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► **B** REGULATION (EC) No 1334/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 16 December 2008

on flavourings and certain food ingredients with flavouring properties for use in and on foods and amending Council Regulation (EEC) No 1601/91, Regulations (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC

(Text with EEA relevance)

(OJ L 354, 31.12.2008, p. 34)

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| ► <b><u>M1</u></b> | Commission Implementing Regulation (EU) No 872/2012 of 1 October 2012 | L 267            | 1    | 2.10.2012  |
| ► <b><u>M2</u></b> | Commission Regulation (EU) No 545/2013 of 14 June 2013                | L 163            | 15   | 15.6.2013  |
| ► <b><u>M3</u></b> | Commission Regulation (EU) No 985/2013 of 14 October 2013             | L 273            | 18   | 15.10.2013 |
| ► <b><u>M4</u></b> | Commission Regulation (EU) No 246/2014 of 13 March 2014               | L 74             | 58   | 14.3.2014  |



**REGULATION (EC) No 1334/2008 OF THE EUROPEAN  
PARLIAMENT AND OF THE COUNCIL**

**of 16 December 2008**

**on flavourings and certain food ingredients with flavouring  
properties for use in and on foods and amending Council  
Regulation (EEC) No 1601/91, Regulations (EC) No 2232/96  
and (EC) No 110/2008 and Directive 2000/13/EC**

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE  
EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and  
in particular Article 95 thereof,

Having regard to the proposal from the Commission,

Having regard to the Opinion of the European Economic and Social  
Committee <sup>(1)</sup>,

Acting in accordance with the procedure laid down in Article 251 of the  
Treaty <sup>(2)</sup>,

Whereas:

- (1) Council Directive 88/388/EEC of 22 June 1988 on the approximation of the laws of the Member States relating to flavourings for use in foodstuffs and to source materials for their production <sup>(3)</sup> needs to be updated in the light of technical and scientific developments. In the interests of clarity and efficiency Directive 88/388/EEC should be replaced by this Regulation.
- (2) Council Decision 88/389/EEC of 22 June 1988 on the establishment, by the Commission, of an inventory of the source materials and substances used in the preparation of flavourings <sup>(4)</sup> provides for the establishment of that inventory within 24 months of its adoption. That Decision is now obsolete and should be repealed.
- (3) Commission Directive 91/71/EEC of 16 January 1991 completing Council Directive 88/388/EEC on the approximation of the laws of the Member States relating to flavourings for use in foodstuffs and to source materials for their production <sup>(5)</sup> lays down rules on the labelling of flavourings. Those rules are replaced by this Regulation and the Directive should now be repealed.
- (4) The free movement of safe and wholesome food is an essential aspect of the internal market and contributes significantly to the health and well-being of citizens, and to their social and economic interests.

<sup>(1)</sup> OJ C 168, 20.7.2007, p. 34.

<sup>(2)</sup> Opinion of the European Parliament of 10 July 2007 (OJ C 175 E, 10.7.2008, p. 176), Council Common Position of 10 March 2008 (OJ C 111 E, 6.5.2008, p. 46). Position of the European Parliament of 8 July 2008 (not yet published) and Council Decision of 18 November 2008.

<sup>(3)</sup> OJ L 184, 15.7.1988, p. 61.

<sup>(4)</sup> OJ L 184, 15.7.1988, p. 67.

<sup>(5)</sup> OJ L 42, 15.2.1991, p. 25.

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- (5) In order to protect human health, this Regulation should cover flavourings, source materials for flavourings and foods containing flavourings. It should also cover certain food ingredients with flavouring properties which are added to food for the main purpose of adding flavour and which contribute significantly to the presence in food of certain naturally occurring undesirable substances (hereinafter referred to as food ingredients with flavouring properties), their source material and foods containing them.
- (6) Raw foodstuffs which have not undergone any processing treatment and non-compound foodstuffs such as spices, herbs, teas and infusions (e.g. fruit or herbal tea) as well as mixtures of spices and/or herbs, mixtures of tea and mixtures for infusion, as long as they are consumed as such and/or not added to the food, do not fall within the scope of this Regulation.
- (7) Flavourings are used to improve or modify the odour and/or taste of foods for the benefit of the consumer. Flavourings and food ingredients with flavouring properties should only be used if they fulfil the criteria laid down in this Regulation. They must be safe when used, and certain flavourings should, therefore, undergo a risk assessment before they can be permitted in food. Where possible, attention should be focused on whether or not the use of certain flavourings could have any negative consequences on vulnerable groups. The use of flavourings must not mislead the consumer and their presence in food should, therefore, always be indicated by appropriate labelling. Flavourings should, in particular, not be used in a way as to mislead the consumer about issues related to, amongst other things, the nature, freshness, quality of ingredients used, the naturalness of a product or of the production process, or the nutritional quality of the product. The approval of flavourings should also take into account other factors relevant to the matter under consideration including societal, economic, traditional, ethical and environmental factors, the precautionary principle and the feasibility of controls.
- (8) Since 1999, the Scientific Committee on Food and subsequently the European Food Safety Authority (hereinafter referred to as the Authority) established by Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety<sup>(1)</sup> have expressed opinions on a number of substances occurring naturally in source materials for flavourings and food ingredients with flavouring properties which, according to the Committee of Experts on Flavouring Substances of the Council of Europe, raise toxicological concern. Substances for which the toxicological concern was confirmed by the Scientific Committee on Food should be regarded as undesirable substances which should not be added as such to food.

<sup>(1)</sup> OJ L 31, 1.2.2002, p. 1.

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- (9) Due to their natural occurrence in plants, undesirable substances might be present in flavouring preparations and food ingredients with flavouring properties. The plants are used traditionally as food or food ingredients. Appropriate maximum levels should be established for the presence of these undesirable substances in foods which contribute most to the human intake of these substances, taking into account both the need to protect human health and their unavoidable presence in traditional foods.
- (10) Maximum levels for certain naturally occurring undesirable substances should focus on the food or food categories which contribute most to dietary intake. Should additional naturally occurring undesirable substances pose a risk to the health of the consumer, maximum levels should be set following the opinion of the Authority. Member States should organise controls on a risk basis in line with Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules <sup>(1)</sup>. Food producers are obliged to take into account the presence of these substances when using food ingredients with flavouring properties and/or flavourings for preparation of all food to ensure that food which is not safe is not placed on the market.
- (11) Provisions should be established at Community level in order to prohibit, or restrict the use of, certain plant, animal, microbiological or mineral materials which raise concern for human health in the production of flavourings and food ingredients with flavouring properties and their applications in food production.
- (12) Risk assessments should be carried out by the Authority.
- (13) In order to ensure harmonisation, the risk assessment and approval of flavourings and source materials that need to undergo an evaluation should be carried out in accordance with the procedure laid down in Regulation (EC) No 1331/2008 of the European Parliament and of the Council of 16 December 2008 establishing a common authorisation procedure for food additives, food enzymes and food flavourings <sup>(2)</sup>.
- (14) Flavouring substances are defined chemical substances, which include flavouring substances obtained by chemical synthesis or isolated using chemical processes, and natural flavouring substances. An evaluation programme of flavouring substances is ongoing in accordance with Regulation (EC) No 2232/96 of the European Parliament and of the Council of 28 October 1996 laying down a Community procedure for flavouring substances used or intended for use in or on foodstuffs <sup>(3)</sup>. Under that Regulation a list of flavouring substances is to be adopted within five

<sup>(1)</sup> OJ L 165, 30.4.2004, p. 1. Corrected version in OJ L 191, 28.5.2004, p. 1.

<sup>(2)</sup> See page 1 of this Official Journal.

<sup>(3)</sup> OJ L 299, 23.11.1996, p. 1.

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years of adoption of that programme. A new deadline should be set for the adoption of that list. That list will be proposed for inclusion in the list referred to in Article 2(1) of Regulation (EC) No 1331/2008.

- (15) Flavouring preparations are flavourings other than defined chemical substances obtained from materials of vegetable, animal or microbiological origin, by appropriate physical, enzymatic or microbiological processes, either in the raw state of the material or after processing for human consumption. Flavouring preparations produced from food do not need to undergo an evaluation or an approval procedure for use in and on foods unless there is doubt about their safety. However, the safety of flavouring preparations produced from non-food material should be evaluated and approved.
- (16) Regulation (EC) No 178/2002 defines food as any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be, ingested by humans. Materials of vegetable, animal or microbiological origin, for which it can be sufficiently demonstrated that they have hitherto been used for the production of flavourings, are considered to be food materials for this purpose, even though some of these source materials, such as rose wood and strawberry leaves, may not have been used for food as such. They do not need to be evaluated.
- (17) Likewise, thermal process flavourings produced from food under specified conditions need not undergo an evaluation or an approval procedure for use in and on foods unless there is doubt about their safety. However, the safety of thermal process flavourings produced from non-food material or not complying with certain conditions of production should be evaluated and approved.
- (18) Regulation (EC) No 2065/2003 of the European Parliament and of the Council of 10 November 2003 on smoke flavourings used or intended for use in or on foods <sup>(1)</sup> lays down a procedure for the safety assessment and approval of smoke flavourings and aims to establish a list of primary smoke condensates and primary tar fractions the use of which is authorised to the exclusion of all others.
- (19) Flavour precursors such as carbohydrates, oligo-peptides and amino acids impart flavour to food by chemical reactions which occur during food processing. Flavour precursors produced from food do not need to undergo an evaluation or an approval procedure for use in and on foods unless there is doubt about their safety. However, the safety of flavour precursors produced from non-food material should be evaluated and approved.
- (20) Other flavourings which do not fall under the definitions of the previously mentioned flavourings may be used in and on foods after they have undergone an evaluation and approval procedure. An example could be flavourings which are obtained by heating oil or fat to an extremely high temperature for a very short period of time, resulting in a grill-like flavour.

<sup>(1)</sup> OJ L 309, 26.11.2003, p. 1.

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- (21) Material of vegetable, animal, microbiological or mineral origin other than food may only be authorised for the production of flavourings after its safety has been evaluated scientifically. It might be necessary to authorise the use of only certain parts of the material or to set conditions of use.
- (22) Flavourings can contain food additives as permitted by Regulation (EC) No 1333/2008 of the European Parliament and of the Council of 16 December 2008 on food additives<sup>(1)</sup> and/or other food ingredients for technological purposes such as for their storage, standardisation, dilution or dissolution and stabilisation.
- (23) A flavouring or a source material which falls within the scope of Regulation (EC) No 1829/2003 of the European Parliament and of the Council of 22 September 2003 on genetically modified food and feed<sup>(2)</sup> should be authorised in accordance with that Regulation as well as under this Regulation.
- (24) Flavourings remain subject to the general labelling obligations provided for in Directive 2000/13/EC of the European Parliament and of the Council of 20 March 2000 on the approximation of the laws of the Member States relating to the labelling, presentation and advertising of foodstuffs<sup>(3)</sup> and, as the case may be, in Regulations (EC) No 1829/2003 and Regulation (EC) No 1830/2003 of the European Parliament and of the Council of 22 September 2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms<sup>(4)</sup>. In addition, specific provisions on the labelling of flavourings sold as such to the manufacturer or to the final consumer should be contained in this Regulation.
- (25) Flavouring substances or flavouring preparations should only be labelled as 'natural' if they comply with certain criteria which ensure that consumers are not misled.
- (26) Specific information requirements should ensure that consumers are not misled concerning the source material used for the production of natural flavourings. In particular, if the term natural is used to describe a flavour, the flavouring components used should be entirely of natural origin. In addition, the source of the flavourings should be labelled, except when the source materials referred to would not be recognised in the flavour or taste of the food. If a source is mentioned, at least 95 % of the flavouring component should be obtained from the material referred to. As the use of flavourings should not mislead the consumer, the other maximum 5 % can only be used for standardisation or to give a, for example, more fresh, pungent, ripe or green note to the flavouring. When less than 95 % of the flavouring component derived from the source referred to has been used and the flavour of the source can still be recognised, the source should be revealed together with a statement that other

<sup>(1)</sup> See page 16 of this Official Journal.

<sup>(2)</sup> OJ L 268, 18.10.2003, p. 1.

<sup>(3)</sup> OJ L 109, 6.5.2000, p. 29.

<sup>(4)</sup> OJ L 268, 18.10.2003, p. 24.

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natural flavourings have been added, for example cacao extract in which other natural flavourings have been added to impart a banana note.

- (27) Consumers should be informed if the smoky taste of a particular food is due to the addition of smoke flavourings. In accordance with Directive 2000/13/EC, the labelling should not confuse the consumer as to whether the product is smoked conventionally with fresh smoke or treated with smoke flavourings. Directive 2000/13/EC needs to be adapted to the definitions of flavourings, smoke flavourings and the term 'natural' for the description of flavourings laid down in this Regulation.
- (28) For the evaluation of the safety of flavouring substances for human health, information on the consumption and use of flavouring substances is crucial. The amounts of flavouring substances added to food should therefore be checked on a regular basis.
- (29) The measures necessary for the implementation of this Regulation should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission <sup>(1)</sup>.
- (30) In particular the Commission should be empowered to amend the Annexes to this Regulation and to adopt appropriate transitional measures regarding the establishment of the Community list. Since those measures are of general scope and are designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it with new non-essential elements, they must be adopted in accordance with the regulatory procedure with scrutiny provided for in Article 5a of Decision 1999/468/EC.
- (31) When, on imperative grounds of urgency, the normal time-limits for the regulatory procedure with scrutiny cannot be complied with, the Commission should be able to apply the urgency procedure provided for in Article 5a(6) of Decision 1999/468/EC for the adoption of measures described in Article 8(2) and amendments to Annexes II to V to this Regulation.
- (32) Annexes II to V to this Regulation should be adapted as necessary to scientific and technical progress, taking into account the information provided by producers and users of flavourings and/or resulting from the monitoring and controls by the Member States.
- (33) In order to develop and update Community law on flavourings in a proportionate and effective way, it is necessary to collect data, share information and coordinate work between Member States. For that purpose, it may be useful to undertake studies to address specific issues with a view to facilitating the decision-making process. It is appropriate that the Community finance such studies as part of its budgetary procedure. The financing of such measures is covered by Regulation (EC) No 882/2004.

<sup>(1)</sup> OJ L 184, 17.7.1999, p. 23.

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- (34) Pending the establishment of the Community list, provision should be made for the evaluation and approval of flavouring substances which are not covered by the evaluation programme provided for in Regulation (EC) No 2232/96. A transitional regime should therefore be laid down. Under that regime such flavouring substances should be evaluated and approved in accordance with the procedure laid down in Regulation (EC) No 1331/2008. However, the time periods provided for in that Regulation for the adoption by the Authority of its opinion and for the submission by the Commission to the Standing Committee on the Food Chain and Animal Health of a draft regulation updating the Community list should not apply, because priority should be given to the ongoing evaluation programme.
- (35) Since the objective of this Regulation, namely to lay down Community rules on the use of flavourings and certain food ingredients with flavouring properties in and on foods, cannot be sufficiently achieved by the Member States and can therefore, in the interests of market unity and a high level of consumer protection, be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary in order to achieve that objective.
- (36) Council Regulation (EEC) No 1601/91 of 10 June 1991 laying down general rules on the definition, description and presentation of aromatised wines, aromatised wine-based drinks and aromatised wine-product cocktails<sup>(1)</sup> and Regulation (EC) No 110/2008 of the European Parliament and of the Council of 15 January 2008 on the definition, description, presentation, labelling and the protection of geographical indications of spirit drinks<sup>(2)</sup> need to be adapted to certain new definitions laid down in this Regulation.
- (37) Regulations (EEC) No 1601/91, (EC) No 2232/96 and (EC) No 110/2008 and Directive 2000/13/EC should be amended accordingly,

HAVE ADOPTED THIS REGULATION:

CHAPTER I

**SUBJECT MATTER, SCOPE AND DEFINITIONS**

*Article 1*

**Subject matter**

This Regulation lays down rules on flavourings and food ingredients with flavouring properties for use in and on foods with a view to ensuring the effective functioning of the internal market whilst ensuring a high level of protection of human health and a high level of consumer protection, including the protection of consumer interests and fair practices in food trade, taking into account, where appropriate, the protection of the environment.

<sup>(1)</sup> OJ L 149, 14.6.1991, p. 1.

<sup>(2)</sup> OJ L 39, 13.2.2008, p. 16.



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For those purposes, this Regulation provides for:

- (a) a Community list of flavourings and source materials approved for use in and on foods, set out in Annex I (hereinafter referred to as the 'Community list');
- (b) conditions of use of flavourings and food ingredients with flavouring properties in and on foods;
- (c) rules on the labelling of flavourings.

*Article 2***Scope**

1. This Regulation shall apply to:
  - (a) flavourings which are used or intended to be used in or on foods, without prejudice to more specific provisions laid down in Regulation (EC) No 2065/2003;
  - (b) food ingredients with flavouring properties;
  - (c) food containing flavourings and/or food ingredients with flavouring properties;
  - (d) source materials for flavourings and/or source materials for food ingredients with flavouring properties.
2. This Regulation shall not apply to:
  - (a) substances which have exclusively a sweet, sour or salty taste;
  - (b) raw foods;
  - (c) non-compound foods and mixtures such as, but not exclusively, fresh, dried or frozen spices and/or herbs, mixtures of tea and mixtures for infusion as such as long as they have not been used as food ingredients.

*Article 3***Definitions**

1. For the purposes of this Regulation, the definitions laid down in Regulations (EC) No 178/2002 and (EC) No 1829/2003 shall apply.
2. For the purposes of this Regulation, the following definitions shall also apply:
  - (a) 'flavourings' shall mean products:
    - (i) not intended to be consumed as such, which are added to food in order to impart or modify odour and/or taste;
    - (ii) made or consisting of the following categories: flavouring substances, flavouring preparations, thermal process flavourings, smoke flavourings, flavour precursors or other flavourings or mixtures thereof;
  - (b) 'flavouring substance' shall mean a defined chemical substance with flavouring properties;
  - (c) 'natural flavouring substance' shall mean a flavouring substance obtained by appropriate physical, enzymatic or microbiological processes from material of vegetable, animal or microbiological origin either in the raw state or after processing for human consumption by one or more of the traditional food preparation

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processes listed in Annex II. Natural flavouring substances correspond to substances that are naturally present and have been identified in nature;

- (d) ‘flavouring preparation’ shall mean a product, other than a flavouring substance, obtained from:
- (i) food by appropriate physical, enzymatic or microbiological processes either in the raw state of the material or after processing for human consumption by one or more of the traditional food preparation processes listed in Annex II;
- and/or
- (ii) material of vegetable, animal or microbiological origin, other than food, by appropriate physical, enzymatic or microbiological processes, the material being taken as such or prepared by one or more of the traditional food preparation processes listed in Annex II;
- (e) ‘thermal process flavouring’ shall mean a product obtained after heat treatment from a mixture of ingredients not necessarily having flavouring properties themselves, of which at least one contains nitrogen (amino) and another is a reducing sugar; the ingredients for the production of thermal process flavourings may be:
- (i) food;
- and/or
- (ii) source material other than food;
- (f) ‘smoke flavouring’ shall mean a product obtained by fractionation and purification of a condensed smoke yielding primary smoke condensates, primary tar fractions and/or derived smoke flavourings as defined in points (1), (2) and (4) of Article 3 of Regulation (EC) No 2065/2003;
- (g) ‘flavour precursor’ shall mean a product, not necessarily having flavouring properties itself, intentionally added to food for the sole purpose of producing flavour by breaking down or reacting with other components during food processing; it may be obtained from:
- (i) food;
- and/or
- (ii) source material other than food;
- (h) ‘other flavouring’ shall mean a flavouring added or intended to be added to food in order to impart odour and/or taste and which does not fall under definitions (b) to (g);
- (i) ‘food ingredient with flavouring properties’ shall mean a food ingredient other than flavourings which may be added to food for the main purpose of adding flavour to it or modifying its flavour and which contributes significantly to the presence in food of certain naturally occurring undesirable substances;
- (j) ‘source material’ shall mean material of vegetable, animal, microbiological or mineral origin from which flavourings or food ingredients with flavouring properties are produced; it may be:

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- (i) food;
  - or
  - (ii) source material other than food;
- (k) ‘appropriate physical process’ shall mean a physical process which does not intentionally modify the chemical nature of the components of the flavouring, without prejudice to the listing of traditional food preparation processes in Annex II, and does not involve, *inter alia*, the use of singlet oxygen, ozone, inorganic catalysts, metal catalysts, organometallic reagents and/or UV radiation.
3. For the purpose of the definitions listed in paragraph 2(d), (e), (g) and (j), source materials for which hitherto there is significant evidence of use for the production of flavourings shall be considered as food for the purpose of this Regulation.
4. Flavourings may contain food additives as permitted by Regulation (EC) No 1333/2008 and/or other food ingredients incorporated for technological purposes.

## CHAPTER II

**CONDITIONS FOR USE OF FLAVOURINGS, FOOD INGREDIENTS WITH FLAVOURING PROPERTIES AND SOURCE MATERIALS***Article 4***General conditions for use of flavourings or food ingredients with flavouring properties**

Only flavourings or food ingredients with flavouring properties which meet the following conditions may be used in or on foods:

- (a) they do not, on the basis of the scientific evidence available, pose a safety risk to the health of the consumer; and
- (b) their use does not mislead the consumer.

*Article 5***Prohibition of non-compliant flavourings and/or non-compliant food**

No person shall place on the market a flavouring or any food in which such a flavouring and/or food ingredients with flavouring properties are present if their use does not comply with this Regulation.

*Article 6***Presence of certain substances**

1. Substances listed in Part A of Annex III shall not be added as such to food.
2. Without prejudice to Regulation (EC) No 110/2008, maximum levels of certain substances, naturally present in flavourings and/or food ingredients with flavouring properties, in the compound foods listed in Part B of Annex III shall not be exceeded as a result of the use of flavourings and/or food ingredients with flavouring properties in and on those foods. The maximum levels of the substances set out in Annex III shall apply to foods as marketed, unless otherwise stated. By

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way of derogation from this principle, for dried and/or concentrated foods which need to be reconstituted, the maximum levels shall apply to the food as reconstituted according to the instructions on the label, taking into account the minimum dilution factor.

3. Detailed rules for the implementation of paragraph 2 may be adopted in accordance with the regulatory procedure referred to in Article 21(2), following the opinion of the European Food Safety Authority (hereinafter referred to as the 'Authority'), where necessary.

*Article 7***Use of certain source materials**

1. Source materials listed in Part A of Annex IV shall not be used for the production of flavourings and/or food ingredients with flavouring properties.

2. Flavourings and/or food ingredients with flavouring properties produced from source materials listed in Part B of Annex IV may be used only under the conditions indicated in that Annex.

*Article 8***Flavourings and food ingredients with flavouring properties for which evaluation and approval are not required**

1. The following flavourings and food ingredients with flavouring properties may be used in or on foods without an evaluation and approval under this Regulation, provided that they comply with Article 4:

- (a) flavouring preparations referred to in Article 3(2)(d)(i);
- (b) thermal process flavourings referred to in Article 3(2)(e)(i) which comply with the conditions for the production of thermal process flavourings and maximum levels for certain substances in thermal process flavourings set out in Annex V;
- (c) flavour precursors referred to in Article 3(2)(g)(i);
- (d) food ingredients with flavouring properties.

2. Notwithstanding paragraph 1, if the Commission, a Member State or the Authority expresses doubts concerning the safety of a flavouring or food ingredient with flavouring properties referred to in paragraph 1, a risk assessment of such flavouring or food ingredient with flavouring properties shall be carried out by the Authority. Articles 4, 5 and 6 of Regulation (EC) No 1331/2008 shall then apply *mutatis mutandis*. If necessary, the Commission shall adopt measures, following the opinion of the Authority, which are designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it, in accordance with the

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regulatory procedure with scrutiny referred to in Article 21(3). Such measures shall be laid down in Annexes III, IV and/or V where appropriate. On imperative grounds of urgency, the Commission may use the urgency procedure referred to in Article 21(4).

## CHAPTER III

**COMMUNITY LIST OF FLAVOURINGS AND SOURCE MATERIALS  
APPROVED FOR USE IN OR ON FOODS***Article 9***Flavourings and source materials for which an evaluation and approval is required**

This Chapter shall apply to:

- (a) flavouring substances;
- (b) flavouring preparations referred to in Article 3(2)(d)(ii);
- (c) thermal process flavourings obtained by heating ingredients which fall partially or totally within Article 3(2)(e)(ii) and/or for which the conditions for the production of thermal process flavourings and/or the maximum levels for certain undesirable substances set out in Annex V are not met;
- (d) flavour precursors referred to in Article 3(2)(g)(ii);
- (e) other flavourings referred to in Article 3(2)(h);
- (f) source materials other than food referred to in Article 3(2)(j)(ii).

*Article 10***Community list of flavourings and source materials**

Of the flavourings and source materials referred to in Article 9, only those included in the Community list may be placed on the market as such and used in or on foods under the conditions of use specified therein, where applicable.

*Article 11***Inclusion of flavourings and source materials in the Community list**

1. A flavouring or source material may be included in the Community list, in accordance with the procedure laid down by Regulation (EC) No 1331/2008, only if it complies with the conditions set out in Article 4 of this Regulation.
2. The entry for a flavouring or source material in the Community list shall specify:
  - (a) the identification of the flavouring or the source material approved;
  - (b) where necessary, the conditions under which the flavouring may be used.

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3. The Community list shall be amended in accordance with the procedure referred to in Regulation (EC) No 1331/2008.

*Article 12***Flavourings or source materials falling within the scope of Regulation (EC) No 1829/2003**

1. A flavouring or source material falling within the scope of Regulation (EC) No 1829/2003 may be included in the Community list in Annex I in accordance with this Regulation only when it is covered by an authorisation in accordance with Regulation (EC) No 1829/2003.

2. When a flavouring already included in the Community list is produced from a different source falling within the scope of Regulation (EC) No 1829/2003, it will not require a new authorisation under this Regulation, as long as the new source is covered by an authorisation in accordance with Regulation (EC) No 1829/2003 and the flavouring complies with the specifications established under this Regulation.

*Article 13***Interpretation decisions**

Where necessary, it may be decided in accordance with the regulatory procedure referred to in Article 21(2):

- (a) whether or not a given substance or mixture of substances, material or type of food falls within the categories listed in Article 2(1);
- (b) to which specific category, defined in Article 3(2)(b) to (j), a given substance belongs;
- (c) whether or not a particular product belongs to a food category or is a food referred to in Annex I or Annex III, Part B.

## CHAPTER IV

**LABELLING***Article 14***Labelling of flavourings not intended for sale to the final consumer**

1. Flavourings not intended for sale to the final consumer may only be marketed with the labelling provided for in Articles 15 and 16, which must be easily visible, clearly legible and indelible. The information provided for in Article 15 shall be in a language easily understandable to purchasers.

2. Within its own territory, the Member State in which the product is marketed may, in accordance with the Treaty, stipulate that the information provided for in Article 15 shall be given in one or more of the official languages of the Community, to be determined by that Member State. This shall not preclude such information from being indicated in several languages.

**▼B***Article 15***General labelling requirements for flavourings not intended for sale to the final consumer**

1. Where flavourings not intended for sale to the final consumer are sold singly or mixed with each other and/or with other food ingredients and/or with other substances added to them in accordance with Article 3(4), their packaging or containers shall bear the following information:

- (a) the sales description: either the word ‘flavouring’ or a more specific name or description of the flavouring;
- (b) the statement either ‘for food’ or the statement ‘restricted use in food’ or a more specific reference to its intended food use;
- (c) if necessary, the special conditions for storage and/or use;
- (d) a mark identifying the batch or lot;
- (e) in descending order of weight, a list of:
  - (i) the categories of flavourings present and
  - (ii) the names of each of the other substances or materials in the product or, where appropriate, their E-number;
- (f) the name or business name and address of the manufacturer, packager or seller;
- (g) an indication of the maximum quantity of each component or group of components subject to quantitative limitation in food and/or appropriate information in clear and easily understandable terms enabling the purchaser to comply with this Regulation or other relevant Community law;
- (h) the net quantity;
- (i) a date of minimum durability or use-by-date;
- (j) where relevant, information on a flavouring or other substances referred to in this Article and listed in Annex IIIa to Directive 2000/13/EC as regards the indication of the ingredients present in foodstuffs.

2. By way of derogation from paragraph 1, the information required in points (e) and (g) of that paragraph may appear merely on the documents relating to the consignment which are to be supplied with or prior to the delivery, provided that the indication ‘not for retail sale’ appears on an easily visible part of the packaging or container of the product in question.

3. By way of derogation from paragraph 1, where flavourings are supplied in tankers, all of the information may appear merely on the accompanying documents relating to the consignment which are to be supplied with the delivery.

*Article 16***Specific requirements for use of the term ‘natural’**

1. If the term ‘natural’ is used to describe a flavouring in the sales description referred to in Article 15(1)(a) the provisions of paragraphs 2 to 6 of this Article shall apply.

**▼B**

2. The term ‘natural’ for the description of a flavouring may only be used if the flavouring component comprises only flavouring preparations and/or natural flavouring substances.

3. The term ‘natural flavouring substance(s)’ may only be used for flavourings in which the flavouring component contains exclusively natural flavouring substances.

4. The term ‘natural’ may only be used in combination with a reference to a food, food category or a vegetable or animal flavouring source if the flavouring component has been obtained exclusively or by at least 95 % by w/w from the source material referred to.

The description shall read ‘natural “food(s) or food category or source(s)” flavouring’.

5. The term ‘natural “food(s) or food category or source(s)” flavouring with other natural flavourings’ may only be used if the flavouring component is partially derived from the source material referred to, the flavour of which can easily be recognised.

6. The term ‘natural flavouring’ may only be used if the flavouring component is derived from different source materials and where a reference to the source materials would not reflect their flavour or taste.

*Article 17***Labelling of flavourings intended for sale to the final consumer**

1. Without prejudice to Directive 2000/13/EC, Council Directive 89/396/EEC of 14 June 1989 on indications or marks identifying the lot to which a foodstuff belongs <sup>(1)</sup> and Regulation (EC) No 1829/2003, flavourings sold singly or mixed with each other and/or with other food ingredients and/or to which other substances are added and which are intended for sale to the final consumer may be marketed only if their packaging contains the statement either ‘for food’ or ‘restricted use in food’ or a more specific reference to their intended food use, which must be easily visible, clearly legible and indelible.

2. If the term ‘natural’ is used to describe a flavouring in the sales description referred to in Article 15(1)(a), Article 16 shall apply.

*Article 18***Other labelling requirements**

Articles 14 to 17 shall be without prejudice to more detailed or more extensive laws, regulations or administrative provisions regarding weights and measures or applying to the presentation, classification, packaging and labelling of dangerous substances and preparations or applying to the transport of such substances and preparations.

<sup>(1)</sup> OJ L 186, 30.6.1989, p. 21.





## CHAPTER V

## PROCEDURAL PROVISIONS AND IMPLEMENTATION

*Article 19***Reporting by the food business operators**

1. A producer or user of a flavouring substance, or the representative of such producer or user, shall, at the request of the Commission, inform it of the amount of the substance added to foods in the Community in a period of 12 months. The information provided in this context shall be treated as confidential insofar as this information is not required for the safety assessment.

Information on the use levels for specific food categories in the Community shall be made available to Member States by the Commission.

2. Where applicable, for a flavouring already approved under this Regulation which is prepared by production methods or starting materials significantly different from those included in the risk assessment of the Authority, a producer or user shall, before marketing the flavouring, submit to the Commission the necessary data to allow an evaluation of the flavouring to be undertaken by the Authority with regard to the modified production method or characteristics.

3. A producer or user of flavourings and/or source materials shall inform the Commission immediately of any new scientific or technical information which is known and accessible to him and which might affect the assessment of the safety of the flavouring substance.

4. Detailed rules for the implementation of paragraph 1 shall be adopted in accordance with the regulatory procedure referred to in Article 21(2).

*Article 20***Monitoring and reporting by the Member States**

1. Member States shall establish systems to monitor the consumption and use of flavourings set out in the Community list and the consumption of the substances listed in Annex III on a risk-based approach, and shall report their findings with appropriate frequency to the Commission and to the Authority.

2. After the Authority has been consulted, a common methodology for the gathering by Member States of information on the consumption and use of flavourings set out in the Community list and of the substances listed in Annex III shall be adopted in accordance with the regulatory procedure referred to in Article 21(2) by 20 January 2011.

*Article 21***Committee**

1. The Commission shall be assisted by the Standing Committee on the Food Chain and Animal Health.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

**▼B**

The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. Where reference is made to this paragraph, Article 5a(1) to (4) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

4. Where reference is made to this paragraph, Article 5a(1), (2), (4) and (6) and Article 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.

*Article 22***Amendments to Annexes II to V**

Amendments to Annexes II to V to this Regulation to reflect scientific and technical progress which are designed to amend non-essential elements of this Regulation shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 21(3), following the opinion of the Authority, where necessary.

On imperative grounds of urgency, the Commission may use the urgency procedure referred to in Article 21(4).

*Article 23***Community financing of harmonised policies**

The legal basis for the financing of measures resulting from this Regulation shall be Article 66(1)(c) of Regulation (EC) No 882/2004.

## CHAPTER VI

**TRANSITIONAL AND FINAL PROVISIONS***Article 24***Repeals**

1. Directive 88/388/EEC, Decision 88/389/EEC and Directive 91/71/EEC shall be repealed from 20 January 2011.

2. Regulation (EC) No 2232/96 shall be repealed from the date of application of the list referred to in Article 2(2) of that Regulation.

3. References to the repealed acts shall be construed as references to this Regulation.

*Article 25***Introduction of the list of flavouring substances into the Community list of flavourings and source materials and transitional regime**

1. The Community list shall be established by introducing the list of flavouring substances referred to in Article 2(2) of Regulation (EC) No 2232/96 into Annex I to this Regulation at the time of its adoption.

**▼B**

2. Pending the establishment of the Community list, Regulation (EC) No 1331/2008 shall apply for the evaluation and approval of flavouring substances which are not covered by the evaluation programme provided for in Article 4 of Regulation (EC) No 2232/96.

By way of derogation from that procedure, the period of nine months referred to in Article 5(1) and Article 7 of Regulation (EC) No 1331/2008 shall not apply to such evaluation and approval.

3. Any appropriate transitional measures which are designed to amend non-essential elements of this Regulation, *inter alia*, by supplementing it, shall be adopted in accordance with the regulatory procedure with scrutiny referred to in Article 21(3).

*Article 26***Amendments to Regulation (EEC) No 1601/91**

Article 2(1) is hereby amended as follows:

1. in point (a), the first sub-indent of the third indent shall be replaced by the following:

‘— flavouring substances and/or flavouring preparations as defined in Article 3(2)(b) and (d) of Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods (\*), and/or

\_\_\_\_\_ (\* ) OJ L 354, 31.12.2008, p. 34.’

2. in point (b), the first sub-indent of the second indent shall be replaced by the following:

‘— flavouring substances and/or flavouring preparations as defined in Article 3(2)(b) and (d) of Regulation (EC) No 1334/2008, and/or’;

3. in point (c), the first sub-indent of the second indent shall be replaced by the following:

‘— flavouring substances and/or flavouring preparations as defined in Article 3(2)(b) and (d) of Regulation (EC) No 1334/2008, and/or’.

*Article 27***Amendment to Regulation (EC) No 2232/96**

Article 5(1) of Regulation (EC) No 2232/96 shall be replaced by the following:

‘1. The list of flavouring substances referred to in Article 2(2) shall be adopted in accordance with the procedure referred to in Article 7 by 31 December 2010 at the latest.’.

*Article 28***Amendments to Regulation (EC) No 110/2008**

Regulation (EC) No 110/2008 is hereby amended as follows:

**▼B**

1. in Article 5(2), point (c) shall be replaced by the following:

‘(c) contain flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods (\*) and flavouring preparations as defined in Article 3(2)(d) of that Regulation;

(\*) OJ L 354, 31.12.2008, p. 34.’

2. in Article 5(3), point (c) shall be replaced by the following:

‘(c) contain one or more flavourings as defined in Article 3(2)(a) of Regulation (EC) No 1334/2008;’;

3. in Annex I, point (9) shall be replaced by the following:

‘(9) *Flavouring*

Flavouring means using in the preparation of a spirit drink one or more of the flavourings defined in Article 3(2)(a) of Regulation (EC) No 1334/2008.’;

4. Annex II shall be amended as follows:

(a) paragraph 19(c) shall be replaced by the following:

‘(c) Other flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and/or flavouring preparations as defined in Article 3(2)(d) of that Regulation, and/or aromatic plants or parts of aromatic plants may be used in addition, but the organoleptic characteristics of juniper must be discernible, even if they are sometimes attenuated.’;

(b) paragraph 20(c) shall be replaced by the following:

‘(c) Only flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and/or flavouring preparations as defined in Article 3(2)(d) of that Regulation shall be used for the production of gin so that the taste is predominantly that of juniper.’;

(c) paragraph 21(a) (ii) shall be replaced by the following:

‘(ii) the mixture of the product of such distillation and ethyl alcohol of agricultural origin with the same composition, purity and alcoholic strength; flavouring substances and/or flavouring preparations as specified in category 20(c) may also be used to flavour distilled gin.’;

(d) paragraph 23(c) shall be replaced by the following:

‘(c) Other flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and/or flavouring preparations as defined in Article 3(2)(d) of that Regulation may additionally be used but there must be a predominant taste of caraway.’;

**▼B**

(e) paragraph 24(c) shall be replaced by the following:

‘(c) Other natural flavouring substances as defined in Article 3(2)(c) of Regulation (EC) No 1334/2008 and/or flavouring preparations as defined in Article 3(2)(d) of that Regulation may additionally be used, but the flavour of these drinks is largely attributable to distillates of caraway (*Carum carvi* L.) and/or dill (*Anethum graveolens* L.) seeds, the use of essential oils being prohibited.’;

(f) paragraph 30(a) shall be replaced by the following:

‘(a) Bitter-tasting spirit drinks or bitter are spirit drinks with a predominantly bitter taste produced by flavouring ethyl alcohol of agricultural origin with flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and/or flavouring preparations as defined in Article 3(2)(d) of that Regulation.’;

(g) in paragraph 32(c), the first subparagraph and the introductory part of the second subparagraph shall be replaced by the following:

‘(c) Flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and flavouring preparations as defined in Article 3(2)(d) of that Regulation may be used in the preparation of liqueur. However, only natural flavouring substances as defined in Article 3(2)(c) of Regulation (EC) No 1334/2008 and flavouring preparations as defined in Article 3(2)(d) of that Regulation shall be used in the preparation of the following liqueurs.’;

(h) paragraph 41(c) shall be replaced by the following:

‘(c) Only flavouring substances as defined in Article 3(2)(b) of Regulation (EC) No 1334/2008 and flavouring preparations as defined in Article 3(2)(d) of that Regulation may be used in the preparation of egg liqueur or advocaat or avocat or advokat.’;

(i) paragraph 44(a) shall be replaced by the following:

‘(a) Våkevå glögi or spritglögg is a spirit drink produced by flavouring ethyl alcohol of agricultural origin with flavour of cloves and/or cinnamon using one of the following processes: maceration and/or distillation, redistillation of the alcohol in the presence of parts of the plants specified above, addition of natural flavouring substances as defined in Article 3(2)(c) of Regulation (EC) No 1334/2008 of cloves or cinnamon or a combination of these methods.’;

(j) paragraph 44(c) shall be replaced by the following:

‘(c) Other flavourings, flavouring substances and/or flavouring preparations as defined in Article 3(2)(b), (d) and (h) of Regulation (EC) No 1334/2008 may also be used, but the flavour of the specified spices must be predominant.’;

(k) In point (c) of paragraphs 25, 26, 27, 28, 29, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 45 and 46, the word ‘preparations’ shall be replaced by ‘flavouring preparations’.

*Article 29***Amendment to Directive 2000/13/EC**

In Directive 2000/13/EC, Annex III shall be replaced by the following:

*'ANNEX III*

**DESIGNATION OF FLAVOURINGS IN THE LIST OF INGREDIENTS**

1. Without prejudice to paragraph 2, flavourings shall be designated by the terms
  - “flavourings” or a more specific name or description of the flavouring, if the flavouring component contains flavourings as defined in Article 3(2)(b), (c), (d), (e), (f), (g) and (h) of Regulation (EC) No 1334/2008 of the European Parliament and of the Council of 16 December 2008 on flavourings and certain food ingredients with flavouring properties for use in and on foods (\*);
  - “smoke flavouring(s)”, or “smoke flavouring(s) produced from “food(s) or food category or source(s)”” (e.g. smoke flavouring produced from beech), if the flavouring component contains flavourings as defined in Article 3(2)(f) of Regulation (EC) No 1334/2008 and imparts a smoky flavour to the food.
2. The term “natural” for the description of flavourings shall be used in accordance with Article 16 of Regulation (EC) No 1334/2008.

(\*) OJ L 354, 31.12.2008, p. 34.’

*Article 30***Entry into force**

This Regulation shall enter into force on the 20th day following its publication in the *Official Journal of the European Union*.

It shall apply from 20 January 2011.

Article 10 shall apply from 18 months after the date of application of the Community list.

Articles 26 and 28 shall apply from the date of application of the Community list.

Article 22 shall apply from 20 January 2009. Foods lawfully placed on the market or labelled prior to 20 January 2011 which do not comply with this Regulation may be marketed until their date of minimum durability or use-by-date.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

**▼B***ANNEX I***▼M1****UNION LIST OF FLAVOURINGS AND SOURCE MATERIALS****PART A****Union list of flavouring substances***SECTION 1**Content of the list*

Table 1 contains the following information:

Column 1 (FL No.): the unique identification number of the substance

Column 2 (Chemical Name): the name of the substance

Column 3 (CAS No): the Chemical Abstracts Service (CAS) registry number

Column 4 (JECFA No.): The Joint FAO/WHO Expert Committee on Food additives (JECFA) number

Column 5 (CoE No.): The Council of Europe (CoE) number

Column 6 (Purity of the named substance at least 95% unless otherwise specified): The purity of the named flavouring substance has to be at least 95%. If less, the composition of the flavouring substances is given in this column.

Column 7 (Restrictions of Use): The use of flavouring substances is permitted in accordance with good manufacturing practices unless specific restriction is given in this column. Flavouring substances with restrictions of use may only be added to the listed food categories and under the specified conditions of use. For the purpose of the restrictions the following food categories, as laid down in Annex II of Regulation (EC) No 1333/2008, shall be referred to:

| Category number | Food category  |
|-----------------|--|
| 1               | Dairy products and analogues   |
| 2               | Fats and oils and fat and oil emulsions  |
| 3               | Edible ices  |
| 4.2             | Processed fruit and vegetables   |
| 5               | Confectionery  |
| 5.3             | Chewing gum  |
| 6               | Cereals and cereal products  |
| 7               | Bakery wares   |
| 8               | Meat   |
| 9               | Fish and fisheries products  |
| 10              | Eggs and egg products  |
| 11              | Sugars, syrups, honey and table-top sweeteners                                       |
| 12              | Salts, spices, soups, sauces, salads and protein products                            |
| 13              | Food intended for particular nutritional uses as defined by Directive 2009/39/EC (1) |
| 14.1            | Non-alcoholic beverages  |

▼ **M1**

| Category number | Food category  |
|-----------------|--|
| 14.2            | Alcoholic beverages, including alcohol-free and low-alcoholic counterparts   |
| 15              | Ready-to-eat savouries and snacks  |
| 16              | Desserts excluding products covered in category 1, 3 and 4   |
| 17              | Food supplements as defined in Directive 2002/46/EC <sup>(2)</sup> of the European Parliament and of the Council excluding food supplements for infants and young children |
| 18              | Processed food not covered by categories 1-17, excluding foods for infants and young children  |

<sup>(1)</sup> OJ L 124, 20.5.2009, p. 21.

<sup>(2)</sup> OJ L 183, 12.7.2002, p. 51.

Column 8 (Footnotes): The footnote '1' is allocated to the flavouring substances for which the evaluation has to be completed by the Authority. The footnotes '2' to '4' refer to time limits set for the applicants to comply with the Authority's requests as expressed in the published opinions. Where the necessary information is not provided by the time requested, the flavouring substance in question will be withdrawn from the Union list. The Authority shall evaluate the submitted data within 9 months from the receipt of such data. Substances which have already been evaluated by JECFA can be recognised from the JECFA number listed in column 4.

- <sup>(1)</sup> evaluation to be completed by the Authority
- <sup>(2)</sup> additional scientific data shall be submitted by 31 December 2012
- <sup>(3)</sup> additional scientific data shall be submitted by 30 June 2013
- <sup>(4)</sup> additional scientific data shall be submitted by 31 December 2013

Column 9 (Reference): Reference to the scientific body that has carried out the evaluation.

## SECTION 2

**Notes**

*Note 1:* Ammonium, sodium, potassium and calcium salts as well as chlorides, carbonates and sulphates are covered by the generic substances, providing that they have flavouring properties.

*Note 2:* If the authorised flavouring substance is a racemate (an equal mixture of optical isomers), both the R- and S- form shall also be authorised for use. If only the R-form has been authorised then the S-form is not covered by this authorisation and vice versa.

*Note 3:* Maximum levels refer to levels in or on food as marketed. By way of derogation from that principle, for dried and/or concentrated foods which need to be reconstituted the maximum levels shall apply to the food as reconstituted according to the instructions in the labelling taking into account the minimum dilution factor.

*Note 4:* The presence of a flavouring substance shall be permitted:

- (a) in a compound food other than as referred to in the Annex, where the flavouring substance is permitted in one of the ingredients of the compound food;
- (b) in a food which is to be used solely in the preparation of a compound food and provided that the compound food complies with this Regulation.



Table 1

| (1)    | (2)                            | (3)       | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--------------------------------|-----------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                  | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 01.001 | Limonene                       | 138-86-3  |           | 491     |  |                     |          | EFSA      |
| 01.002 | 1-Isopropyl-4-methyl-benzene   | 99-87-6   | 1325      | 620     |  |                     |          | EFSA      |
| 01.003 | Pin-2(10)-ene                  | 127-91-3  | 1330      | 2114    |  |                     | 2        | EFSA      |
| 01.004 | Pin-2(3)-ene                   | 80-56-8   | 1329      | 2113    |  |                     | 2        | EFSA      |
| 01.005 | Terpinolene                    | 586-62-9  | 1331      | 2115    |  |                     |          | EFSA      |
| 01.006 | alpha-Phellandrene             | 99-83-2   | 1328      | 2117    | At least 85%; secondary components 10-12% cymene and other terpene hydrocarbons  |                     |          | EFSA      |
| 01.007 | beta-Caryophyllene             | 87-44-5   | 1324      | 2118    | 80-92% beta-caryophyllene and 15-19% C <sub>15</sub> H <sub>24</sub> terpene hydrocarbons (eg. valencene)  |                     | 2        | EFSA      |
| 01.008 | Myrcene                        | 123-35-3  | 1327      | 2197    | At least 90%; secondary components C <sub>15</sub> H <sub>24</sub> terpene hydrocarbons (eg. valencene); Minimum assay value may include traces of limonene, alpha- and beta-pinene and other common C <sub>10</sub> H <sub>16</sub> terpenes. |                     | 4        | EFSA      |
| 01.009 | Camphene                       | 79-92-5   | 1323      | 2227    | At least 80%; secondary components 15-19% C <sub>15</sub> H <sub>24</sub> terpene hydrocarbons (eg. valencene)   |                     | 2        | EFSA      |
| 01.010 | 1-Isopropenyl-4-methyl-benzene | 1195-32-0 | 1333      | 2260    |  |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)                 | (3)     | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|---------------------|---------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name       | CAS No. | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 01.014 | 1-Methylnaphthalene | 90-12-0 | 1335      | 11009   |   |                     | 4        | JECFA/EFSA |

▼ **M4**

|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|

▼ **M1**

|        |                               |            |      |       |   |  |   |      |
|--------|-------------------------------|------------|------|-------|---|--|---|------|
| 01.016 | 1,4(8),12-Bisabolatriene      | 495-62-5   | 1336 | 10979 |   |  |   | EFSA |
| 01.017 | Valencene                     | 4630-07-3  | 1337 | 11030 | At least 94%; secondary components 1-4% other C <sub>15</sub> H <sub>24</sub> sesquiterpenes    |  | 2 | EFSA |
| 01.018 | beta-Ocimene                  | 13877-91-3 | 1338 | 11015 | At least 80%; secondary component 15-17% cis-beta-ocimene                                       |  | 4 | EFSA |
| 01.019 | alpha-Terpinene               | 99-86-5    | 1339 | 11023 | At least 89%; secondary components 6-7% 1,4- and 1,8-cineole                                    |  |   | EFSA |
| 01.020 | gamma-Terpinene               | 99-85-4    | 1340 | 11025 |   |  |   | EFSA |
| 01.024 | beta-Bourbonene               | 5208-59-3  | 1345 | 11931 |   |  | 2 | EFSA |
| 01.026 | 1(5),7(11)-Guaiadiene         | 88-84-6    | 1347 |       |   |  | 2 | EFSA |
| 01.027 | Bisabola-1,8,12-triene        | 17627-44-0 |      |       |   |  |   | EFSA |
| 01.028 | beta-Bisabolene               | 495-61-4   |      |       |   |  |   | EFSA |
| 01.029 | delta-3-Carene                | 13466-78-9 | 1342 | 10983 | At least 92%; secondary components 2-3% beta-pinene; 1-2% limonene; 1-2% myrcene; 0-1% p-cymene |  | 2 | EFSA |
| 01.033 | 2,2-Dimethylhexane            | 590-73-8   |      |       |   |  |   | EFSA |
| 01.034 | 2,4-Dimethylhexane            | 589-43-5   |      |       |   |  |   | EFSA |
| 01.035 | 2,6-Dimethylocta-2,4,6-triene | 673-84-7   |      |       |   |  | 2 | EFSA |
| 01.038 | Dodecane                      | 112-40-3   |      |       |   |  |   | EFSA |

## ▼M1

| (1)    | (2)                               | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 01.039 | delta-Elemene                     | 20307-84-0 |           | 10996   |   |                     |          | EFSA      |
| 01.040 | alpha-Farnesene                   | 502-61-4   | 1343      | 10998   | At least 38% alpha and 29% beta (sum of cis/trans isomers); secondary components 20% bisabolene, up to 10% other isomers (valencene, bourbonene, cadinene, guaiene) |                     | 4        | EFSA      |
| 01.045 | d-Limonene                        | 5989-27-5  | 1326      | 491     |   |                     |          | EFSA      |
| 01.046 | l-Limonene                        | 5989-54-8  |           | 491     |   |                     |          | EFSA      |
| 01.054 | Pentadecane                       | 629-62-9   |           |         |   |                     |          | EFSA      |
| 01.057 | Tetradecane                       | 629-59-4   |           |         |   |                     |          | EFSA      |
| 01.059 | 4(10)-Thujene                     | 3387-41-5  |           | 11018   |   |                     | 2        | EFSA      |
| 01.061 | Undeca-1,3,5-triene               | 16356-11-9 | 1341      |         | At least 94% (sum of cis/trans isomers); secondary component 2,4,6-undecatriene (Z,Z,E)   |                     | 4        | EFSA      |
| 01.064 | cis-3,7-Dimethyl-1,3,6-octatriene | 3338-55-4  |           |         |   |                     | 2        | EFSA      |
| 01.070 | 1-Octene                          | 111-66-0   |           |         |   |                     | 2        | EFSA      |
| 01.077 | 1-Methyl-1,3-cyclohexadiene       | 1489-56-1  | 1344      |         |   |                     |          | EFSA      |
| 02.001 | 2-Methylpropan-1-ol               | 78-83-1    | 251       | 49      |   |                     |          | JECFA     |
| 02.002 | Propan-1-ol                       | 71-23-8    | 82        | 50      |   |                     |          | JECFA     |
| 02.003 | Isopentanol                       | 123-51-3   | 52        | 51      |   |                     |          | JECFA     |
| 02.004 | Butan-1-ol                        | 71-36-3    | 85        | 52      |   |                     |          | JECFA     |
| 02.005 | Hexan-1-ol                        | 111-27-3   | 91        | 53      |   |                     |          | JECFA     |

## ▼M1

| (1)    | (2)                    | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name          | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 02.006 | Octan-1-ol             | 111-87-5   | 97        | 54      |   |                     |          | JECFA     |
| 02.007 | Nonan-1-ol             | 143-08-8   | 100       | 55      |   |                     |          | JECFA     |
| 02.008 | Dodecan-1-ol           | 112-53-8   | 109       | 56      |   |                     |          | JECFA     |
| 02.009 | Hexadecan-1-ol         | 36653-82-4 | 114       | 57      |   |                     |          | JECFA     |
| 02.010 | Benzyl alcohol         | 100-51-6   | 25        | 58      |   |                     |          | EFSA      |
| 02.011 | Citronellol            | 106-22-9   | 1219      | 59      | At least 90%; secondary components 5-8% di-unsaturated and saturated C10 alcohols, 1% citronellyl acetate, 1% citronellal |                     |          | EFSA      |
| 02.012 | Geraniol               | 106-24-1   | 1223      | 60      |   |                     |          | EFSA      |
| 02.013 | Linalool               | 78-70-6    | 356       | 61      |   |                     |          | JECFA     |
| 02.014 | alpha-Terpineol        | 98-55-5    | 366       | 62      |   |                     |          | JECFA     |
| 02.015 | Menthol                | 89-78-1    | 427       | 63      |   |                     |          | JECFA     |
| 02.016 | DL-Borneol             | 507-70-0   | 1385      | 64      |   |                     |          | EFSA      |
| 02.017 | Cinnamyl alcohol       | 104-54-1   | 647       | 65      |   |                     |          | EFSA      |
| 02.018 | Nerolidol              | 7212-44-4  | 1646      | 67      |   |                     |          | EFSA      |
| 02.019 | 2-Phenylethan-1-ol     | 60-12-8    | 987       | 68      |   |                     |          | EFSA      |
| 02.020 | Hex-2-en-1-ol          | 2305-21-7  | 1354      |         |   |                     | 2        | EFSA      |
| 02.021 | Heptan-1-ol            | 111-70-6   | 94        | 70      |   |                     |          | JECFA     |
| 02.022 | Octan-2-ol             | 123-96-6   | 289       | 71      |   |                     |          | JECFA     |
| 02.023 | Oct-1-en-3-ol          | 3391-86-4  | 1152      |         |   |                     | 1        | EFSA      |
| 02.024 | Decan-1-ol             | 112-30-1   | 103       | 73      |   |                     |          | JECFA     |
| 02.026 | 3,7-Dimethyloctan-1-ol | 106-21-8   | 272       | 75      | At least 90%; secondary components 5-7% geraniol and citronello   |                     |          | JECFA     |

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| (1)    | (2)                                      | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                            | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.027 | (-)-Rhodinol                             | 6812-78-8  | 1222      | 76      |   |                     |          | EFSA      |
| 02.028 | 3,7-Dimethyloctan-3-ol                   | 78-69-3    | 357       | 77      |   |                     |          | JECFA     |
| 02.029 | 3,7,11-Trimethyldodeca-2,6,10-trien-1-ol | 4602-84-0  | 1230      | 78      |   |                     |          | EFSA      |
| 02.030 | alpha-Pentylcinnamyl alcohol             | 101-85-9   | 674       | 79      |   |                     |          | EFSA      |
| 02.031 | 3-Phenylpropan-1-ol                      | 122-97-4   | 636       | 80      |   |                     |          | EFSA      |
| 02.033 | 1-Phenylpropan-1-ol                      | 93-54-9    | 822       | 82      |   |                     |          | EFSA      |
| 02.034 | 1-Phenylpentan-2-ol                      | 705-73-7   | 825       | 83      |   |                     |          | EFSA      |
| 02.035 | 2-Methyl-1-phenylpropan-2-ol             | 100-86-7   | 1653      | 84      |   |                     |          | EFSA      |
| 02.036 | 4-Phenylbutan-2-ol                       | 2344-70-9  | 815       | 85      |   |                     |          | EFSA      |
| 02.037 | 3-Methyl-1-phenylpentan-3-ol             | 10415-87-9 | 1649      | 86      |   |                     |          | EFSA      |
| 02.038 | Fenchyl alcohol                          | 1632-73-1  | 1397      | 87      |   |                     |          | EFSA      |
| 02.039 | 4-Isopropylbenzyl alcohol                | 536-60-7   | 864       | 88      |   |                     |          | EFSA      |
| 02.040 | Pentan-1-ol                              | 71-41-0    | 88        | 514     |   |                     |          | JECFA     |
| 02.041 | 2-Methylbutan-2-ol                       | 75-85-4    |           | 515     |   |                     |          | EFSA      |
| 02.042 | 2-(4-Methylphenyl)propan-2-ol            | 1197-01-9  | 1650      | 530     | At least 90%; secondary component 9-11% p-isopropenyltoluene          |                     |          | EFSA      |
| 02.043 | 2-Ethylbutan-1-ol                        | 97-95-0    |           | 543     |   |                     |          | SCF/CoE   |
| 02.044 | Heptan-3-ol                              | 589-82-2   | 286       | 544     |   |                     |          | JECFA     |
| 02.045 | Heptan-2-ol                              | 543-49-7   | 284       | 554     |   |                     |          | JECFA     |

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| (1)    | (2)                          | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.047 | 3,7-Dimethyloctane-1,7-diol  | 107-74-4   | 610       | 559     |   |                     |          | JECFA     |
| 02.049 | Nona-2,6-dien-1-ol           | 7786-44-9  | 1184      | 589     |   |                     | 2        | EFSA      |
| 02.050 | Pent-2-en-1-ol               | 20273-24-9 | 1793      | 665     |   |                     | 2        | EFSA      |
| 02.051 | 5-Phenylpentan-1-ol          | 10521-91-2 | 675       | 674     |   |                     |          | EFSA      |
| 02.052 | 2-Methylpropan-2-ol          | 75-65-0    |           | 698     |   |                     |          | EFSA      |
| 02.054 | p-Menthane-1,8-diol          | 80-53-5    |           | 701     |   |                     |          | EFSA      |
| 02.055 | 3,5,5-Trimethylhexan-1-ol    | 3452-97-9  | 268       | 702     |   |                     |          | JECFA     |
| 02.056 | Hex-3(cis)-en-1-ol           | 928-96-1   | 315       | 750c    |   |                     |          | JECFA     |
| 02.057 | Undecan-1-ol                 | 112-42-5   | 106       | 751     |   |                     |          | JECFA     |
| 02.058 | (Z)-Nerol                    | 106-25-2   | 1224      | 2018    |   |                     |          | EFSA      |
| 02.059 | DL-Isoborneol                | 124-76-5   | 1386      | 2020    | At least 92%; secondary component 3-5% borneol                        |                     |          | EFSA      |
| 02.060 | p-Mentha-1,8-dien-7-ol       | 536-59-4   | 974       |         |   |                     | 2        | EFSA      |
| 02.061 | Dihydrocarveol               | 619-01-2   | 378       | 2025    |   |                     |          | JECFA     |
| 02.062 | Carveol                      | 99-48-9    | 381       | 2027    |   |                     |          | JECFA     |
| 02.063 | d-Neomenthol                 | 2216-52-6  | 428       | 2028    |   |                     |          | JECFA     |
| 02.064 | 1-Phenylethan-1-ol           | 98-85-1    | 799       | 2030    |   |                     |          | EFSA      |
| 02.065 | 4-Methyl-1-phenylpentan-2-ol | 7779-78-4  | 827       | 2031    |   |                     |          | EFSA      |
| 02.066 | 4-Phenylbut-3-en-2-ol        | 17488-65-2 | 819       |         |   |                     | 2        | EFSA      |

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| (1)    | (2)                            | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.067 | 1R,2S,5R-isopulegol            | 89-79-2    | 755       | 2033    |   |                     | 4        | EFSA      |
| 02.070 | Cyclohexanol                   | 108-93-0   |           | 2138    |   |                     |          | EFSA      |
| 02.071 | p-Menthan-2-ol                 | 499-69-4   | 376       | 2228    |   |                     |          | JECFA     |
| 02.072 | 4-Terpinenol                   | 562-74-3   | 439       | 2229    |   |                     |          | JECFA     |
| 02.073 | 2-Phenylpropan-1-ol            | 1123-85-9  | 1459      | 2257    |   |                     |          | EFSA      |
| 02.074 | Hex-4-en-1-ol                  | 6126-50-7  | 318       | 2295    |   |                     |          | JECFA     |
| 02.075 | (1R,2S,5S)-neo-Dihydro-carveol | 18675-33-7 |           | 2296    |   |                     |          | EFSA      |
| 02.076 | 2-Methylbutan-1-ol             | 137-32-6   | 1199      | 2346    |   |                     |          | EFSA      |
| 02.077 | Pentan-3-ol                    | 584-02-1   |           | 2349    |   |                     |          | EFSA      |
| 02.078 | Ethanol                        | 64-17-5    | 41        | 11891   |   |                     |          | JECFA     |
| 02.079 | Isopropanol                    | 67-63-0    | 277       |         |   |                     |          | JECFA     |
| 02.080 | 1-(p-Tolyl)ethan-1-ol          | 536-50-5   | 805       | 10197   |   |                     |          | EFSA      |
| 02.081 | 2,6-Dimethylheptan-4-ol        | 108-82-7   | 303       | 11719   | At least 90%; secondary component 8-9% 2-heptanol                     |                     |          | JECFA     |
| 02.082 | 2-Ethylhexan-1-ol              | 104-76-7   | 267       | 11763   |   |                     |          | JECFA     |
| 02.083 | p-Menth-1-en-3-ol              | 491-04-3   | 434       | 10248   |   |                     |          | JECFA     |
| 02.085 | Sabinene hydrate               | 546-79-2   | 441       | 10309   |   |                     |          | JECFA     |
| 02.086 | Undecan-2-ol                   | 1653-30-1  | 297       | 11826   |   |                     |          | JECFA     |
| 02.087 | Nonan-2-ol                     | 628-99-9   | 293       | 11803   |   |                     |          | JECFA     |
| 02.088 | Pentan-2-ol                    | 6032-29-7  | 280       | 11696   |   |                     |          | JECFA     |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.089 | Hexan-3-ol                                      | 623-37-0   | 282       | 11775   |   |                     |          | JECFA     |
| 02.090 | Non-2(trans)-en-1-ol                            | 31502-14-4 | 1365      | 10292   |   |                     | 2        | EFSA      |
| 02.091 | Myrtenol  | 515-00-4   | 981       | 10285   |   |                     | 2        | EFSA      |
| 02.092 | Dehydrodihydroionol                             | 57069-86-0 | 397       | 10195   | At least 70%; secondary component 25-27% tetrahydroionone             |                     |          | JECFA     |
| ▼ M3   |   |            |           |         |   |                     |          |           |
| 02.093 | (Z)-Non-6-en-1-ol                               | 35854-86-5 | 324       | 10294   |   |                     |          | JECFA     |
| ▼ M1   |   |            |           |         |   |                     |          |           |
| 02.094 | Oct-3-en-1-ol                                   | 20125-84-2 | 321       | 10296   |   |                     |          | JECFA     |
| 02.095 | 2-Ethylfenchol                                  | 18368-91-7 | 440       | 10208   |   |                     |          | JECFA     |
| 02.096 | 1-Terpinenol                                    | 586-82-3   | 373       | 10252   |   |                     |          | JECFA     |
| 02.097 | beta-Terpineol                                  | 138-87-4   | 374       | 10254   |   |                     |          | JECFA     |
| 02.098 | Octan-3-ol                                      | 589-98-0   | 291       | 11715   |   |                     |          | JECFA     |
| 02.099 | Pent-1-en-3-ol                                  | 616-25-1   | 1150      | 11717   |   |                     | 1        | EFSA      |
| 02.100 | Pinocarveol                                     | 5947-36-4  | 1403      | 10303   |   |                     |          | EFSA      |
| 02.101 | Pin-2-en-4-ol                                   | 473-67-6   | 1404      | 10304   |   |                     |          | EFSA      |
| 02.102 | Oct-3-en-2-ol                                   | 76649-14-4 | 1140      |         |   |                     | 1        | EFSA      |
| 02.103 | Decan-3-ol                                      | 1565-81-7  | 295       | 10194   |   |                     |          | JECFA     |
| 02.104 | Hex-1-en-3-ol                                   | 4798-44-1  | 1151      | 10220   |   |                     | 1        | EFSA      |
| 02.105 | 4-(2,6,6-Trimethyl-2-cyclohexenyl)but-3-en-2-ol | 25312-34-9 | 391       |         |   |                     | 2        | JECFA     |
| 02.106 | 4-(2,2,6-Trimethyl-1-cyclohexenyl)but-3-en-2-ol | 22029-76-1 | 392       |         | At least 92%; secondary components 3-8% ionol and ionone              |                     | 2        | JECFA     |
| 02.107 | Dihydro-beta-ionol                              | 3293-47-8  | 395       |         |   |                     |          | JECFA     |



▼ **M1**

| (1)         | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name                                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.108      | 2-Methyl-4-phenylbutan-2-ol                   | 103-05-9   | 1477      | 10281   |   |                     |          | EFSA      |
| 02.109      | 3-Methylbut-2-en-1-ol                         | 556-82-1   | 1200      | 11795   |   |                     |          | EFSA      |
| ▼ <b>M3</b> |   |            |           |         |   |                     |          |           |
| 02.110      | 2,6-Dimethylhept-6-en-1-ol                    | 36806-46-9 | 348       |         | At least 90 %; secondary component 5-10 % 2,6-dimethyl-5-hepten-1-ol  |                     |          | JECFA     |
| ▼ <b>M1</b> |   |            |           |         |   |                     |          |           |
| 02.111      | 3-Methylbutan-2-ol                            | 598-75-4   | 300       |         |   |                     |          | JECFA     |
| 02.112      | Non-2(cis)-en-1-ol                            | 41453-56-9 | 1369      | 10292   |   |                     | 2        | EFSA      |
| 02.113      | Oct-5(cis)-en-1-ol                            | 64275-73-6 | 322       |         | At least 90%; secondary component 7-9% trans-5-octen-1-ol             |                     |          | JECFA     |
| 02.114      | 2-(2,2,3-Trimethylcyclopent-3-enyl)ethan-1-ol | 1901-38-8  | 970       |         |   |                     |          | EFSA      |
| 02.115      | 3-Methylpentan-1-ol                           | 589-35-5   | 263       | 10275   |   |                     |          | JECFA     |
| 02.119      | Cedrenol                                      | 28231-03-0 |           | 10189   |   |                     |          | EFSA      |
| 02.120      | (+)-Cedrol                                    | 77-53-2    |           | 10190   |   |                     |          | EFSA      |
| 02.121      | Butan-2-ol                                    | 78-92-2    |           | 11735   |   |                     |          | SCF/CoE   |
| ▼ <b>M4</b> |   |            |           |         |   |                     |          |           |
| ▼ <b>M1</b> |   |            |           |         |   |                     |          |           |
| 02.123      | 2-Methylbut-3-en-2-ol                         | 115-18-4   |           | 11794   |   |                     |          | EFSA      |
| 02.124      | 6-Methylhept-5-en-2-ol                        | 1569-60-4  |           | 10264   |   |                     |          | EFSA      |
| 02.125      | Undec-10-en-1-ol                              | 112-43-6   |           | 10319   |   |                     |          | EFSA      |
| 02.126      | Tetradecan-1-ol                               | 112-72-1   |           | 10314   |   |                     |          | EFSA      |
| 02.128      | p-Anisyl alcohol                              | 105-13-5   | 871       | 66      |   |                     |          | EFSA      |

## ▼ M1

| (1)    | (2)   | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                          | Restrictions of Use | Footnote | Reference |
| 02.129 | (1)-alpha-Bisabolol                                     | 23089-26-1 |           | 10178   | Sum of isomers at least 95%  |                     |          | EFSA      |
| 02.131 | But-3-en-2-ol   | 598-32-3   |           |         |  |                     | 1        | EFSA      |
| 02.132 | Butane-1,3-diol   | 107-88-0   |           |         |  |                     |          | EFSA      |
| 02.133 | Butane-2,3-diol   | 513-85-9   |           | 10181   |  |                     |          | EFSA      |
| 02.134 | 2-Cyclohexylethan-1-ol                                  | 4442-79-9  |           |         |  |                     |          | EFSA      |
| 02.135 | Cyclopentanol   | 96-41-3    |           | 10193   |  |                     |          | EFSA      |
| 02.136 | Dec-1-en-3-ol   | 51100-54-0 | 1153      |         |  |                     | 1        | EFSA      |
| 02.137 | Dec-2-en-1-ol   | 22104-80-9 | 1794      | 11750   |  |                     | 2        | EFSA      |
| 02.138 | Dec-9-en-1-ol   | 13019-22-2 |           |         |  |                     |          | EFSA      |
| 02.139 | Deca-2,4-dien-1-ol                                      | 18409-21-7 | 1189      |         |  |                     | 2        | EFSA      |
| 02.140 | 1,2-Dihydrolinalool                                     | 2270-57-7  |           |         |  |                     |          | EFSA      |
| 02.141 | 2-(6,6-Dimethyl-bicyclo[3.1.1]hept-2-en-2-yl)ethan-1-ol | 128-50-7   | 986       |         |  |                     |          | EFSA      |
| 02.142 | 3,3-Dimethylbutan-2-ol                                  | 464-07-3   |           |         |  |                     |          | EFSA      |
| 02.144 | 2,6-Dimethyloct-7-en-2-ol                               | 18479-58-8 |           |         |  |                     |          | EFSA      |
| ▼ M3   |   |            |           |         |  |                     |          |           |
| 02.145 | 2,6-Dimethylocta-1,5,7-trien-3-ol                       | 29414-56-0 |           |         |  |                     |          | EFSA      |
| ▼ M1   |   |            |           |         |  |                     |          |           |
| 02.146 | (E)-3,7-Dimethylocta-1,5,7-trien-3-ol                   | 53834-70-1 |           | 10202   | At least 93%; secondary components 2-3% linalool, 1-2% linalool oxide and up to 1% nerol oxide |                     | 4        | EFSA      |
| 02.147 | 3,6-Dimethyloctan-3-ol                                  | 151-19-9   |           |         |  |                     |          | EFSA      |
| 02.148 | Dodecan-2-ol  | 10203-28-8 |           | 11760   |  |                     |          | EFSA      |

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| (1)    | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.149 | (-)-alpha-Elemol                      | 639-99-6   |           | 10205   |   |                     |          | EFSA      |
| 02.150 | (E,E)-geranyl linalool                | 1113-21-9  |           |         |   |                     |          | EFSA      |
| 02.152 | Hept-3-en-1-ol                        | 10606-47-0 |           | 10219   |   |                     |          | EFSA      |
| 02.153 | Hepta-2,4-dien-1-ol                   | 33467-79-7 | 1784      |         |   |                     | 2        | EFSA      |
| 02.154 | Heptadecan-1-ol                       | 1454-85-9  |           |         |   |                     |          | EFSA      |
| 02.155 | 1-Hepten-3-ol                         | 4938-52-7  | 1842      | 10218   |   |                     | 1        | EFSA      |
| 02.156 | Hex-2(cis)-en-1-ol                    | 928-94-9   | 1374      | 69      | At least 92%; secondary component 3-4% hex-2(trans)-en-1-ol           |                     | 2        | EFSA      |
| 02.159 | Hex-3-en-1-ol                         | 544-12-7   | 315       | 750     |   |                     |          | SCF/CoE   |
| 02.162 | Hexa-2,4-dien-1-ol                    | 111-28-4   | 1174      |         |   |                     | 2        | EFSA      |
| 02.164 | 4-Hydroxy-3,5-dimethoxybenzyl alcohol | 530-56-3   |           |         |   |                     |          | EFSA      |
| 02.165 | 4-Hydroxybenzyl alcohol               | 623-05-2   | 955       |         |   |                     |          | EFSA      |
| 02.166 | 2-(4-Hydroxyphenyl)ethan-1-ol         | 501-94-0   |           | 10226   |   |                     |          | EFSA      |
| 02.167 | (1R,2R,5S)-Isodihydrocarveol          | 18675-35-9 |           |         |   |                     |          | EFSA      |
| 02.168 | Isophytol                             | 505-32-8   |           | 10233   |   |                     |          | EFSA      |
| 02.170 | (R)-(-)-Lavandulol                    | 498-16-8   |           |         |   |                     |          | EFSA      |
| 02.171 | p-Menthan-8-ol                        | 498-81-7   |           |         |   |                     |          | EFSA      |
| 02.173 | 3-(4-Methoxyphenyl)propan-1-ol        | 5406-18-8  |           |         |   |                     |          | EFSA      |
| 02.174 | 2-Methylbut-2-en-1-ol                 | 4675-87-0  |           | 10258   |   |                     | 1        | EFSA      |

▼ **M1**

| (1)         | (2)                      | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|--------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name            | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.175      | 2-Methylbut-3-en-1-ol    | 4516-90-9  |           | 10259   |   |                     |          | EFSA      |
| 02.176      | 3-Methylbut-3-en-1-ol    | 763-32-6   |           | 10260   |   |                     |          | EFSA      |
| 02.177      | 2-Methylhexan-3-ol       | 617-29-8   |           | 10266   |   |                     |          | EFSA      |
| 02.178      | 2-Methyloctan-1-ol       | 818-81-5   |           |         |   |                     |          | EFSA      |
| 02.180      | 4-Methylpentan-1-ol      | 626-89-1   |           | 10278   |   |                     |          | EFSA      |
| 02.181      | 2-Methylpentan-2-ol      | 590-36-3   |           | 10274   |   |                     |          | EFSA      |
| 02.182      | 3-Methylpentan-2-ol      | 565-60-6   |           | 10276   |   |                     |          | EFSA      |
| 02.183      | 4-Methylpentan-2-ol      | 108-11-2   |           | 10279   |   |                     |          | EFSA      |
| 02.184      | 3-Methylpentan-3-ol      | 77-74-7    |           | 10277   |   |                     |          | EFSA      |
| 02.186      | Myrtanol                 | 514-99-8   |           |         |   |                     |          | EFSA      |
| 02.187      | Non-1-en-3-ol            | 21964-44-3 |           | 10291   |   |                     | 1        | EFSA      |
| 02.188      | Nona-2,4-dien-1-ol       | 62488-56-6 | 1183      | 11802   | At least 92%; secondary component 3-4% 2-nonen-1-ol                   |                     | 2        | EFSA      |
| 02.189      | (Z,Z)-Nona-3,6-dien-1-ol | 76649-25-7 | 1283      | 10289   |   |                     |          | EFSA      |
| 02.190      | Nonan-3-ol               | 624-51-1   |           | 10290   |   |                     |          | EFSA      |
| 02.192      | Oct-2-en-1-ol            | 22104-78-5 |           |         |   |                     | 2        | EFSA      |
| 02.193      | Oct-2-en-4-ol            | 4798-61-2  | 1141      |         |   |                     | 1        | EFSA      |
| ▼ <b>M3</b> |                          |            |           |         |   |                     |          |           |
| 02.194      | Octa-1,5-dien-3-ol       | 83861-74-9 |           |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |                          |            |           |         |   |                     |          |           |
| 02.195      | Octa-(3Z,5E)-dien-1-ol   | 70664-96-9 |           |         |   |                     |          | EFSA      |
| 02.196      | Octadecan-1-ol           | 112-92-5   |           |         |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 02.197 | 1,2,3,4,4a,5,6,7-Octahydro-2,5,5-trimethylnaphthalen-2-ol | 41199-19-3 |           | 10173   |   |                     |          | EFSA      |
| 02.198 | Octane-1,3-diol   | 23433-05-8 |           |         |   |                     |          | EFSA      |
| 02.201 | Pent-4-en-1-ol  | 821-09-0   |           |         |   |                     |          | EFSA      |
| 02.202 | Pentadecan-1-ol   | 629-76-5   |           |         |   |                     |          | EFSA      |
| 02.203 | 2-Phenylpropan-2-ol                                       | 617-94-7   |           | 11704   |   |                     |          | EFSA      |
| 02.204 | Phytol  | 150-86-7   | 1832      | 10302   |   |                     |          | EFSA      |
| 02.205 | Piperonyl alcohol   | 495-76-1   |           | 10306   |   |                     |          | EFSA      |
| 02.206 | (-)-Sclareol  | 515-03-7   |           | 10311   |   |                     |          | EFSA      |
| 02.207 | Thujyl alcohol  | 21653-20-3 | 1865      |         |   |                     |          | EFSA      |
| 02.209 | 3,3,5-Trimethylcyclohexan-1-ol                            | 116-02-9   | 1099      |         |   |                     |          | EFSA      |
| 02.210 | Undec-2-en-1-ol   | 37617-03-1 | 1384      |         |   |                     | 2        | EFSA      |
| 02.211 | Undeca-1,5-dien-3-ol                                      | 56722-23-7 |           |         |   |                     |          | EFSA      |
| 02.213 | Vanillyl alcohol  | 498-00-0   | 886       | 690     |   |                     |          | EFSA      |
| 02.214 | Vetiverol   | 89-88-3    | 1866      | 10321   |   |                     | 2        | EFSA      |
| 02.216 | 12-beta-Santalén-14-ol                                    | 77-42-9    |           | 74      |   |                     | 2        | EFSA      |
| 02.217 | 12-alpha-Santalén-14-ol                                   | 115-71-9   |           | 74      |   |                     | 2        | EFSA      |
| 02.219 | 2,6-Dimethyl-2-heptanol                                   | 13254-34-7 |           |         |   |                     |          | EFSA      |
| 02.222 | 3-Pentenol-1  | 39161-19-8 |           | 10298   |   |                     |          | EFSA      |
| 02.224 | 3-(1-Menthoxy)propane-1,2-diol                            | 87061-04-9 | 1408      |         |   |                     |          | EFSA      |

▼ **M3**▼ **M1**

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                      | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 02.226 | [S-(cis)]-3,7,11-Trimethyl-1,6,10-dodecatrien-3-ol | 142-50-7    |           | 67      |   |                     |          | EFSA      |
| ▼ M3   |  |             |           |         |   |                     |          |           |
| 02.229 | (-)-3,7-Dimethyl-6-octen-1-ol                      | 7540-51-4   |           |         | At least 90 % cis-isomer; secondary components 2-6 % di-unsaturated and saturated C10 alcohols, 2-4 % citronellyl acetate and 2-3 % citronellal |                     |          | EFSA      |
| ▼ M1   |  |             |           |         |   |                     |          |           |
| 02.230 | Terpineol  | 8000-41-7   |           |         | Sum of isomers: 91-99 %. Relative contribution of each isomer: 55-75% alpha, 16-23% gamma, 1-10% cis-beta, 1-13% trans-beta, 0-1% delta         |                     |          | EFSA      |
| 02.231 | trans-2, cis-6-Nonadien-1-ol                       | 28069-72-9  |           |         |   |                     | 2        | EFSA      |
| 02.234 | (Z)-Non-3-en-1-ol                                  | 10340-23-5  |           | 10293   |   |                     |          | EFSA      |
| 02.242 | 2-Butoxyethan-1-ol                                 | 111-76-2    |           | 10182   |   |                     |          | EFSA      |
| 02.243 | (E,Z)-3,6-Nonadien-1-ol                            | 56805-23-3  | 1284      |         | At least 92%; secondary component 6% (E,E)-3,6-nonadien-1-ol  |                     |          | EFSA      |
| 02.245 | 2,3,4-Trimethyl-3-pentanol                         | 3054-92-0   | 1643      |         |   |                     |          | EFSA      |
| 02.246 | p-Menthane-3,8-diol                                | 42822-86-6  | 1416      |         |   |                     |          | EFSA      |
| 02.247 | l-Menthoxyethanol                                  | 38618-23-4  | 1853      |         |   |                     |          | EFSA      |
| 02.248 | Vanillin 3-(1-menthoxy)propane-1,2-diol acetal     | 180964-47-0 | 1879      |         |   |                     |          | EFSA      |
| 02.249 | (4Z)-Hepten-1-ol                                   | 6191-71-5   | 1280      |         |   |                     |          | EFSA      |
| 02.250 | 2,4,8-Trimethyl-7-nonen-2-ol                       | 437770-28-0 | 1644      |         |   |                     |          | EFSA      |
| 02.251 | 2,4,8-Trimethyl-3,7-nonadien-2-ol                  | 479547-57-4 | 1645      |         |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)  | (3)         | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                                    | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 02.252 | 4,8-Dimethyl-3,7-nonadien-2-ol                   | 67845-50-5  | 1841      |         |  |                     |          | EFSA      |
| 02.253 | 2,4-Dimethyl-4-nonanol                           | 74356-31-3  | 1850      |         |  |                     |          | EFSA      |
| 02.254 | (1R, 2S, 5S)-3-Menthoxy-2-methylpropane-1,2-diol | 195863-84-4 | 1411      |         |  |                     |          | EFSA      |
| 02.255 | (Z)-4-Hepten-2-ol                                | 66642-85-1  |           |         | At least 91%; secondary components (E)-4-hepten-2-ol (4-5%), 2-heptanol (up to 1%), trans-3-hepten-2-ol (up to 1%) cis-3-hepten-2-ol (up to 1%). |                     |          | EFSA      |
| 03.001 | 1,8-Cineole                                      | 470-82-6    | 1234      | 182     |  |                     |          | EFSA      |
| 03.003 | Benzyl ethyl ether                               | 539-30-0    | 1252      | 521     |  |                     |          | EFSA      |
| 03.004 | Dibenzyl ether                                   | 103-50-4    | 1256      | 11856   |  |                     |          | EFSA      |
| 03.005 | 2-Butyl ethyl ether                              | 2679-87-0   | 1231      | 10911   |  |                     |          | EFSA      |
| 03.006 | 2-Methoxyethyl benzene                           | 3558-60-9   | 1254      | 11812   |  |                     |          | EFSA      |
| 03.007 | 1,4-Cineole                                      | 470-67-7    | 1233      | 11225   | At least 75%; secondary component 20-25% 1,8-cineole.  |                     |          | EFSA      |
| 03.008 | 2-Acetoxy-1,8-cineole                            | 57709-95-2  |           |         |  |                     |          | EFSA      |
| 03.010 | Benzyl butyl ether                               | 588-67-0    | 1253      | 520     | At least 93%; secondary component 2-5% benzyl alcohol  |                     |          | EFSA      |
| 03.011 | Benzyl methyl ether                              | 538-86-3    |           | 10910   |  |                     |          | EFSA      |
| 03.012 | Benzyl octyl ether                               | 54852-64-1  |           |         |  |                     |          | EFSA      |
| 03.015 | Ethyl geranyl ether                              | 40267-72-9  |           |         |  |                     |          | EFSA      |

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| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 03.016 | Hexyl methyl ether                      | 4747-07-3  |           |         |   |                     |          | EFSA      |
| 03.019 | Prenyl ethyl ether                      | 22094-00-4 | 1232      |         |   |                     |          | EFSA      |
| 03.020 | alpha-Terpinyl methyl ether             | 14576-08-0 |           |         |   |                     |          | EFSA      |
| 03.022 | 1-Methoxy-1-decene                      | 79930-37-3 | 1802      |         |   |                     |          | EFSA      |
| 03.023 | 1-Ethoxyethyl acetate                   | 1608-72-6  |           |         |   |                     |          | EFSA      |
| 03.024 | Digeranyl ether                         | 31147-36-1 |           |         |   |                     |          | EFSA      |
| 04.002 | 6-Ethoxyprop-3-enylphenol               | 94-86-0    | 1264      | 170     |   |                     |          | EFSA      |
| 04.003 | Eugenol                                 | 97-53-0    | 1529      | 171     |   |                     |          | EFSA      |
| 04.004 | Isoeugenol                              | 97-54-1    | 1260      | 172     |   |                     |          | EFSA      |
| 04.005 | 2-Methoxyphenol                         | 90-05-1    | 713       | 173     |   |                     |          | EFSA      |
| 04.006 | Thymol                                  | 89-83-8    | 709       | 174     |   |                     |          | EFSA      |
| 04.007 | 2-Methoxy-4-methylphenol                | 93-51-6    | 715       | 175     |   |                     |          | EFSA      |
| 04.008 | 4-Ethylguaiacol                         | 2785-89-9  | 716       | 176     |   |                     |          | EFSA      |
| 04.009 | 2-Methoxy-4-vinylphenol                 | 7786-61-0  | 725       | 177     |   |                     |          | EFSA      |
| 04.010 | 1-Methoxy-4-(prop-1(trans)-enyl)benzene | 4180-23-8  | 217       | 183     |   |                     |          | JECFA     |
| 04.013 | 1,2-Dimethoxy-4-(prop-1-enyl)benzene    | 93-16-3    | 1266      | 186     |   |                     |          | EFSA      |
| 04.014 | 1-Methoxy-2-methylbenzene               | 578-58-5   | 1242      | 187     |   |                     |          | EFSA      |
| 04.015 | 1-Methoxy-4-methylbenzene               | 104-93-8   | 1243      | 188     |   |                     |          | EFSA      |
| 04.016 | 1,3-Dimethoxybenzene                    | 151-10-0   | 1249      | 189     |   |                     |          | EFSA      |



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| (1)    | (2)                                       | (3)       | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-----------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                             | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 04.017 | 1-Ethoxy-2-methoxy-4-(prop-1-enyl)benzene | 7784-67-0 | 1267      | 190     |   |                     |          | EFSA      |
| 04.018 | Benzyl isoeugenyl ether                   | 120-11-6  | 1268      | 522     |   |                     |          | EFSA      |
| 04.019 | 2,5-Dimethylphenol                        | 95-87-4   | 706       | 537     |   |                     |          | EFSA      |
| 04.020 | 3,5-Dimethylphenol                        | 108-68-9  |           | 538     |   |                     |          | EFSA      |
| 04.021 | 3-Ethylphenol                             | 620-17-7  |           | 549     |   |                     |          | EFSA      |
| 04.022 | 4-Ethylphenol                             | 123-07-9  | 694       | 550     |   |                     |          | EFSA      |
| 04.026 | 3-Methylphenol                            | 108-39-4  | 692       | 617     |   |                     |          | EFSA      |
| 04.027 | 2-Methylphenol                            | 95-48-7   | 691       | 618     |   |                     |          | EFSA      |
| 04.028 | 4-Methylphenol                            | 106-44-5  | 693       | 619     |   |                     |          | EFSA      |
| 04.029 | Benzene-1,2-diol                          | 120-80-9  |           | 680     |   |                     |          | SCF/CoE   |
| 04.031 | Carvacrol                                 | 499-75-2  | 710       | 2055    |   |                     |          | EFSA      |
| 04.032 | Anisole                                   | 100-66-3  | 1241      | 2056    |   |                     |          | EFSA      |
| 04.033 | beta-Naphthyl ethyl ether                 | 93-18-5   | 1258      | 2058    |   |                     |          | EFSA      |
| 04.034 | 1,4-Dimethoxybenzene                      | 150-78-7  | 1250      | 2059    |   |                     |          | EFSA      |
| 04.035 | Diphenyl ether                            | 101-84-8  | 1255      | 2201    |   |                     |          | EFSA      |
| 04.036 | 2,6-Dimethoxyphenol                       | 91-10-1   | 721       | 2233    |   |                     |          | EFSA      |
| 04.037 | 4-Ethoxyphenol                            | 622-62-8  | 720       | 2258    |   |                     |          | EFSA      |
| 04.038 | Carvacryl ethyl ether                     | 4732-13-2 | 1247      | 11840   |   |                     |          | EFSA      |
| 04.039 | 1-Methoxy-4-propylbenzene                 | 104-45-0  | 1244      | 11835   |   |                     |          | EFSA      |

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| (1)    | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 04.040 | 1,2-Dimethoxy-4-vinylbenzene          | 6380-23-0  | 1251      | 11228   |   |                     |          | EFSA      |
| 04.041 | Phenol                                | 108-95-2   | 690       | 11811   |   |                     |          | EFSA      |
| 04.042 | 2,6-Dimethylphenol                    | 576-26-1   | 707       | 11261   |   |                     |          | EFSA      |
| 04.043 | 1-Isopropyl-2-methoxy-4-methylbenzene | 1076-56-8  | 1246      | 11245   |   |                     |          | EFSA      |
| 04.044 | 2-Isopropylphenol                     | 88-69-7    | 697       | 11234   |   |                     |          | EFSA      |
| 04.045 | 2-(Ethoxymethyl)phenol                | 20920-83-6 | 714       | 11905   |   |                     |          | EFSA      |
| 04.046 | 2-Propylphenol                        | 644-35-9   | 695       | 11908   |   |                     |          | EFSA      |
| 04.047 | Benzene-1,3-diol                      | 108-46-3   | 712       | 11250   |   |                     |          | EFSA      |
| 04.048 | 3,4-Dimethylphenol                    | 95-65-8    | 708       | 11262   |   |                     |          | EFSA      |
| 04.049 | 2-Methoxy-4-propylphenol              | 2785-87-7  | 717       |         |   |                     |          | EFSA      |
| 04.050 | 4-Propylphenol                        | 645-56-7   | 696       |         |   |                     |          | EFSA      |
| 04.051 | 4-Allyl-2,6-dimethoxyphenol           | 6627-88-9  | 726       | 11214   |   |                     |          | EFSA      |
| 04.052 | 4-Ethyl-2,6-dimethoxyphenol           | 14059-92-8 | 723       | 11231   |   |                     |          | EFSA      |
| 04.053 | 4-Methyl-2,6-dimethoxyphenol          | 6638-05-7  | 722       |         |   |                     |          | EFSA      |
| 04.054 | Isobutyl beta-naphthyl ether          | 2173-57-1  | 1259      | 11886   |   |                     |          | EFSA      |
| 04.055 | 2,6-Dimethoxy-4-prop-1-enylphenol     | 20675-95-0 | 1265      |         |   |                     |          | EFSA      |
| 04.056 | 2,6-Dimethoxy-4-propylphenol          | 6766-82-1  | 724       |         |   |                     |          | EFSA      |

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| (1)    | (2)                           | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 04.057 | 4-Vinylphenol                 | 2628-17-3  | 711       | 11257   |   |                     |          | EFSA      |
| 04.058 | 4-Allylphenol                 | 501-92-8   | 1527      | 11218   |   |                     |          | EFSA      |
| 04.059 | Carvacryl methyl ether        | 6379-73-3  |           | 11224   |   |                     |          | EFSA      |
| 04.061 | 2,6-Dimethoxy-4-vinylphenol   | 28343-22-8 |           | 11229   |   |                     |          | EFSA      |
| 04.062 | 1,2-Dimethoxybenzene          | 91-16-7    | 1248      | 10320   |   |                     |          | EFSA      |
| 04.063 | 1,3-Dimethyl-4-methoxybenzene | 6738-23-4  | 1245      |         |   |                     |          | EFSA      |
| 04.064 | 4-(1,1-Dimethylethyl)phenol   | 98-54-4    | 733       |         |   |                     |          | EFSA      |
| 04.065 | 2,3-Dimethylphenol            | 526-75-0   |           | 11258   |   |                     |          | EFSA      |
| 04.066 | 2,4-Dimethylphenol            | 105-67-9   |           | 11259   |   |                     |          | EFSA      |
| 04.067 | 1-Ethoxy-2-methoxybenzene     | 17600-72-5 |           |         |   |                     |          | EFSA      |
| 04.068 | 1-Ethoxy-4-methoxybenzene     | 5076-72-2  |           |         |   |                     |          | EFSA      |
| 04.069 | 1-Ethyl-4-methoxybenzene      | 1515-95-3  |           |         |   |                     |          | EFSA      |
| 04.070 | 2-Ethylphenol                 | 90-00-6    |           | 11232   |   |                     |          | EFSA      |
| 04.072 | 3-Isopropylphenol             | 618-45-1   |           |         |   |                     |          | EFSA      |
| 04.073 | 4-Isopropylphenol             | 99-89-8    |           |         |   |                     |          | EFSA      |
| 04.074 | 2-Methoxynaphthalene          | 93-04-9    | 1257      |         |   |                     |          | EFSA      |
| 04.075 | 1-Methoxynaphthalene          | 2216-69-5  |           |         |   |                     |          | EFSA      |
| 04.076 | 3-Methoxyphenol               | 150-19-6   |           |         |   |                     |          | EFSA      |

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| (1)    | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 04.077 | 4-Methoxyphenol                       | 150-76-5   |           | 11241   |   |                     |          | EFSA      |
| 04.078 | 5-Methyl-2-(tert-butyl)phenol         | 88-60-8    |           |         |   |                     |          | EFSA      |
| 04.079 | Methyl 4-methoxybenzyl ether          | 1515-81-7  |           |         |   |                     |          | EFSA      |
| 04.084 | 1,2,3-Trimethoxybenzene               | 634-36-6   |           |         |   |                     |          | EFSA      |
| 04.085 | 2,3,6-Trimethylphenol                 | 2416-94-6  | 737       |         |   |                     |          | EFSA      |
| 04.088 | 1-Methoxy-4-(1-propenyl)benzene       | 104-46-1   |           | 183     |   |                     |          | CoE       |
| 04.091 | Ethyl 4-hydroxybenzyl ether           | 57726-26-8 |           |         |   |                     |          | EFSA      |
| 04.092 | 4-Hydroxybenzyl methyl ether          | 5355-17-9  |           |         |   |                     |          | EFSA      |
| 04.093 | Butyl vanillyl ether                  | 82654-98-6 | 888       |         |   |                     |          | EFSA      |
| 04.094 | Ethyl 4-hydroxy-3-methoxybenzyl ether | 13184-86-6 | 887       |         |   |                     |          | EFSA      |
| 04.095 | 2,4,6-Trimethyl phenol                | 527-60-6   |           |         |   |                     |          | EFSA      |
| 04.096 | 2-Methoxy-6-(2-propenyl)phenol        | 579-60-2   | 1528      |         |   |                     |          | EFSA      |
| 04.097 | 4-Prop-1-enylphenol                   | 539-12-8   |           |         |   |                     |          | EFSA      |
| 05.001 | Acetaldehyde                          | 75-07-0    | 80        | 89      |   |                     |          | JECFA     |
| 05.002 | Propanal                              | 123-38-6   | 83        | 90      |   |                     |          | JECFA     |
| 05.003 | Butanal                               | 123-72-8   | 86        | 91      |   |                     |          | JECFA     |

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| (1)    | (2)                           | (3)       | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|-------------------------------|-----------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                 | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                | Restrictions of Use | Footnote | Reference |
| 05.004 | 2-Methylpropanal              | 78-84-2   | 252       | 92      |  |                     |          | JECFA     |
| 05.005 | Pentanal                      | 110-62-3  | 89        | 93      |  |                     |          | JECFA     |
| 05.006 | 3-Methylbutanal               | 590-86-3  | 258       | 94      |  |                     |          | JECFA     |
| 05.007 | 2-Ethylbutanal                | 97-96-1   | 256       | 95      |  |                     |          | JECFA     |
| 05.008 | Hexanal                       | 66-25-1   | 92        | 96      |  |                     |          | JECFA     |
| 05.009 | Octanal                       | 124-13-0  | 98        | 97      | At least 92%; secondary component 4-7% 2-methylheptanal                              |                     |          | JECFA     |
| 05.010 | Decanal                       | 112-31-2  | 104       | 98      | At least 92%; secondary component 4-7% 2-methylnonanal                               |                     |          | JECFA     |
| 05.011 | Dodecanal                     | 112-54-9  | 110       | 99      | At least 92%; secondary components 3-6% tetradecanal; 2-5% decanal; 1-2% hexadecanal |                     |          | JECFA     |
| 05.012 | 3,7-Dimethyl-7-hydroxyoctanal | 107-75-5  | 611       | 100     |  |                     |          | JECFA     |
| 05.013 | Benzaldehyde                  | 100-52-7  | 22        | 101     |  |                     |          | EFSA      |
| 05.014 | Cinnamaldehyde                | 104-55-2  | 656       | 102     |  |                     |          | EFSA      |
| 05.015 | 4-Methoxybenzaldehyde         | 123-11-5  | 878       | 103     |  |                     |          | EFSA      |
| 05.016 | Piperonal                     | 120-57-0  | 896       | 104     |  |                     |          | EFSA      |
| 05.017 | Veratraldehyde                | 120-14-9  | 877       | 106     |  |                     |          | EFSA      |
| 05.018 | Vanillin                      | 121-33-5  | 889       | 107     |  |                     |          | EFSA      |
| 05.019 | Ethyl vanillin                | 121-32-4  | 893       | 108     |  |                     |          | EFSA      |
| 05.020 | Citral                        | 5392-40-5 | 1225      | 109     |  |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)                     | (3)       | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|-------------|-------------------------|-----------|-----------|---------|--|---------------------|----------|-----------|
| FL No.      | Chemical Name           | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 05.021      | Citronellal             | 106-23-0  | 1220      | 110     | At least 85%; secondary components 12-14% mixture of terpenoid materials (mainly 1,8-cineole, 2-isopropylidene-5-methylcyclohexanol, linalool, citronellyl acetate and other naturally occurring terpenes) |                     |          | EFSA      |
| 05.022      | 4-Isopropylbenzaldehyde | 122-03-2  | 868       | 111     |  |                     |          | EFSA      |
| 05.023      | 2,6-Dimethyloctanal     | 7779-07-9 | 273       | 112     |  |                     |          | JECFA     |
| 05.024      | 2-Methyloctanal         | 7786-29-0 | 270       | 113     |  |                     |          | JECFA     |
| 05.025      | Nonanal                 | 124-19-6  | 101       | 114     | At least 92%; secondary component 4-8% 2-methyloctanal   |                     |          | JECFA     |
| ▼ <b>M3</b> |                         |           |           |         |  |                     |          |           |
| 05.026      | o-Tolualdehyde          | 529-20-4  |           |         |  |                     |          | EFSA      |
| ▼ <b>M1</b> |                         |           |           |         |  |                     |          |           |
| 05.027      | Tolualdehyde            | 1334-78-7 | 866       | 115     | At least 95% (sum of o,m,p-isomers)  |                     |          | EFSA      |
| ▼ <b>M3</b> |                         |           |           |         |  |                     |          |           |
| 05.028      | m-Tolualdehyde          | 620-23-5  |           |         |  |                     |          | EFSA      |
| 05.029      | p-Tolualdehyde          | 104-87-0  |           |         |  |                     |          | EFSA      |
| ▼ <b>M1</b> |                         |           |           |         |  |                     |          |           |
| 05.030      | Phenylacetaldehyde      | 122-78-1  | 1002      | 116     |  |                     |          | EFSA      |
| 05.031      | Heptanal                | 111-71-7  | 95        | 117     | At least 92%; secondary component 4-7% 2-methylhexanal   |                     |          | EFSA      |
| 05.032      | Tetradecanal            | 124-25-4  | 112       | 118     | At least 85%; secondary components 10-12% dodecanal, hexadecanal, and octadecanal  |                     |          | JECFA     |

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| (1)    | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified     | Restrictions of Use | Footnote | Reference |
| 05.033 | 2-Ethylhept-2-enal                    | 10031-88-6 | 1216      | 120     |   |                     | 1        | EFSA      |
| 05.034 | Undecanal                             | 112-44-7   | 107       | 121     | At least 92%; secondary component 4-8% 2-methyldecenal                    |                     |          | JECFA     |
| 05.035 | Undec-10-enal                         | 112-45-8   | 330       | 122     |   |                     |          | JECFA     |
| 05.036 | Undec-9-enal                          | 143-14-6   | 329       | 123     |   |                     |          | JECFA     |
| 05.037 | 2-Dodecenal                           | 4826-62-4  | 1350      | 124     | At least 93%; secondary component 3-4% 2-dodecenoic acid                  |                     | 2        | EFSA      |
| 05.038 | 2-Phenylpropanal                      | 93-53-8    | 1467      | 126     |   |                     |          | EFSA      |
| 05.039 | alpha-Butylcinnamaldehyde             | 7492-44-6  | 684       | 127     |   |                     |          | EFSA      |
| 05.040 | alpha-Pentylcinnamaldehyde            | 122-40-7   | 685       | 128     |   |                     |          | EFSA      |
| 05.041 | alpha-Hexylcinnamaldehyde             | 101-86-0   | 686       | 129     |   |                     |          | EFSA      |
| 05.042 | p-Tolylacetaldehyde                   | 104-09-6   | 1023      | 130     |   |                     |          | EFSA      |
| 05.043 | 2-(p-Tolyl)propionaldehyde            | 99-72-9    | 1471      | 131     |   |                     |          | EFSA      |
| 05.044 | p-Isopropyl phenylacetaldehyde        | 4395-92-0  | 1024      | 132     |   |                     |          | EFSA      |
| 05.045 | 3-(p-Cumenyl)-2-methylpropionaldehyde | 103-95-7   | 1465      | 133     | At least 90%; secondary component 5% 3-(p-cumenyl)-2-methylpropionic acid |                     |          | EFSA      |
| 05.046 | 2-Methyl-4-phenylbutyraldehyde        | 40654-82-8 | 1462      | 134     |   |                     |          | EFSA      |
| 05.047 | 4-Hydroxybenzaldehyde                 | 123-08-0   | 956       | 558     |   |                     |          | EFSA      |
| 05.048 | 2-Methoxycinnamaldehyde               | 1504-74-1  | 688       | 571     | At least 94%; secondary component 3% o-methoxycinnamic acid               |                     |          | EFSA      |
| 05.049 | 2-Methylbutyraldehyde                 | 96-17-3    | 254       | 575     |   |                     |          | JECFA     |
| 05.050 | alpha-Methylcinnamaldehyde            | 101-39-3   | 683       | 578     |   |                     |          | EFSA      |

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| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 05.051 | 3-(4-Methoxyphenyl)-2-methylprop-2-enal | 65405-67-6 | 689       | 584     |   |                     |          | EFSA      |
| 05.052 | 2-Methyl-3-(p-tolyl)propionaldehyde     | 41496-43-9 | 1466      | 587     |   |                     |          | EFSA      |
| 05.053 | 2,4,6-Trimethyl-1,3,5-trioxane          | 123-63-7   |           | 594     |   |                     |          | SCF/CoE   |
| 05.055 | Salicylaldehyde                         | 90-02-8    | 897       | 605     |   |                     |          | EFSA      |
| 05.056 | 4-Ethoxybenzaldehyde                    | 10031-82-0 | 879       | 626     |   |                     |          | EFSA      |
| 05.057 | Hexa-2(trans),4(trans)-dienal           | 142-83-6   | 1175      | 640     |   |                     | 2        | EFSA      |
| 05.058 | Nona-2(trans),6(cis)-dienal             | 557-48-2   | 1186      | 659     | At least 92%; secondary component 4-7% (E,E)-2,6-nonadienal   |                     | 2        | EFSA      |
| 05.059 | Non-6(cis)-enal                         | 2277-19-2  | 325       | 661     | At least 90%; secondary component 6-9% trans-6-nonenal  |                     |          | JECFA     |
| 05.060 | Oct-2-enal                              | 2363-89-5  | 1363      | 663     | At least 92%; secondary components 3-4% 2-octenoic acid and ethyl octanoate   |                     | 2        | EFSA      |
| 05.061 | Oct-6-enal                              | 63826-25-5 |           | 664     |   |                     |          | EFSA      |
| 05.062 | 2-Phenylcrotonaldehyde                  | 4411-89-6  | 1474      | 670     |   |                     | 2        | EFSA      |
| 05.064 | Trideca-2(trans),4(cis),7(cis)-trienal  | 13552-96-0 | 1198      | 685     | At least 71%; secondary components 14% 4-cis-7-cis-tridecadienol; 6% 3-cis-7-cis-tridecadienol; 5% 2-trans-7-cis-tridecadienal; 3% 2-trans-4-trans-7-cis-tridecatrienal |                     | 2        | EFSA      |
| 05.066 | 4-Ethoxy-3-methoxybenzaldehyde          | 120-25-2   |           | 703     |   |                     |          | EFSA      |
| 05.068 | 4-Ethylbenzaldehyde                     | 4748-78-1  | 865       | 705     |   |                     |          | EFSA      |
| 05.069 | 2-Methylpentanal                        | 123-15-9   | 260       | 706     |   |                     |          | JECFA     |
| 05.070 | 2-Heptenal                              | 2463-63-0  | 1360      | 730     |   |                     | 2        | SCF/CoE   |



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| (1)    | (2)                         | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|-----------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name               | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 05.071 | Nona-2,4-dienal             | 6750-03-4  | 1185      | 732     | At least 89%; secondary components 5-6% 2,4-nonadien-1-ol and 1-2% 2-nonen-1-ol  |                     | 2        | EFSA      |
| 05.072 | trans-2-Nonenal             | 18829-56-6 |           | 733     | At least 92%; secondary component 3-4% 2-nonenic acid  |                     | 2        | CoE       |
| 05.073 | Hex-2(trans)-enal           | 6728-26-3  | 1353      | 748     | At least 92%; secondary component 3-4% 2-hexenoic acid   |                     | 2        | CoE       |
| 05.074 | 2,6-Dimethylhept-5-enal     | 106-72-9   | 349       | 2006    | At least 85%; secondary components 9-10% 6-methyl-5-hepten-2-one; 1-2% 2,6-dimethyl-6-heptenal   |                     |          | JECFA     |
| 05.075 | Hex-3(cis)-enal             | 6789-80-6  | 316       | 2008    |  |                     |          | JECFA     |
| 05.076 | Dec-2-enal                  | 3913-71-1  | 1349      | 2009    | At least 92%; secondary components 3-4% 2-decenoic acid  |                     | 2        | EFSA      |
| 05.077 | 2-Methylundecanal           | 110-41-8   | 275       | 2010    |  |                     |          | JECFA     |
| 05.078 | Tridec-2-enal               | 7774-82-5  | 1359      | 2011    | At least 92%; secondary components 3-4% 2-tridecenoic acid   |                     | 2        | EFSA      |
| 05.079 | Citronellyl oxyacetaldehyde | 7492-67-3  | 592       | 2012    | At least 75%; secondary components 20-21% geranyloxyacetaldehyde; 1-2% citronellol   |                     |          | EFSA      |
| 05.080 | 3-Phenylpropanal            | 104-53-0   | 645       | 2013    |  |                     |          | EFSA      |
| 05.081 | 2,4-Decadienal              | 2363-88-4  |           |         | At least 89%; secondary components mixture of the (cis, cis)-; (cis, trans)- and (trans, cis)- 2,4-decadienals (sum of all isomers 95%); acetone and isopropanol |                     | 2        | EFSA      |
| 05.082 | (Z,Z)-3,6-Dodecadienal      | 13553-09-8 |           | 2121    |  |                     |          | EFSA      |
| 05.084 | Hepta-2,4-dienal            | 4313-03-5  | 1179      | 729     | At least 92%; secondary components 2-4% (E,Z)-2,4-heptadienal and 2-4% 2,4-heptadienoic acid   |                     | 2        | EFSA      |

## ▼ M1

| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                       | Restrictions of Use | Footnote | Reference |
| 05.085 | (Z)-Hept-4-enal                                   | 6728-31-0  | 320       | 2124    | At least 93 % of Z-form of hept-4-enal; secondary component 2-5 % of E-form of hept-4-enal. |                     |          | JECFA     |
| 05.090 | 2-Methylpent-2-enal                               | 623-36-9   | 1209      | 2129    | At least 92%; secondary components 1.5-2.5% propionaldehyde and 3.5-4.5% propionic acid     |                     | 1        | EFSA      |
| 05.091 | 2-Hydroxy-4-methylbenzaldehyde                    | 698-27-1   | 898       | 2130    |   |                     |          | EFSA      |
| 05.094 | 3-(4-Isopropylphenyl)propionaldehyde              | 7775-00-0  | 680       | 2261    | 85-90% p-isomer and 5-10% o-isomer  |                     |          | EFSA      |
| 05.095 | 2-Methylcrotonaldehyde                            | 497-03-0   | 1201      | 2281    |   |                     | 1        | EFSA      |
| 05.096 | 4-Decenal   | 30390-50-2 | 326       | 2297    |   |                     |          | JECFA     |
| 05.097 | 3-Methyl-2-phenylbutyraldehyde                    | 2439-44-3  | 1463      | 135     |   |                     |          | EFSA      |
| 05.098 | p-Menth-1-en-9-al                                 | 29548-14-9 | 971       | 10347   |   |                     |          | EFSA      |
| 05.099 | 5-Methyl-2-phenylhex-2-enal                       | 21834-92-4 | 1472      | 10365   |   |                     | 2        | EFSA      |
| 05.100 | 4-Methyl-2-phenylpent-2-enal                      | 26643-91-4 | 1473      | 10366   |   |                     | 2        | EFSA      |
| 05.101 | Penta-2,4-dienal                                  | 764-40-9   | 1173      | 11695   |   |                     | 2        | EFSA      |
| 05.102 | Pent-2-enal                                       | 764-39-6   | 1364      | 10375   |   |                     | 2        | EFSA      |
| 05.103 | 3-Phenylpent-4-enal                               | 939-21-9   | 679       | 10378   |   |                     |          | EFSA      |
| 05.104 | 2,6,6-Trimethylcyclohexa-1,3-diene-1-carbaldehyde | 116-26-7   | 977       | 10383   |   |                     |          | EFSA      |
| 05.105 | 2-Butylbut-2-enal                                 | 25409-08-9 | 1214      | 10324   |   |                     | 1        | EFSA      |
| 05.106 | Myrtenal  | 564-94-3   | 980       | 10379   |   |                     | 2        | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 05.107 | 2-Isopropyl-5-methylhex-2-enal                       | 35158-25-9 | 1215      | 10361   |   |                     | 1        | EFSA      |
| 05.108 | Undeca-2,4-dienal                                    | 13162-46-4 | 1195      | 10385   |   |                     | 2        | EFSA      |
| 05.109 | 2-Undecenal  | 2463-77-6  | 1366      | 11827   |   |                     | 2        | EFSA      |
| 05.110 | 2,4-Dimethylbenzaldehyde                             | 15764-16-6 | 869       |         |   |                     |          | EFSA      |
| 05.111 | Octa-2(trans),6(trans)-dienal                        | 56767-18-1 | 1182      | 10371   |   |                     | 2        | EFSA      |
| 05.112 | 2,6,6-Trimethylcyclohex-1-en-1-acetaldehyde          | 472-66-2   | 978       | 10338   | At least 92%; secondary components 2-3% beta-cyclocitral; 0.5-1% beta-ionone; 2-4% methyl beta-homocyclogeranate; 0.6-1% ethyl beta-homocyclogeranate |                     |          | EFSA      |
| 05.113 | Hex-4-enal   | 4634-89-3  | 319       | 10337   |   |                     |          | JECFA     |
| 05.114 | 4-Methylpent-2-enal                                  | 5362-56-1  | 1208      | 10364   |   |                     | 2        | EFSA      |
| 05.115 | 2-Phenylpent-4-enal                                  | 24401-36-3 | 1476      | 10377   |   |                     |          | EFSA      |
| 05.116 | 3,5,5-Trimethylhexanal                               | 5435-64-3  | 269       | 10384   |   |                     |          | JECFA     |
| 05.117 | p-Mentha-1,8-dien-7-al                               | 2111-75-3  | 973       | 11788   |   |                     | 2        | EFSA      |
| 05.118 | 4-Methoxycinnamaldehyde                              | 1963-36-6  | 687       | 11919   |   |                     |          | EFSA      |
| 05.119 | (1R) 2,2,3-Trimethylcyclopent-3-en-1-yl acetaldehyde | 4501-58-0  | 967       | 10325   |   |                     |          | EFSA      |
| 05.120 | Dodeca-2,6-dienal                                    | 21662-13-5 | 1197      |         |   |                     | 2        | EFSA      |

▼ **M1**

| (1)         | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 05.121      | 2,6,6-Trimethyl-1-cyclohexen-1-carboxaldehyde               | 432-25-7   | 979       | 2133    |   |                     | 2        | EFSA      |
| 05.122      | p-Methylcinnamaldehyde                                      | 1504-75-2  | 682       | 10352   |   |                     |          | EFSA      |
| 05.123      | (1R,2R,5S) 5-Isopropenyl-2-methylcyclopentanecarboxaldehyde | 55253-28-6 | 968       |         |   |                     |          | EFSA      |
| 05.124      | 3-Methylcrotonaldehyde                                      | 107-86-8   | 1202      | 10354   |   |                     |          | EFSA      |
| 05.125      | Dodeca-2,4-dienal   | 21662-16-8 | 1196      | 11758   | At least 85%; secondary component 11-12% 2-trans-4-cis isomer         |                     | 2        | EFSA      |
| 05.126      | 2-Methyloct-2-enal  | 49576-57-0 | 1217      | 10363   |   |                     | 1        | EFSA      |
| 05.127      | Octa-2(trans),4(trans)-dienal                               | 30361-28-5 | 1181      | 11805   |   |                     | 2        | EFSA      |
| 05.128      | Oct-5(cis)-enal   | 41547-22-2 | 323       |         | At least 85%; secondary component 10-15% trans-5-octenal              |                     |          | JECFA     |
| 05.129      | 2-Methoxybenzaldehyde                                       | 135-02-4   |           | 10350   |   |                     |          | EFSA      |
| 05.134      | 2-Methyl-3-tolylpropionaldehyde (mixed o,m,p-)              |            |           | 587     | At least 95% (sum of isomers p-80%; o-10%; m-5% )                     |                     |          | CoE       |
| ▼ <b>M3</b> |   |            |           |         |   |                     |          |           |
| 05.137      | Dec-4(cis)-enal   | 21662-09-9 |           |         | At least 90 %; secondary component at least 5 % trans-isomer          |                     |          | EFSA      |
| ▼ <b>M1</b> |   |            |           |         |   |                     |          |           |
| 05.139      | Dec-9-enal  | 39770-05-3 | 1286      |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 05.140 | Deca-2(trans),4(trans)-dial                            | 25152-84-5 | 1190      | 2120    | At least 89%; secondary components 3-4% mixture of ( cis-cis)-; (cis-trans)- and (trans-cis)- 2,4-decadienals; 3-4% acetone and trace of isopropanol |                     | 2        | EFSA      |
| 05.141 | Deca-2,4,7-trienal                                     | 51325-37-2 | 1786      |         |  |                     | 2        | EFSA      |
| 05.142 | 3,4-Dihydroxybenzaldehyde                              | 139-85-5   |           | 10328   |  |                     |          | EFSA      |
| 05.143 | 2,5-Dimethyl-2-vinylhex-4-enal                         | 56134-05-5 |           |         |  |                     |          | EFSA      |
| 05.144 | Dodec-2(trans)-enal                                    | 20407-84-5 |           |         | At least 93%; secondary component 2-3% 2-dodecenoic acid   |                     | 2        | EFSA      |
| 05.147 | 2-Ethylhexanal   | 123-05-7   |           | 10331   |  |                     |          | EFSA      |
| 05.148 | Farnesal   | 19317-11-4 | 1228      |         |  |                     |          | EFSA      |
| 05.149 | Glutaraldehyde   | 111-30-8   |           |         |  |                     |          | EFSA      |
| 05.150 | Hept-2(trans)-enal                                     | 18829-55-5 | 1360      | 730     |  |                     | 2        | EFSA      |
| 05.152 | Hexadecanal  | 629-80-1   |           | 10336   |  |                     |          | EFSA      |
| 05.153 | 4-Hydroxy-3,5-dimethoxybenzaldehyde                    | 134-96-3   | 1878      | 10340   |  |                     |          | EFSA      |
| 05.154 | (E)-4-Hydroxy-3,5-dimethoxycinnamaldehyde              | 4206-58-0  |           | 10341   |  |                     |          | EFSA      |
| 05.155 | 4-Hydroxy-3-methoxycinnamaldehyde (mixture of isomers) | 458-36-6   |           | 10342   |  |                     |          | EFSA      |
| 05.156 | 3-(4-Hydroxy-3-methoxyphenyl)propanal                  | 80638-48-8 |           |         |  |                     |          | EFSA      |
| 05.157 | Isocyclocitral   | 1335-66-6  |           |         |  |                     |          | EFSA      |
| 05.158 | 3-Methoxybenzaldehyde                                  | 591-31-1   |           | 10351   |  |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 05.159      | p-Methoxyphenylacetaldehyde                     | 5703-26-4  |           |         |   |                     |          | EFSA      |
| 05.160      | 2-Methyldecanal                                 | 19009-56-4 |           |         |   |                     |          | EFSA      |
| 05.164      | 2-Methylhexanal                                 | 925-54-2   |           |         |   |                     |          | EFSA      |
| 05.166      | 4-Methylpentanal                                | 1119-16-0  |           | 10369   |   |                     |          | EFSA      |
| 05.167      | 12-Methyltetradecanal                           | 75853-50-8 |           |         |   |                     |          | EFSA      |
| 05.169      | 12-Methyltridecanal                             | 75853-49-5 | 1229      |         |   |                     |          | EFSA      |
| 05.170      | Neral   | 106-26-3   |           |         |   |                     | 1        | EFSA      |
| 05.171      | Non-2-enal                                      | 2463-53-8  | 1362      | 733     | At least 92%; secondary component 3-4% 2-nonenic acid                 |                     | 2        | EFSA      |
| 05.172      | Nona-2(trans),6(trans)-dienal                   | 17587-33-6 | 1187      |         |   |                     | 2        | EFSA      |
| 05.173      | Nona-2,4,6-trienal                              | 57018-53-8 | 1785      |         |   |                     | 2        | EFSA      |
| 05.174      | Pent-4-enal                                     | 2100-17-6  | 1619      |         |   |                     |          | EFSA      |
| 05.175      | 2-Phenylpent-2-enal                             | 3491-63-2  |           |         |   |                     | 2        | EFSA      |
| 05.179      | (E)-Tetradec-2-enal                             | 51534-36-2 | 1803      |         |   |                     | 2        | EFSA      |
| ▼ <b>M3</b> |   |            |           |         |   |                     |          |           |
| 05.182      | 2,6,6-Trimethylcyclohex-2-ene-1-carboxaldehyde  | 432-24-6   |           |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |   |            |           |         |   |                     |          |           |
| 05.183      | 4-(2,6,6-Trimethylcyclohexenyl)-2-methylbutanal | 73398-85-3 |           |         |   |                     |          | EFSA      |
| 05.184      | Undec-2(trans)-enal                             | 53448-07-0 |           |         |   |                     | 2        | EFSA      |
| 05.186      | 2,4-Octadienal                                  | 5577-44-6  |           |         |   |                     | 2        | EFSA      |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 05.188 | trans-3,7-Dimethylocta-2,6-dienal                          | 141-27-5    |           |         |   |                     | 1        | EFSA      |
| 05.189 | 2-Hexenal  | 505-57-7    |           |         | At least 92%; secondary component 3-4% 2-hexenoic acid  |                     | 2        | EFSA      |
| 05.190 | trans-2-Octenal  | 2548-87-0   |           |         | At least 92%; secondary components 3-4% 2-octenoic acid and ethyl octanoate   |                     | 2        | EFSA      |
| 05.191 | trans-2-Decenal  | 3913-81-3   |           |         | At least 92%; secondary component 3-4% 2-decenoic acid  |                     | 2        | EFSA      |
| 05.192 | 3-Hexenal  | 4440-65-7   | 1271      |         | At least 80% (total of cis- and trans-isomers); secondary component 18-20% trans-2-hexenal.                           |                     |          | EFSA      |
| 05.194 | tr-2, tr-4-Nonadienal                                      | 5910-87-2   |           |         | At least 89%; secondary components at least 5% 2,4-nonadien-1-ol and 2-nonen-1-ol and other isomers of 2,4-nonadienal |                     | 2        | EFSA      |
| 05.195 | trans-2-Tridecenal   | 7069-41-2   |           |         | At least 92%; secondary components 2-5% 2-tridecenoic acid and 3-5% cis-2-tridecenal                                  |                     | 2        | EFSA      |
| 05.196 | tr-2, tr-4-Undecadienal                                    | 30361-29-6  |           | 10385   |   |                     | 2        | EFSA      |
| 05.198 | 3-Butenal, 2-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)- | 58102-02-6  |           |         |   |                     |          | EFSA      |
| 05.203 | 9-Octadecenal  | 5090-41-5   | 1641      |         |   |                     |          | EFSA      |
| 05.208 | Z-8-Tetradecenal   | 169054-69-7 | 1640      |         |   |                     |          | EFSA      |
| 05.211 | 6-Methyloctanal  | 30689-75-9  |           |         |   |                     |          | EFSA      |
| 05.217 | (Z)-5-Decenal  | 21662-08-8  |           |         |   |                     |          | EFSA      |
| 05.218 | 16-Octadecenal   | 56554-87-1  |           |         |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                            | Restrictions of Use | Footnote | Reference |
| 05.219 | 3-Methylhexanal   | 19269-28-4 |           |         |  |                     |          | EFSA      |
| 05.220 | 4Z-Dodecenal  | 21944-98-9 | 1636      |         | At least 94% of (4Z)-dodecenal; secondary component 3-4% dodecanal                               |                     |          | EFSA      |
| 05.221 | 6,6'-Dihydroxy-5,5'-dimethoxy-biphenyl-3,3'-dicarb-aldehyde | 2092-49-1  | 1881      |         |  |                     |          | EFSA      |
| 05.222 | 2-Phenyl-4-methyl-2-hexenal                                 | 26643-92-5 |           |         |  |                     | 2        | EFSA      |
| 05.223 | 4-Ethyl-octanal   | 58475-04-0 | 1819      |         |  |                     |          | EFSA      |
| 05.224 | (4E)-hexenal  | 25166-87-4 | 1622      |         |  |                     |          | EFSA      |
| 05.225 | 6-Methylheptanal  | 63885-09-6 |           |         |  |                     |          | EFSA      |
| 05.226 | E-4-Undecenal   | 68820-35-9 |           |         |  |                     |          | EFSA      |
| 06.001 | 1,1-Diethoxyethane  | 105-57-7   | 941       | 35      |  |                     |          | EFSA      |
| 06.002 | 5-Hydroxy-2-phenyl-1,3-dioxane                              | 1708-40-3  | 838       | 36      | At least 98% (sum of 5-hydroxy-2-phenyl-1,3-dioxane and 2-phenyl-4-hydroxy-methyl-1,3-dioxalane) |                     |          | EFSA      |
| 06.003 | alpha,alpha-Dimethoxytoluene                                | 1125-88-8  | 837       | 37      |  |                     |          | EFSA      |
| 06.004 | Citral diethyl acetal                                       | 7492-66-2  | 948       | 38      | At least 98% (sum of isomers + hemiacetals + citral)   |                     |          | EFSA      |
| 06.005 | Citral dimethyl acetal                                      | 7549-37-3  | 944       | 39      | At least 98% (sum of isomers + hemiacetals + citral)   |                     |          | EFSA      |
| 06.006 | 1,1-Dimethoxy-2-phenylethane                                | 101-48-4   | 1003      | 40      |  |                     |          | EFSA      |
| 06.007 | Phenylacetaldehyde glyceryl acetal                          | 29895-73-6 | 1004      | 41      | 57% 5-hydroxymethyl-2-phenyl-1,3-dioxolan; 38% 5-hydroxy-2-phenyl-1,3-dioxan                     |                     |          | EFSA      |



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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                              | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.008 | 1,1-Dimethoxyoctane                        | 10022-28-3 | 942       | 42      |   |                     |          | EFSA      |
| 06.009 | 1,1-dimethoxydecane                        | 7779-41-1  | 945       | 43      |   |                     |          | EFSA      |
| 06.010 | 1,1-Diethoxy-3,7-dimethyl-octan-7-ol       | 7779-94-4  | 613       | 44      |   |                     |          | JECFA     |
| 06.011 | 1,1-Dimethoxy-3,7-dimethyloctan-7-ol       | 141-92-4   | 612       | 45      |   |                     |          | JECFA     |
| 06.012 | Tolualdehyde glyceryl acetal               | 1333-09-1  | 867       | 46      | 40% 5-hydroxydioxane; 60% 5-hydroxy-methyldioxalane                   |                     |          | EFSA      |
| 06.013 | alpha-Pentylcinnamaldehyde dimethyl acetal | 91-87-2    | 681       | 47      |   |                     |          | EFSA      |
| 06.014 | Cinnamaldehyde ethylene glycol acetal      | 5660-60-6  | 648       | 48      |   |                     |          | EFSA      |
| 06.015 | 1,1-Dimethoxyethane                        | 534-15-6   | 940       | 510     |   |                     |          | EFSA      |
| 06.016 | 1-Phenylethoxy-1-propoxy ethane            | 7493-57-4  | 1000      | 511     |   |                     |          | EFSA      |
| 06.017 | (Diethoxymethyl)benzene                    | 774-48-1   |           | 517     |   |                     |          | EFSA      |
| 06.019 | 1-Benzyloxy-1-(2-methoxyethoxy)ethane      | 7492-39-9  | 840       | 523     |   |                     |          | EFSA      |
| 06.020 | 1,1-Diethoxydecane                         | 34764-02-8 |           | 531     |   |                     |          | SCF/CoE   |
| 06.021 | 1,1-Diethoxyheptane                        | 688-82-4   |           | 553     |   |                     |          | SCF/CoE   |
| 06.023 | 1,1-Diethoxyhexane                         | 3658-93-3  |           | 557     |   |                     |          | SCF/CoE   |
| 06.024 | 1,1-Di-isobutoxy-2-phenylethane            | 68345-22-2 | 1006      | 595     |   |                     |          | EFSA      |
| 06.025 | 1,1-Diethoxynona-2,6-diene                 | 67674-36-6 | 946       | 660     |   |                     | 2        | EFSA      |

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| (1)    | (2)  | (3)          | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|--------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.      | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified             | Restrictions of Use | Footnote | Reference |
| 06.027 | 4,5-Dimethyl-2-benzyl-1,3-dioxolan                   | 5468-06-4    | 1005      | 669     | At least 93%; secondary component 2-3% butane-2,3-diol                            |                     |          | EFSA      |
| 06.028 | 1,1-Dimethoxyheptane                                 | 10032-05-0   | 947       | 2015    |   |                     |          | EFSA      |
| 06.029 | Heptanal glyceryl acetal (mixed 1,2 and 1,3 acetals) | 72854-42-3   | 912       | 2016    | Mixture of acetals (56-58% dioxolane; 37-39% dioxane) and 1-2% unreacted heptanal |                     |          | EFSA      |
| 06.030 | 1,1-Dimethoxy-2-phenylpropane                        | 90-87-9      | 1468      | 2017    |   |                     |          | EFSA      |
| 06.031 | 1,1-Diethoxyhex-2-ene                                | 54306-00-2   | 1383      | 2135    |   |                     | 2        | EFSA      |
| 06.032 | 4-Methyl-2-phenyl-1,3-dioxolane                      | 2568-25-4    | 839       | 2226    |   |                     |          | EFSA      |
| 06.033 | 1,1-Dibutoxyethane                                   | 871-22-7     |           | 2341    |   |                     |          | SCF/CoE   |
| 06.034 | 1,1-Dipropoxyethane                                  | 105-82-8     |           | 2342    |   |                     |          | SCF/CoE   |
| 06.035 | Citral propylene glycol acetal                       | 10444-50-5   |           | 2343    |   |                     |          | SCF/CoE   |
| 06.036 | 1-Butoxy-1-(2-phenylethoxy)ethane                    | 64577-91-9   | 1001      | 10007   |   |                     |          | EFSA      |
| 06.037 | 1,1-Diethoxyhept-4-ene (cis and trans)               | 1192738-48-9 | 949       | 10011   |   |                     |          | EFSA      |
| 06.038 | 4,4-Dimethoxybutan-2-one                             | 5436-21-5    | 593       | 10029   |   |                     |          | JECFA     |
| 06.039 | 1,2-Di((1'-ethoxy)-ethoxy)propane                    | 67715-79-1   | 927       |         |   |                     |          | EFSA      |
| 06.040 | 1,2,3-Tris([1'-ethoxy]-ethoxy)propane                | 67715-82-6   | 913       | 11930   |   |                     |          | EFSA      |
| 06.041 | 1-Isobutoxy-1-ethoxy-2-methylpropane                 |              |           | 10055   |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                              | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.042 | 1-Isobutoxy-1-ethoxy-3-methylbutane        | 85136-40-9  |           | 10057   |   |                     |          | EFSA      |
| 06.043 | 1-Isoamyloxy-1-ethoxy-propane              | 238757-30-7 |           | 10038   |   |                     |          | EFSA      |
| 06.044 | 1-Isobutoxy-1-ethoxy-propane               | 67234-04-2  |           | 10058   |   |                     |          | EFSA      |
| 06.045 | 1-Isobutoxy-1-isopentyloxy-2-methylpropane |             |           | 10061   |   |                     |          | EFSA      |
| 06.046 | 1-Isobutoxy-1-isopentyloxy-3-methylbutane  |             |           | 10060   |   |                     |          | EFSA      |
| 06.047 | 1-Isopentyloxy-1-propoxyethane             | 238757-63-6 |           | 10065   |   |                     |          | EFSA      |
| 06.048 | 1-Isopentyloxy-1-propoxy-propane           | 238757-65-8 |           | 10066   |   |                     |          | EFSA      |
| 06.049 | 1-Butoxy-1-(2-methylbutoxy)ethane          | 77249-20-8  |           |         |   |                     |          | EFSA      |
| 06.050 | 1-Butoxy-1-ethoxyethane                    | 57006-87-8  |           | 10003   |   |                     |          | EFSA      |
| 06.051 | 1,1-Di-(2-methylbutoxy)ethane              | 13535-43-8  |           |         |   |                     |          | EFSA      |
| 06.052 | 1,1-Di-isobutoxy-2-methylpropane           | 13262-24-3  |           | 10025   |   |                     |          | EFSA      |
| 06.053 | 1,1-Di-isobutoxyethane                     | 5669-09-0   |           | 10023   |   |                     |          | EFSA      |
| 06.054 | 1,1-Di-isobutoxypentane                    | 13262-27-6  |           | 10026   |   |                     |          | EFSA      |
| 06.055 | 1,1-Di-isopentyloxyethane                  | 13002-09-0  | 1729      | 10028   |   |                     |          | EFSA      |

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| (1)    | (2)                           | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.057 | 1,1-Diethoxy-2-methylbutane   | 3658-94-4  |           | 10013   |   |                     |          | EFSA      |
| 06.058 | 1,1-Diethoxy-2-methylpropane  | 1741-41-9  |           | 10015   |   |                     |          | EFSA      |
| 06.059 | 1,1-Diethoxy-3-methylbutane   | 3842-03-3  | 1730      | 10014   |   |                     |          | EFSA      |
| 06.061 | 1,1-Diethoxybutane            | 3658-95-5  |           | 10009   |   |                     |          | EFSA      |
| 06.062 | 1,1-Diethoxydodecane          | 53405-98-4 |           |         |   |                     |          | EFSA      |
| 06.063 | (Z)-1,1-diethoxyhex-3-ene     | 73545-18-3 |           |         |   |                     |          | EFSA      |
| 06.064 | Diethoxymethane               | 462-95-3   |           | 10012   |   |                     |          | EFSA      |
| 06.065 | 1,1-Diethoxynonane            | 54815-13-3 |           | 10016   |   |                     |          | EFSA      |
| 06.066 | 1,1-Diethoxyoctane            | 54889-48-4 |           |         |   |                     |          | EFSA      |
| 06.067 | 1,1-Diethoxypentane           | 3658-79-5  |           | 10017   |   |                     |          | EFSA      |
| 06.069 | 1,1-Diethoxypropane           | 4744-08-5  |           | 10018   |   |                     |          | EFSA      |
| 06.070 | 1,1-Diethoxyundecane          | 53405-97-3 |           |         |   |                     |          | EFSA      |
| 06.071 | 1,1-Dihexyloxyethane          | 5405-58-3  |           | 10022   |   |                     |          | EFSA      |
| 06.072 | 1,1-Dimethoxyhex-2(trans)-ene | 18318-83-7 | 1728      |         |   |                     | 2        | EFSA      |
| 06.073 | 1,1-Dimethoxyhexane           | 1599-47-9  |           |         |   |                     |          | EFSA      |
| 06.074 | Dimethoxymethane              | 109-87-5   |           | 10031   |   |                     |          | EFSA      |
| 06.075 | 1,1-Dimethoxypentane          | 26450-58-8 |           |         |   |                     |          | EFSA      |
| 06.076 | 1,1-Dimethoxypropane          | 4744-10-9  |           |         |   |                     |          | EFSA      |
| 06.077 | 2,4-Dimethyl-1,3-dioxolane    | 3390-12-3  | 1711      |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                              | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.078 | 1,1-Diphenethoxyethane                     | 122-71-4   |           |         |   |                     |          | EFSA      |
| 06.079 | 1-Ethoxy-1-(2-methylbutoxy)ethane          | 13602-09-0 |           | 10040   |   |                     |          | EFSA      |
| 06.080 | 1-Ethoxy-1-(2-phenylethoxy)ethane          | 2556-10-7  |           | 10049   |   |                     |          | EFSA      |
| 06.081 | (Z)-1-Ethoxy-1-(3-hexenyl)ethane           | 28069-74-1 | 943       | 10034   |   |                     |          | EFSA      |
| 06.082 | 1-Ethoxy-1-hexyloxyethane                  | 54484-73-0 |           | 11948   |   |                     |          | EFSA      |
| 06.083 | 1-Ethoxy-1-isopentyloxyethane              | 13442-90-5 |           | 10037   |   |                     |          | EFSA      |
| 06.084 | 1-Ethoxy-1-methoxyethane                   | 10471-14-4 |           | 10039   |   |                     |          | EFSA      |
| 06.085 | 1-Ethoxy-1-pentyloxyethane                 | 13442-89-2 |           | 10046   |   |                     |          | EFSA      |
| 06.086 | 1-Ethoxy-1-propoxyethane                   | 20680-10-8 |           | 10050   |   |                     |          | EFSA      |
| 06.087 | Ethyl 2,4-dimethyl-1,3-dioxolane-2-acetate | 6290-17-1  | 1715      |         |   |                     |          | EFSA      |
| 06.088 | 2-Ethyl-4-methyl-1,3-dioxolane             | 4359-46-0  |           |         |   |                     |          | EFSA      |
| 06.089 | 2-Hexyl-4,5-dimethyl-1,3-dioxolane         | 6454-22-4  | 1712      |         |   |                     |          | EFSA      |
| 06.090 | 4-Hydroxymethyl-2-methyl-1,3-dioxolane     | 3773-93-1  |           |         |   |                     |          | EFSA      |
| 06.091 | 1-Isobutoxy-1-ethoxyethane                 | 6986-51-2  |           | 10054   |   |                     |          | EFSA      |

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| (1)    | (2)                                     | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.092 | 1-Isobutoxy-1-isopentyloxyethane        | 75048-15-6  |           | 10059   |   |                     |          | EFSA      |
| 06.094 | 4-Methyl-2-pentyl-1,3-dioxolane         | 1599-49-1   | 928       |         |   |                     |          | EFSA      |
| 06.095 | 4-Methyl-2-propyl-1,3-dioxolane         | 4352-99-2   |           |         |   |                     |          | EFSA      |
| 06.096 | Triethoxymethane                        | 122-51-0    |           | 10903   |   |                     |          | EFSA      |
| 06.097 | 1,1,3-Triethoxypropane                  | 7789-92-6   |           | 10075   |   |                     |          | EFSA      |
| 06.098 | 2,2,4-Trimethyl-1,3-dioxolane           | 1193-11-9   | 929       | 11423   |   |                     |          | EFSA      |
| 06.100 | 1,1-Dipentyloxyethane                   | 13002-08-9  |           | 10032   |   |                     |          | EFSA      |
| 06.102 | 2-Hexyl-5-hydroxy-1,3-dioxane           | 1708-36-7   |           | 2016    |   |                     |          | EFSA      |
| 06.104 | Vanillin propylene glycol acetal        | 68527-74-2  | 1882      |         |   |                     |          | EFSA      |
| 06.105 | 3-Methyl-1,1-di-isopentyloxybutane      | 13285-51-3  |           | 10070   |   |                     |          | EFSA      |
| 06.106 | 2-Methyl-1,1-di-isopentyloxypropane     | 13112-63-5  |           | 10071   |   |                     |          | EFSA      |
| 06.107 | 1-(2-Methylbutoxy)-1-isopentyloxyethane | 13548-84-0  |           | 10068   |   |                     |          | EFSA      |
| 06.109 | 8,8-Diethoxy-2,6-dimethyloct-2-ene      | 71662-17-4  |           |         |   |                     |          | EFSA      |
| 06.111 | 1-Ethoxy-1-methoxypropane               | 127248-84-4 |           |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 06.114 | 1-Hexyloxy-1-isopentyloxyethane                            | 233665-90-2 |           |         |   |                     |          | EFSA      |
| 06.115 | 1-isopentyloxy-1-pentyloxyethane                           | 13442-92-7  |           |         |   |                     |          | EFSA      |
| 06.120 | DL-Menthone-1,2-glycerol ketal                             | 63187-91-7  | 446       |         |   |                     |          | JECFA     |
| 06.123 | 1-Butoxy-1-isopentyloxyethane                              | 238757-27-2 |           | 10004   |   |                     |          | EFSA      |
| 06.124 | 1,1-Di-isobutoxy-3-methylbutane                            | 13439-98-0  |           | 10024   |   |                     |          | EFSA      |
| 06.125 | 1,1-Di-isobutoxypropane                                    | 13002-11-4  |           | 10027   |   |                     |          | EFSA      |
| 06.128 | 1-Ethoxy-1-pentyloxybutane                                 | 3658-92-2   |           | 10045   |   |                     |          | EFSA      |
| 06.129 | 1-Ethoxy-2-methyl-1-isopentyloxypropane                    | 253679-74-2 |           | 10043   |   |                     |          | EFSA      |
| 06.130 | 1-Ethoxy-2-methyl-1-propoxypropane                         | 238757-42-1 |           | 10044   |   |                     |          | EFSA      |
| 06.131 | 1-Ethoxy-1-(3-methylbutoxy)-3-methylbutane                 | 238757-35-2 |           | 10042   |   |                     |          | EFSA      |
| 06.132 | Vanillin butan-2,3-diol acetal (mixture of stereo isomers) | 63253-24-7  | 960       |         |   |                     |          | EFSA      |
| 06.133 | l-Menthone-1,2-glycerol ketal                              | 563187-91-7 | 445       |         |   |                     |          | JECFA     |
| 06.135 | 2-Isobutyl-4-methyl-1,3-dioxolane                          | 18433-93-7  | 1732      |         |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)         |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-------------|
| FL No. | Chemical Name   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference   |
| 06.136 | 6-Isopropyl-3,9-dimethyl-1,4-dioxyspiro[4.5]decan-2-one | 831213-72-0 | 1859      |         | Sum of isomers 98% with at least 60-70% (3S,5R,6S,9R)- 6-isopropyl-3,9-dimethyl-1,4-dioxyspiro[4.5]decan-2-one. |                     |          | EFSA        |
| 06.137 | Acetaldehyde ethyl isopropyl acetal                     | 25334-93-4  |           |         |   |                     |          | EFSA        |
| 07.001 | 2-Oxopropanal   | 78-98-8     | 937       | 105     |   |                     |          | EFSA        |
| 07.002 | Heptan-2-one  | 110-43-0    | 283       | 136     |   |                     |          | JECFA       |
| 07.003 | Heptan-3-one  | 106-35-4    | 285       | 137     |   |                     |          | JECFA       |
| 07.004 | Acetophenone  | 98-86-2     | 806       | 138     |   |                     |          | EFSA        |
| 07.005 | Vanillyl acetone  | 122-48-5    | 730       | 139     |   |                     |          | EFSA        |
| 07.007 | alpha-Ionone  | 127-41-3    | 388       | 141     |   |                     | 2        | JECFA/ EFSA |
| 07.008 | beta-Ionone   | 14901-07-6  | 389       | 142     |   |                     | 2        | JECFA/EFSA  |
| 07.009 | Methyl-alpha-ionone                                     | 7779-30-8   | 398       | 143     | At least 90%; secondary component 5-6% methyl-beta-ionone   |                     | 2        | JECFA/ EFSA |
| 07.010 | Methyl-beta- ionone                                     | 127-43-5    | 399       | 144     | At least 88%; secondary component 7-10% alpha- and beta-isomethylionone   |                     | 2        | JECFA/ EFSA |
| 07.011 | 4-(2,5,6,6-Tetramethyl-2-cyclohexenyl)-3-buten-2-one    | 79-69-6     | 403       | 145     |   |                     | 2        | JECFA/ EFSA |
| 07.012 | Carvone   | 99-49-0     | 380       | 146     |   |                     |          | SCF/CoE     |
| 07.013 | Methyl 2-naphthyl ketone                                | 93-08-3     | 811       | 147     |   |                     |          | EFSA        |
| 07.014 | Maltol  | 118-71-8    | 1480      | 148     |   |                     | 2        | EFSA        |
| 07.015 | 6-Methylhept-5-en-2-one                                 | 110-93-0    | 1120      | 149     |   |                     |          | EFSA        |
| 07.016 | Undecan-2-one   | 112-12-9    | 296       | 150     |   |                     |          | JECFA       |



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| (1)    | (2)                                | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                      | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.017 | 4-Methylpentan-2-one               | 108-10-1   | 301       | 151     |   |                     |          | JECFA     |
| 07.018 | Hexan-2,3-dione                    | 3848-24-6  | 412       | 152     | At least 93%; secondary components 2-3% hexanediones                  |                     |          | JECFA     |
| 07.019 | Octan-2-one                        | 111-13-7   | 288       | 153     |   |                     |          | JECFA     |
| 07.020 | Nonan-2-one                        | 821-55-6   | 292       | 154     |   |                     |          | JECFA     |
| 07.021 | Undeca-2,3-dione                   | 7493-59-6  | 417       | 155     |   |                     |          | JECFA     |
| 07.022 | 4-Methylacetophenone               | 122-00-9   | 807       | 156     |   |                     |          | EFSA      |
| 07.023 | 2,4-Dimethylacetophenone           | 89-74-7    | 809       | 157     |   |                     |          | EFSA      |
| 07.024 | 4-Phenylbut-3-en-2-one             | 122-57-6   | 820       | 158     |   |                     | 2        | EFSA      |
| 07.025 | 4-Methyl-1-phenylpentan-2-one      | 5349-62-2  | 828       | 159     |   |                     |          | EFSA      |
| 07.026 | 4-(p-Tolyl)butan-2-one             | 7774-79-0  | 817       | 160     |   |                     |          | EFSA      |
| 07.027 | 3-Methyl-4-phenylbut-3-en-2-one    | 1901-26-4  | 821       | 161     |   |                     | 2        | EFSA      |
| 07.028 | Benzoin                            | 119-53-9   | 836       | 162     |   |                     |          | EFSA      |
| 07.029 | 4-(4-Methoxyphenyl)butan-2-one     | 104-20-1   | 818       | 163     |   |                     |          | EFSA      |
| 07.030 | 1-(4-Methoxyphenyl)pent-1-en-3-one | 104-27-8   | 826       | 164     |   |                     | 2        | EFSA      |
| 07.031 | Piperonyl acetone                  | 55418-52-5 |           | 165     |   |                     |          | SCF/CoE   |
| 07.032 | Benzophenone                       | 119-61-9   | 831       | 166     |   |                     |          | EFSA      |
| 07.033 | Isojasmone                         | 11050-62-7 | 1115      | 167     |   |                     | 2        | EFSA      |
| 07.034 | 2-Hexylidenecyclopentan-1-one      | 17373-89-6 | 1106      |         |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.035 | Tetramethyl ethylcyclohexenone (mixture of isomers) | 17369-60-7 | 1111      | 168     |   |                     |          | EFSA      |
| 07.036 | alpha-Isomethyl ionone                              | 127-51-5   | 404       | 169     |   |                     | 2        | JECFA     |
| 07.038 | 4-Methoxyacetophenone                               | 100-06-1   | 810       | 570     |   |                     |          | EFSA      |
| 07.040 | 1-Phenylpropan-1-one                                | 93-55-0    | 824       | 599     |   |                     |          | EFSA      |
| 07.041 | beta-Isomethyl ionone                               | 79-89-0    |           | 650     |   |                     | 2        | EFSA      |
| 07.042 | 4-Isopropylacetophenone                             | 645-13-6   | 808       | 651     |   |                     |          | EFSA      |
| 07.044 | Pent-3-en-2-one                                     | 625-33-2   | 1124      | 666     |   |                     | 1        | EFSA      |
| 07.045 | 2,2,6-Trimethylcyclohexanone                        | 2408-37-9  | 1108      | 686     |   |                     |          | EFSA      |
| 07.046 | Vanillylidene acetone                               | 1080-12-2  | 732       | 691     |   |                     | 2        | EFSA      |
| 07.047 | Ethyl maltol  | 4940-11-8  | 1481      | 692     |   |                     |          | EFSA      |
| 07.048 | 4-Hexen-3-one                                       | 2497-21-4  | 1125      | 718     |   |                     | 1        | EFSA      |
| 07.049 | 1-(4-Methoxyphenyl)-4-methylpent-1-en-3-one         | 103-13-9   | 829       | 719     |   |                     | 2        | EFSA      |
| 07.050 | Acetone   | 67-64-1    | 139       | 737     |   |                     |          | JECFA     |
| 07.051 | 3-Hydroxybutan-2-one                                | 513-86-0   | 405       | 749     |   |                     |          | JECFA     |
| 07.052 | Diacetyl  | 431-03-8   | 408       | 752     |   |                     |          | JECFA     |
| 07.053 | Butan-2-one   | 78-93-3    | 278       | 753     |   |                     |          | JECFA     |
| 07.054 | Pentan-2-one  | 107-87-9   | 279       | 754     |   |                     |          | JECFA     |
| 07.055 | 4-(p-Hydroxyphenyl)butan-2-one                      | 5471-51-2  | 728       | 755     |   |                     |          | EFSA      |

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| (1)    | (2)                               | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|-----------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                               | Restrictions of Use | Footnote | Reference  |
| 07.056 | 3-Methylcyclopentan-1,2-dione     | 80-71-7    | 418       | 758     |   |                     |          | JECFA      |
| 07.057 | 3-Ethylcyclopentan-1,2-dione      | 21835-01-8 | 419       | 759     | At least 90%; secondary component 5-10% 3-ethylcyclopentan-1,2-dione (enolic form)                  |                     |          | JECFA      |
| 07.058 | Heptan-4-one                      | 123-19-3   | 287       | 2034    |   |                     |          | JECFA      |
| 07.059 | p-Menthan-3-one                   | 10458-14-7 |           |         |   |                     | 1        | EFSA       |
| 07.060 | Pentan-2,3-dione                  | 600-14-6   | 410       | 2039    | At least 93%; secondary component 2-3% 2,5-diethylcyclohexadien-1,4-dione (dimer of 2,3-pentadione) |                     |          | JECFA      |
| 07.061 | Allyl alpha-ionone                | 79-78-7    | 401       | 2040    |   |                     | 2        | JECFA/EFSA |
| 07.062 | Octan-3-one                       | 106-68-3   | 290       | 2042    |   |                     |          | JECFA      |
| 07.063 | 4-Methylpentan-2,3-dione          | 7493-58-5  | 411       | 2043    |   |                     |          | JECFA      |
| 07.064 | Heptan-2,3-dione                  | 96-04-8    | 415       | 2044    |   |                     |          | JECFA      |
| 07.065 | 5-Hydroxyoctan-4-one              | 496-77-5   | 416       | 2045    |   |                     |          | JECFA      |
| 07.067 | 2R,5S-isopulegone                 | 29606-79-9 | 754       | 2051    |   |                     | 4        | EFSA       |
| 07.069 | Tetrahydro-pseudo-ionone          | 4433-36-7  | 1121      | 2053    |   |                     |          | EFSA       |
| 07.070 | 3-Benzylheptan-4-one              | 7492-37-7  | 830       | 2140    |   |                     |          | EFSA       |
| 07.071 | Octane-4,5-dione                  | 5455-24-3  |           | 2141    |   |                     |          | EFSA       |
| 07.072 | 6-Methylheptan-3-one              | 624-42-0   |           | 2143    |   |                     |          | EFSA       |
| 07.075 | 3,4-Dimethylcyclopentan-1,2-dione | 13494-06-9 | 420       | 2234    |   |                     |          | JECFA      |
| 07.076 | 3,5-Dimethylcyclopentan-1,2-dione | 13494-07-0 | 421       | 2235    |   |                     |          | JECFA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|---|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 07.077 | Hexan-3,4-dione                                   | 4437-51-8  | 413       | 2255    |   |                     |          | JECFA      |
| 07.078 | d,l-Isomenthone                                   | 491-07-6   | 430       | 2259    |   |                     |          | JECFA      |
| 07.079 | 1-Phenylpropan-1,2-dione                          | 579-07-7   | 833       | 2275    |   |                     |          | EFSA       |
| 07.080 | 3-Methylcyclohexan-1,2-dione                      | 3008-43-3  | 425       | 2311    |   |                     |          | JECFA      |
| 07.081 | Oct-1-en-3-one                                    | 4312-99-6  | 1148      | 2312    |   |                     | 1        | EFSA       |
| 07.082 | Oct-2-en-4-one                                    | 4643-27-0  | 1129      | 2313    |   |                     | 1        | EFSA       |
| 07.083 | beta-Damascone                                    | 23726-92-3 | 384       | 2340    | At least 90%; secondary components 5-8% alpha- and delta-damascone    |                     | 2        | JECFA/EFSA |
| 07.084 | Pentan-3-one                                      | 96-22-0    |           | 2350    |   |                     |          | EFSA       |
| 07.086 | 1,3-Diphenylpropan-2-one                          | 102-04-5   | 832       | 11839   |   |                     |          | EFSA       |
| 07.087 | 4-Methoxyphenylacetone                            | 122-84-9   | 813       | 11836   |   |                     |          | EFSA       |
| 07.088 | Methyl-delta-ionone                               | 7784-98-7  | 400       | 11852   |   |                     | 2        | JECFA/EFSA |
| 07.089 | Nootkatone  | 4674-50-4  | 1398      | 11164   | At least 93%; secondary component 3-4% dihydronootkatone              |                     | 2        | EFSA       |
| 07.090 | 1-Hydroxybutan-2-one                              | 5077-67-8  | 1717      | 11102   |   |                     |          | EFSA       |
| 07.091 | gamma-Ionone                                      | 79-76-5    | 390       |         |   |                     | 2        | JECFA/EFSA |
| 07.092 | p-Menthan-2-one                                   | 499-70-7   | 375       | 11128   |   |                     |          | JECFA      |
| 07.093 | 5-Methylhexan-2,3-dione                           | 13706-86-0 | 414       | 11148   |   |                     |          | JECFA      |
| 07.094 | 3-Methyl-2-(pent-2(cis)-enyl)cyclopent-2-en-1-one | 488-10-8   | 1114      | 11786   |   |                     | 2        | EFSA       |

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| (1)    | (2)                                    | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)         |
|--------|--|------------|-----------|---------|---|---------------------|----------|-------------|
| FL No. | Chemical Name                          | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference   |
| 07.095 | 2-(sec-Butyl)cyclohexanone             | 14765-30-1 | 1109      | 11044   | At least 94%; secondary component 2-2.5% 2-isobutyl cyclohexanone     |                     |          | EFSA        |
| 07.096 | Hexan-3-one                            | 589-38-8   | 281       | 11097   |   |                     |          | JECFA       |
| 07.097 | 3-(Hydroxymethyl)octan-2-one           | 59191-78-5 | 1839      | 11113   | At least 90%; secondary component 7% 3-methylene-2-octanone           |                     |          | EFSA        |
| 07.098 | 3-Methylcyclohex-2-en-1-one            | 1193-18-6  | 1107      | 11134   |   |                     |          | EFSA        |
| 07.099 | 6-Methylhepta-3,5-dien-2-one           | 1604-28-0  | 1134      | 11143   |   |                     | 1        | EFSA        |
| 07.100 | 5-Methylhex-5-en-2-one                 | 3240-09-3  | 1119      | 11150   |   |                     |          | EFSA        |
| 07.101 | 4-Methylpent-3-en-2-one                | 141-79-7   | 1131      | 11853   |   |                     | 1        | EFSA        |
| 07.102 | Pent-1-en-3-one                        | 1629-58-9  | 1147      | 11179   |   |                     | 1        | EFSA        |
| 07.103 | Tridecan-2-one                         | 593-08-8   | 298       | 11194   |   |                     |          | JECFA       |
| 07.104 | Hept-2-en-4-one                        | 4643-25-8  | 1126      | 11093   |   |                     | 1        | EFSA        |
| 07.105 | Hept-3-en-2-one                        | 1119-44-4  | 1127      | 11094   |   |                     | 1        | EFSA        |
| 07.106 | 5-Methylhex-3-en-2-one                 | 5166-53-0  | 1132      | 11149   |   |                     | 1        | EFSA        |
| 07.107 | Oct-3-en-2-one                         | 1669-44-9  | 1128      | 11170   | At least 94%; secondary component 4-6% 4-octen-2-one                  |                     | 1        | EFSA        |
| 07.108 | beta-Damascenone                       | 23696-85-7 | 387       | 11197   |   |                     | 2        | JECFA/ EFSA |
| 07.109 | 2,6,6-Trimethylcyclohex-2-en-1,4-dione | 1125-21-9  | 1857      | 11200   |   |                     | 2        | EFSA        |
| 07.112 | 3-Methyl-2-cyclopenten-1-one           | 2758-18-1  | 1105      | 11137   |   |                     | 2        | EFSA        |
| 07.113 | Nonan-3-one                            | 925-78-0   | 294       | 11160   |   |                     |          | JECFA       |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.114 | 6,10,14-Trimethylpentadeca-5,9,13-trien-2-one  | 762-29-8   | 1123      | 11206   |   |                     |          | EFSA      |
| 07.115 | 3,4-Dehydrodihydro-beta-ionone                 | 20483-36-7 | 396       | 11057   | At least 70%; secondary component 25-27% tetrahydroionone             |                     |          | JECFA     |
| 07.117 | 3-Ethyl-2-hydroxy-4-methylcyclopent-2-en-1-one | 42348-12-9 | 422       | 11077   |   |                     |          | JECFA     |
| 07.118 | 5-Ethyl-2-hydroxy-3-methylcyclopent-2-en-1-one | 53263-58-4 | 423       | 11078   |   |                     |          | JECFA     |
| 07.119 | 2-Hydroxycyclohex-2-en-1-one                   | 10316-66-2 | 424       | 11046   |   |                     |          | JECFA     |
| 07.120 | 2-Hydroxy-3,5,5-trimethylcyclohex-2-en-1-one   | 4883-60-7  | 426       | 11198   |   |                     |          | JECFA     |
| 07.121 | Dec-3-en-2-one                                 | 10519-33-2 | 1130      | 11751   |   |                     | 1        | EFSA      |
| 07.122 | 2,6-Dimethylheptan-4-one                       | 108-83-8   | 302       | 11914   | At least 80%; secondary component 15-17% 4,6-dimethyl-2-heptanone     |                     |          | JECFA     |
| 07.123 | Geranylacetone                                 | 3796-70-1  | 1122      | 11088   |   |                     |          | EFSA      |
| 07.124 | 2-Hydroxyacetophenone                          | 118-93-4   | 727       | 11784   |   |                     |          | EFSA      |
| 07.125 | 3-Hydroxypentan-2-one                          | 3142-66-3  | 409       | 11115   |   |                     |          | JECFA     |
| 07.126 | 3,5,5-Trimethylcyclohex-2-en-1-one             | 78-59-1    | 1112      | 11918   |   |                     |          | EFSA      |
| 07.127 | p-Mentha-1,4(8)-dien-3-one                     | 491-09-8   | 757       | 11189   |   |                     | 2        | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)         |
|--------|--|------------|-----------|---------|--|---------------------|----------|-------------|
| FL No. | Chemical Name                                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                            | Restrictions of Use | Footnote | Reference   |
| 07.128 | Dihydrocarvone                                   | 7764-50-3  | 377       | 11703   | At least 77%; secondary components 10-15% dihydrocarveol; 5-6% carvone; 2-3% carveol             |                     |          | JECFA       |
| 07.129 | 3-Methyl-5-propylcyclohex-2-en-1-one             | 3720-16-9  | 1113      |         |  |                     |          | EFSA        |
| 07.130 | delta-Damascone                                  | 57378-68-4 | 386       |         |  |                     | 2        | JECFA/ EFSA |
| 07.131 | Dihydro-beta-ionone                              | 17283-81-7 | 394       | 11060   |  |                     |          | JECFA       |
| 07.132 | Dihydro-alpha-ionone                             | 31499-72-6 | 393       | 11059   |  |                     |          | JECFA       |
| 07.134 | alpha-Damascone                                  | 43052-87-5 | 385       | 11053   |  |                     | 2        | JECFA/EFSA  |
| 07.135 | 2,4-Dihydroxyacetophenone                        | 28631-86-9 | 729       | 11884   | 23-25% 2,3-isomer; 19-22% 2,4-isomer; 19-20% 2,5-isomer; 20-21% 3,4-isomer and 15-18% 3,5-isomer |                     |          | EFSA        |
| 07.136 | 4,4a,5,6-Tetrahydro-7-methylnaphthalen-2(3H)-one | 34545-88-5 | 1405      |         |  |                     | 2        | EFSA        |
| 07.137 | Pentadecan-2-one                                 | 2345-28-0  | 299       | 11808   |  |                     |          | JECFA       |
| 07.139 | 5-Methylhept-2-en-4-one                          | 81925-81-7 | 1133      |         |  |                     | 1        | EFSA        |
| 07.140 | 3-Methyl-2-pentylcyclopent-2-en-1-one            | 1128-08-1  | 1406      |         |  |                     | 2        | EFSA        |
| 07.142 | Acetovanillone                                   | 498-02-2   |           | 11035   |  |                     |          | EFSA        |
| 07.146 | d-Carvone  | 2244-16-8  | 380.1     |         |  |                     |          | JECFA       |
| 07.147 | l-Carvone  | 6485-40-1  | 380.2     |         |  |                     |          | JECFA       |
| 07.148 | Cyclohexanone                                    | 108-94-1   | 1100      | 11047   |  |                     |          | EFSA        |
| 07.149 | Cyclopentanone                                   | 120-92-3   | 1101      | 11050   |  |                     |          | EFSA        |
| 07.150 | Decan-2-one                                      | 693-54-9   |           | 11055   |  |                     |          | EFSA        |
| 07.151 | Decan-3-one                                      | 928-80-3   | 1118      | 11056   |  |                     |          | EFSA        |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.152 | 3,3-Diethoxybutan-2-one                         | 51933-13-2 |           |         |   |                     |          | EFSA      |
| 07.153 | (4R,4aS,6R,8aS)-1,10-Dihydronootkatone          | 20489-53-6 | 1407      |         | At least 90%; secondary component 5-6% nootkatone                     |                     |          | EFSA      |
| 07.154 | 1-(3,5-Dimethoxy-4-hydroxyphenyl)propan-1-one   | 5650-43-1  |           | 11106   |   |                     |          | EFSA      |
| 07.156 | 2,6-Dimethyloct-6-en-3-one (mixture of E and Z) | 90975-15-8 |           |         |   |                     |          | EFSA      |
| 07.157 | 6,10-Dimethylundecan-2-one                      | 1604-34-8  |           | 11068   |   |                     |          | EFSA      |
| 07.158 | Dodecan-2-one                                   | 6175-49-1  |           | 11069   |   |                     |          | EFSA      |
| 07.159 | d-Fenchone                                      | 4695-62-9  | 1396      | 551     |   |                     |          | EFSA      |
| 07.160 | Heptadecan-2-one                                | 2922-51-2  |           | 11089   |   |                     |          | EFSA      |
| 07.161 | Hex-1-en-3-one                                  | 1629-60-3  |           |         |   |                     | 1        | EFSA      |
| 07.162 | Hex-5-en-2-one                                  | 109-49-9   |           |         |   |                     |          | EFSA      |
| 07.164 | 4-Hydroxy-3,5-dimethoxyacetophenone             | 2478-38-8  |           | 11105   |   |                     |          | EFSA      |
| 07.165 | 4-Hydroxy-4-methylpentan-2-one                  | 123-42-2   |           |         |   |                     |          | EFSA      |
| 07.167 | 4-Hydroxyhexan-3-one                            | 4984-85-4  |           | 11108   |   |                     |          | EFSA      |
| 07.168 | 2-Hydroxypiperitone                             | 490-03-9   |           |         |   |                     |          | EFSA      |
| 07.169 | 1-Hydroxypropan-2-one                           | 116-09-6   |           | 11101   |   |                     |          | EFSA      |
| 07.170 | beta-Ionone epoxide                             | 23267-57-4 | 1571      | 11202   |   |                     | 2        | EFSA      |



▼ **M1**

| (1)         | (2)                            | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|-------------|--------------------------------|-------------|-----------|---------|---|---------------------|----------|------------|
| FL No.      | Chemical Name                  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference  |
| 07.171      | Isopinocampnone                | 18358-53-7  | 1868      | 11125   |   |                     |          | EFSA       |
| 07.172      | 4-Isopropylcyclohex-2-en-1-one | 500-02-7    | 1110      | 11127   |   |                     |          | EFSA       |
| 07.175      | p-Menth-1-en-3-one             | 89-81-6     | 435       | 2052    | At least 94%; secondary components 2-3% menthol and menthone  |                     |          | JECFA      |
| 07.176      | trans-Menthone                 | 89-80-5     | 429       | 2035    |   |                     |          | JECFA      |
| 07.177      | 7-Methyl-3-octenone-2          | 33046-81-0  | 1135      |         | At least 94%; secondary components 2-4% 7-methyl-4-octen-2-one, 5,6-dimethyl-3-hepten-2-one and 3-nonen-2-one |                     | 1        | EFSA       |
| 07.178      | 3-Methylbutan-2-one            | 563-80-4    |           | 11131   |   |                     |          | EFSA       |
| 07.179      | 2-Methylcyclohexanone          | 583-60-8    | 1102      |         |   |                     |          | EFSA       |
| 07.180      | 3-Methylcyclohexanone          | 591-24-2    | 1103      |         |   |                     |          | EFSA       |
| 07.181      | 6-Methylheptan-2-one           | 928-68-7    |           | 11146   |   |                     |          | EFSA       |
| 07.182      | 5-Methylheptan-3-one           | 541-85-5    |           |         |   |                     |          | EFSA       |
| 07.184      | 3-Methylnona-2,4-dione         | 113486-29-6 | 2032      |         |   |                     | 4        | JECFA/EFSA |
| 07.185      | 3-Methylpentan-2-one           | 565-61-7    |           | 11157   |   |                     |          | EFSA       |
| 07.187      | Non-2-en-4-one                 | 32064-72-5  |           | 11162   |   |                     | 1        | EFSA       |
| 07.188      | Non-3-en-2-one                 | 14309-57-0  | 1136      | 11163   |   |                     | 1        | EFSA       |
| 07.189      | Nonan-4-one                    | 4485-09-0   |           | 11161   |   |                     |          | EFSA       |
| ▼ <b>M3</b> |                                |             |           |         |   |                     |          |            |
| 07.190      | Octa-1,5-dien-3-one            | 65213-86-7  | 1848      |         | Mixture of stereoisomers: 60-90 % E-form and 10-40 % Z-form   |                     |          | EFSA       |
| ▼ <b>M1</b> |                                |             |           |         |   |                     |          |            |
| 07.193      | 1-Phenylbutan-1-one            | 495-40-9    |           |         |   |                     |          | EFSA       |
| 07.194      | 4-Phenylbutan-2-one            | 2550-26-7   |           | 11182   |   |                     |          | EFSA       |
| 07.195      | 1-Phenylpropan-2-one           | 103-79-7    |           | 11042   |   |                     |          | EFSA       |

▼ **M1**

| (1)         | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.196      | Pin-2-en-4-one                                       | 80-57-9    | 1870      | 11186   |   |                     |          | EFSA      |
| ▼ <b>M3</b> |  |            |           |         |   |                     |          |           |
| 07.198      | Pseudo-ionone  | 141-10-6   |           | 11191   |   |                     |          | EFSA      |
| ▼ <b>M1</b> |  |            |           |         |   |                     |          |           |
| 07.199      | Tetradecan-2-one                                     | 2345-27-9  |           | 11192   |   |                     |          | EFSA      |
| 07.200      | 4-(2,5,6,6-Tetramethyl-1-cyclohexenyl)but-3-en-2-one | 79-70-9    |           |         |   |                     | 2        | EFSA      |
| 07.201      | Tridec-12-en-2-one                                   | 60437-21-0 |           |         |   |                     |          | EFSA      |
| ▼ <b>M3</b> |  |            |           |         |   |                     |          |           |
| 07.202      | 2,6,6-Trimethylcyclohex-2-en-1-one                   | 20013-73-4 |           |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |  |            |           |         |   |                     |          |           |
| 07.203      | 3,3,5-Trimethylcyclohexan-1-one                      | 873-94-9   |           |         |   |                     |          | EFSA      |
| ▼ <b>M3</b> |  |            |           |         |   |                     |          |           |
| 07.204      | 3,3,6-Trimethylhepta-1,5-dien-4-one                  | 546-49-6   |           |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |  |            |           |         |   |                     |          |           |
| 07.205      | 6,10,14-Trimethylpentadecan-2-one                    | 502-69-2   |           | 11205   |   |                     |          | EFSA      |
| 07.206      | 4-(2,3,6-Trimethylphenyl)but-3-en-2-one              | 56681-06-2 |           |         |   |                     | 2        | EFSA      |
| 07.210      | 1-Nonene-3-one                                       | 24415-26-7 |           |         |   |                     | 1        | EFSA      |
| 07.214      | alpha-Methyl naphthyl ketone                         | 941-98-0   |           |         |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)  | (7)   | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified            | Restrictions of Use   | Footnote | Reference |
| 07.215 | d-Camphor   | 464-49-3   | 1395      | 140     |  | <p>In category 1 – not more than 16 mg/kg</p> <p>In categories 2 and 8 – not more than 50 mg/kg</p> <p>In category 3 – not more than 20 mg/kg</p> <p>In categories 5, 6, 7, 12 and 15 – not more than 100 mg/kg</p> <p>In category 14.1 – not more than 50 mg/l</p> <p>In category 14.2 – not more than 50 mg/l (except not more than 850 mg/l in <i>Schweden-bitter</i>)</p> |          | EFSA      |
| 07.219 | trans-3-Methyl-2-(2-pentenyl)-2-cyclopenten-1-one         | 6261-18-3  |           |         |  |   | 2        | EFSA      |
| 07.224 | tr-1-(2,6,6-Trimethyl-1-cyclohexen-1-yl)but-2-en-1-one    | 23726-91-2 |           |         | At least 90%; secondary components 2-4% alpha-damascone and 2-4% delta-damascone |   | 2        | EFSA      |
| 07.225 | cis-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)but-2-en-1-one   | 23726-94-5 |           |         | At least 92%; secondary component 4% trans-isomer                                |   | 2        | EFSA      |
| 07.226 | trans-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)but-2-en-1-one | 24720-09-0 |           |         |  |   | 2        | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.231 | alpha-Damascenone                               | 35044-63-4 |           |         |   |                     | 2        | EFSA      |
| 07.234 | 1-(4-Hydroxy-3-methoxyphenyl)-3-decanone        | 27113-22-0 | 2021      |         |   |                     |          | EFSA      |
| 07.236 | (Z)-5-Octen-2-one                               | 22610-86-2 |           | 11171   |   |                     |          | EFSA      |
| 07.238 | 3-Hydroxy-2-octanone                            | 37160-77-3 |           |         |   |                     |          | EFSA      |
| 07.239 | [R-(E)]-5-Isopropyl-8-methylnona-6,8-dien-2-one | 2278-53-7  | 1840      |         |   |                     |          | EFSA      |
| 07.240 | 2-Methylheptan-3-one                            | 13019-20-0 | 1156      |         |   |                     |          | EFSA      |
| 07.242 | 3-Hydroxy-4-phenylbutane-2-one                  | 5355-63-5  | 2041      |         | At least 93%; secondary component 3-5% 4-hydroxy-4-phenylbutan-2-one  |                     |          | EFSA      |
| 07.243 | 4-Hydroxyacetophenone                           | 99-93-4    |           |         |   |                     |          | EFSA      |
| 07.244 | (6E)-Methyl-3-hepten-2-one                      | 20859-10-3 | 1138      |         |   |                     | 1        | EFSA      |
| 07.247 | (E,E)-3,5-Octadien-2-one                        | 30086-02-3 | 1139      |         |   |                     | 1        | EFSA      |
| 07.248 | Octan-2,3-dione                                 | 585-25-1   |           |         |   |                     |          | EFSA      |
| 07.249 | Undecan-6-one                                   | 927-49-1   | 1155      |         |   |                     |          | EFSA      |
| 07.254 | 2-Methoxy-acetophenone                          | 579-74-8   |           |         |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                 | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 07.255 | l-Piperitone                                  | 4573-50-6   | 1856      |         |   |                     |          | EFSA      |
| 07.256 | (E) & (Z)-4,8-Dimethyl-3,7-nonadiene-2-one    | 817-88-9    | 1137      |         | At least 94%; secondary component 3-4% 4,8-dimethyl-3,7-nonadien-2-ol |                     | 1        | EFSA      |
| 07.257 | 2-(3,7-Dimethyl-2,6-octadienyl)cyclopentanone | 68133-79-9  | 1117      |         |   |                     |          | EFSA      |
| 07.258 | 6-Methyl-3-hepten-2-one                       | 2009-74-7   |           |         |   |                     | 1        | EFSA      |
| 07.259 | 2-Methyl-acetophenone                         | 577-16-2    | 2044      |         |   |                     |          | EFSA      |
| 07.260 | 3-Hydroxy-5-methyl-2-hexanone                 | 163038-04-8 |           |         |   |                     |          | EFSA      |
| 07.261 | 4-Methyl-3-hepten-5-one                       | 22319-31-9  |           |         |   |                     | 1        | EFSA      |
| 07.262 | 9-decen-2-one                                 | 35194-30-0  |           |         |   |                     |          | EFSA      |
| 08.001 | Formic acid                                   | 64-18-6     | 79        | 1       |   |                     |          | JECFA     |
| 08.002 | Acetic acid                                   | 64-19-7     | 81        | 2       |   |                     |          | JECFA     |
| 08.003 | Propionic acid                                | 79-09-4     | 84        | 3       |   |                     |          | JECFA     |
| 08.004 | Lactic acid                                   | 50-21-5     | 930       | 4       |   |                     |          | EFSA      |
| 08.005 | Butyric acid                                  | 107-92-6    | 87        | 5       |   |                     |          | JECFA     |
| 08.006 | 2-Methylpropionic acid                        | 79-31-2     | 253       | 6       |   |                     |          | JECFA     |
| 08.007 | Valeric acid                                  | 109-52-4    | 90        | 7       |   |                     |          | JECFA     |
| 08.008 | 3-Methylbutyric acid                          | 503-74-2    | 259       | 8       |   |                     |          | JECFA     |
| 08.009 | Hexanoic acid                                 | 142-62-1    | 93        | 9       |   |                     |          | JECFA     |
| 08.010 | Octanoic acid                                 | 124-07-2    | 99        | 10      |   |                     |          | JECFA     |
| 08.011 | Decanoic acid                                 | 334-48-5    | 105       | 11      |   |                     |          | JECFA     |

▼ **M3**▼ **M1**▼ **M3**▼ **M1**

## ▼M1

| (1)    | (2)                | (3)       | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--------------------|-----------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name      | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 08.012 | Dodecanoic acid    | 143-07-7  | 111       | 12      | At least 90%; secondary components 3-6% tetradecanoic acid; 2-5% decanoic acid; 1-2% hexadecanoic acid   |                     |          | JECFA     |
| 08.013 | Oleic acid         | 112-80-1  | 333       | 13      | At least 90%; secondary component 5-7% palmitic acid and other fatty acids   |                     |          | JECFA     |
| 08.014 | Hexadecanoic acid  | 57-10-3   | 115       | 14      | At least 80%; secondary components 8-11% octadecanoic acid; 5-7% tetradecanoic acid; 3-5% heptadecanoic acid; <1% pentadecanoic acid   |                     |          | JECFA     |
| 08.015 | Octadecanoic acid  | 57-11-4   | 116       | 15      | At least 40%; secondary components 5-50% hexadecanoic acid; <3% tetradecanoic acid; <5% 9-octadecenoic acid; <3% heptadecanoic acid; <2% eicosanoic acid; <1% pentadecanoic acid |                     |          | JECFA     |
| 08.016 | Tetradecanoic acid | 544-63-8  | 113       | 16      | At least 94%; secondary components 2-4% hexadecanoic acid; 1-3% dodecanoic acid  |                     |          | JECFA     |
| 08.017 | l-Malic acid       | 6915-15-7 | 619       | 17      |  |                     |          | JECFA     |
| 08.018 | Tartaric acid      | 133-37-9  | 621       | 18      |  |                     |          | JECFA     |
| 08.019 | Pyruvic acid       | 127-17-3  | 936       | 19      |  |                     |          | EFSA      |
| 08.021 | Benzoic acid       | 65-85-0   | 850       | 21      |  |                     |          | EFSA      |
| 08.022 | Cinnamic acid      | 621-82-9  | 657       | 22      |  |                     |          | EFSA      |
| 08.023 | 4-Oxovaleric acid  | 123-76-2  | 606       | 23      |  |                     |          | JECFA     |
| 08.024 | Succinic acid      | 110-15-6  |           | 24      |  |                     |          | CoE       |
| 08.025 | Fumaric acid       | 110-17-8  | 618       | 25      |  |                     |          | JECFA     |
| 08.026 | Adipic acid        | 124-04-9  | 623       | 26      |  |                     |          | JECFA     |
| 08.028 | Heptanoic acid     | 111-14-8  | 96        | 28      |  |                     |          | JECFA     |

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| (1)    | (2)                                 | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|-------------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 08.029 | Nonanoic acid                       | 112-05-0   | 102       | 29      |  |                     |          | JECFA     |
| 08.031 | 2-Methylvaleric acid                | 97-61-0    | 261       | 31      |  |                     |          | JECFA     |
| 08.032 | 3-Phenylpropionic acid              | 501-52-0   | 646       | 32      |  |                     |          | EFSA      |
| 08.033 | Prop-1-ene-1,2,3-tricarboxylic acid | 499-12-7   | 627       | 33      |  |                     |          | JECFA     |
| 08.034 | Cyclohexylacetic acid               | 5292-21-7  | 965       | 34      |  |                     |          | EFSA      |
| 08.035 | 2-Methylhexanoic acid               | 4536-23-6  | 265       | 582     |  |                     |          | JECFA     |
| 08.036 | Citronellic acid                    | 502-47-6   | 1221      | 616     | At least 90%; secondary components 5-8% citronellal, citronellyl, neryl, and geranyl acetate esters and other naturally occurring terpenes |                     |          | EFSA      |
| 08.037 | 2-Oxoglutaric acid                  | 328-50-7   | 634       | 653     |  |                     |          | JECFA     |
| 08.038 | Phenylacetic acid                   | 103-82-2   | 1007      | 672     |  |                     |          | EFSA      |
| 08.039 | Undec-10-enoic acid                 | 112-38-9   | 331       | 689     |  |                     |          | JECFA     |
| 08.040 | 4-Hydroxybenzoic acid               | 99-96-7    | 957       | 693     |  |                     |          | EFSA      |
| 08.041 | Octadeca-9,12-dienoic acid          | 60-33-3    | 332       | 694     | 44-46% linolenic acid; 18-20% linoleic acid; 22-25% stearic and oleic acid; 7-8% palmitic acid   |                     |          | JECFA     |
| 08.042 | Undecanoic acid                     | 112-37-8   | 108       | 696     |  |                     |          | JECFA     |
| 08.043 | Vanillic acid                       | 121-34-6   | 959       | 697     |  |                     |          | EFSA      |
| 08.044 | (2E),4-Dimethylpent-2-enoic acid    | 21016-46-6 | 1211      | 744     | At least 92%; secondary component 5-7% 4-methyl-2-methylenevaleric acid.   |                     |          | EFSA      |
| 08.045 | 2-Ethylbutyric acid                 | 88-09-5    | 257       | 2001    |  |                     |          | JECFA     |

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| (1)    | (2)                        | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name              | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 08.046 | 2-Methylbutyric acid       | 116-53-0   | 255       | 2002    |   |                     |          | JECFA     |
| 08.047 | 2-Methylheptanoic acid     | 1188-02-9  | 1212      | 2003    |   |                     |          | EFSA      |
| 08.048 | Pent-4-enoic acid          | 591-80-0   | 314       | 2004    |   |                     |          | JECFA     |
| 08.049 | Phenoxyacetic acid         | 122-59-8   | 1026      | 2005    |   |                     |          | EFSA      |
| 08.050 | Hex-3-enoic acid           | 4219-24-3  | 317       | 2256    |   |                     |          | JECFA     |
| 08.051 | 3-Methyl-2-oxobutyric acid | 759-05-7   | 631       | 2262    |   |                     |          | JECFA     |
| 08.052 | 4-Methyl-2-oxovaleric acid | 816-66-0   | 633       | 2263    |   |                     |          | JECFA     |
| 08.053 | Malonic acid               | 141-82-2   |           | 2264    |   |                     |          | EFSA      |
| 08.054 | Hex-2(trans)-enoic acid    | 13419-69-7 | 1361      | 11777   |   |                     |          | EFSA      |
| 08.055 | 2-Methyl-2-pentenoic acid  | 3142-72-1  | 1210      | 11680   |   |                     |          | EFSA      |
| 08.056 | 3-Methylvaleric acid       | 105-43-1   | 262       | 10149   |   |                     |          | JECFA     |
| 08.057 | 4-Methylvaleric acid       | 646-07-1   | 264       | 10150   |   |                     |          | JECFA     |
| 08.058 | 2-Methylpent-3-enoic acid  | 37674-63-8 | 347       | 10147   |   |                     |          | JECFA     |
| 08.059 | 2-Methylpent-4-enoic acid  | 1575-74-2  | 355       | 10148   |   |                     |          | JECFA     |
| 08.060 | Cyclohexanecarboxylic acid | 98-89-5    | 961       | 11911   |   |                     |          | EFSA      |
| 08.061 | 5-Methylhexanoic acid      | 628-46-6   | 266       | 10142   |   |                     |          | JECFA     |
| 08.062 | 4-Methylnonanoic acid      | 45019-28-1 | 274       | 11925   |   |                     |          | JECFA     |



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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 08.063 | 4-Methyloctanoic acid            | 54947-74-9 | 271       | 11926   |   |                     |          | JECFA     |
| 08.064 | (2E)-Methylcrotonic acid         | 80-59-1    | 1205      | 10168   |   |                     |          | EFSA      |
| 08.065 | Dec-9-enoic acid                 | 14436-32-9 | 328       | 10090   |   |                     |          | JECFA     |
| 08.066 | 2-Oxobutyric acid                | 600-18-0   | 589       |         |   |                     |          | JECFA     |
| 08.067 | 1,2,5,6-Tetrahydrocuminic acid   | 71298-42-5 | 976       |         |   |                     |          | EFSA      |
| 08.068 | Dec-(5- and 6)-enoic acid        | 72881-27-7 | 327       |         |   |                     |          | JECFA     |
| 08.070 | 3-Methylcrotonic acid            | 541-47-9   | 1204      | 10138   |   |                     |          | EFSA      |
| 08.071 | p-Anisic acid                    | 100-09-4   | 883       | 10077   |   |                     |          | EFSA      |
| 08.072 | But-2-enoic acid (cis and trans) | 3724-65-0  |           | 10080   |   |                     |          | EFSA      |
| 08.073 | Dec-2-enoic acid                 | 3913-85-7  | 1372      | 10087   |   |                     |          | EFSA      |
| 08.074 | Dec-3-enoic acid                 | 15469-77-9 |           | 10088   |   |                     |          | EFSA      |
| 08.075 | Dec-4-enoic acid                 | 26303-90-2 | 1287      | 10089   |   |                     |          | EFSA      |
| 08.076 | 2,4-Dihydroxybenzoic acid        | 89-86-1    | 908       |         |   |                     |          | EFSA      |
| 08.078 | 2-Ethylhexanoic acid             | 149-57-5   |           |         |   |                     |          | EFSA      |
| 08.079 | 4-Ethyloctanoic acid             | 16493-80-4 | 1218      |         |   |                     |          | EFSA      |
| 08.080 | Gallic acid                      | 149-91-7   |           | 10170   |   |                     |          | EFSA      |
| 08.081 | Geranic acid                     | 459-80-3   | 1825      | 10094   |   |                     |          | EFSA      |
| 08.082 | Glutaric acid                    | 110-94-1   |           |         |   |                     |          | EFSA      |
| 08.083 | Hept-2-enoic acid                | 18999-28-5 |           | 10102   |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 08.085 | (E,E)-Hexa-2,4-dienoic acid                               | 110-44-1   | 1176      |         |   |                     |          | EFSA      |
| 08.086 | 3-Hydroxy-2-oxopropionic acid                             | 1113-60-6  | 635       |         |   |                     |          | JECFA     |
| 08.087 | 4-Hydroxy-3,5-dimethoxybenzoic acid                       | 530-57-4   |           | 10111   |   |                     |          | EFSA      |
| 08.088 | 4-Hydroxy-3,5-dimethoxycinnamic acid (mixture of isomers) | 530-59-6   |           |         |   |                     |          | EFSA      |
| 08.089 | 4-Hydroxy-3-methoxycinnamic acid (mixture of isomers)     | 1135-24-6  |           | 10113   |   |                     |          | EFSA      |
| 08.090 | 2-Hydroxy-4-methylvaleric acid                            | 498-36-2   |           | 10118   |   |                     |          | EFSA      |
| 08.092 | 3-Methoxybenzoic acid                                     | 586-38-9   | 882       |         |   |                     |          | EFSA      |
| 08.093 | 3-Methyl-2-oxovaleric acid                                | 39748-49-7 | 632       | 10146   |   |                     |          | JECFA     |
| 08.094 | 4-Methyldecanoic acid                                     | 24323-24-8 |           |         |   |                     |          | EFSA      |
| 08.095 | 8-Methyldecanoic acid                                     | 5601-60-5  |           |         |   |                     |          | EFSA      |
| 08.096 | 3-Methylhexanoic acid                                     | 3780-58-3  |           |         |   |                     |          | EFSA      |
| 08.097 | 4-Methylhexanoic acid                                     | 1561-11-1  |           |         |   |                     |          | EFSA      |
| 08.099 | 4-Methylpent-2-enoic acid                                 | 10321-71-8 | 1818      |         |   |                     |          | EFSA      |
| 08.100 | 4-Methylpent-3-enoic acid                                 | 504-85-8   |           |         |   |                     |          | EFSA      |
| 08.101 | Non-2-enoic acid  | 3760-11-0  |           | 10153   |   |                     |          | EFSA      |

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| (1)    | (2)                                       | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                             | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 08.102 | Non-3-enoic acid                          | 4124-88-3   |           | 10154   |   |                     |          | EFSA      |
| 08.103 | Nonanedioic acid                          | 123-99-9    |           | 10079   |   |                     |          | EFSA      |
| 08.107 | (E)-Pent-2-enoic acid                     | 13991-37-2  | 1804      | 10163   |   |                     |          | EFSA      |
| 08.108 | 2-Phenylpropionic acid                    | 492-37-5    |           | 10164   |   |                     |          | EFSA      |
| 08.109 | 3-Phenylpyruvic acid                      | 156-06-9    | 1478      |         |   |                     |          | EFSA      |
| 08.112 | Salicylic acid                            | 69-72-7     | 958       | 10165   |   |                     |          | EFSA      |
| 08.113 | Succinic acid, disodium salt              | 150-90-3    |           |         |   |                     |          | EFSA      |
| 08.114 | 2-Octenoic acid                           | 1871-67-6   | 1805      | 10156   |   |                     |          | EFSA      |
| 08.115 | 4-Methylheptanoic acid                    | 3302-03-2   |           |         |   |                     |          | EFSA      |
| 08.119 | 2-Hexenoic acid                           | 1191-04-4   |           | 11777   |   |                     |          | EFSA      |
| 08.120 | 2-Methyl-2-butenic acid                   | 13201-46-2  |           | 10168   |   |                     |          | EFSA      |
| 08.123 | trans-2-Heptenoic acid                    | 10352-88-2  | 1373      |         |   |                     |          | EFSA      |
| 08.127 | 2-(4-Methoxyphenoxy)propionic acid        | 158833-38-6 |           |         |   |                     |          | EFSA      |
| 08.131 | cis-2-Heptyl-cyclopropane-carboxylic acid | 697290-76-9 | 1907      |         |   |                     |          | EFSA      |
| 08.132 | 3-Hydroxybenzoic acid                     | 99-06-9     |           |         |   |                     |          | EFSA      |
| 08.133 | 3,4-Dihydroxybenzoic acid                 | 99-50-3     |           |         |   |                     |          | EFSA      |
| 08.134 | 4-Hydroxy-3-methoxy-mandelic acid         | 55-10-7     |           |         |   |                     |          | EFSA      |

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| (1)                   | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-----------------------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.                | Chemical Name                               | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 08.135                | 4-(2,2,3-trimethylcyclopentyl)butanoic acid | 957136-80-0 |           |         |   |                     |          | EFSA      |
| 09.001                | Ethyl acetate                               | 141-78-6    | 27        | 191     |   |                     |          | JECFA     |
| 09.002                | Propyl acetate                              | 109-60-4    | 126       | 192     |   |                     |          | JECFA     |
| 09.003                | Isopropyl acetate                           | 108-21-4    | 305       | 193     |   |                     |          | JECFA     |
| 09.004                | Butyl acetate                               | 123-86-4    | 127       | 194     |   |                     |          | JECFA     |
| 09.005                | Isobutyl acetate                            | 110-19-0    | 137       | 195     |   |                     |          | JECFA     |
| 09.006                | Hexyl acetate                               | 142-92-7    | 128       | 196     |   |                     |          | JECFA     |
| 09.007                | Octyl acetate                               | 112-14-1    | 130       | 197     |   |                     |          | JECFA     |
| 09.008                | Nonyl acetate                               | 143-13-5    | 131       | 198     |   |                     |          | JECFA     |
| 09.009                | Decyl acetate                               | 112-17-4    | 132       | 199     |   |                     |          | JECFA     |
| 09.010                | Dodecyl acetate                             | 112-66-3    | 133       | 200     |   |                     |          | JECFA     |
| 09.011                | Geranyl acetate                             | 105-87-3    | 58        | 201     | At least 90%; secondary components 4-6% geraniol and 1-2% nerol       |                     |          | JECFA     |
| 09.012                | Citronellyl acetate                         | 150-84-5    | 57        | 202     | At least 92%; secondary component 4-6% citronellol                    |                     |          | JECFA     |
| 09.013                | Linalyl acetate                             | 115-95-7    | 359       | 203     |   |                     |          | JECFA     |
| 09.014                | Benzyl acetate                              | 140-11-4    | 23        | 204     |   |                     |          | EFSA      |
| 09.015                | alpha-Terpinyl acetate                      | 80-26-2     | 368       | 205     |   |                     |          | SCF/CoE   |
| ▼ <b>M3</b><br>09.016 | Menthyl acetate                             | 16409-45-3  | 431       | 206     |   |                     |          | JECFA     |

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| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.017 | DL-Bornyl acetate                       | 76-49-3    | 1387      | 207     |   |                     |          | EFSA      |
| 09.018 | Cinnamyl acetate                        | 103-54-8   | 650       | 208     |   |                     |          | EFSA      |
| 09.019 | p-Anisyl acetate                        | 104-21-2   | 873       | 209     |   |                     |          | EFSA      |
| 09.020 | Eugenyl acetate                         | 93-28-7    | 1531      | 210     |   |                     |          | EFSA      |
| 09.021 | Pentyl acetate                          | 628-63-7   |           | 211     |   |                     |          | SCF/CoE   |
| 09.022 | Heptyl acetate                          | 112-06-1   | 129       | 212     |   |                     |          | JECFA     |
| 09.023 | Methyl acetate                          | 79-20-9    | 125       | 213     |   |                     |          | JECFA     |
| 09.024 | Isopentyl acetate                       | 123-92-2   | 43        | 214     |   |                     |          | JECFA     |
| 09.025 | 2-Ethylbutyl acetate                    | 10031-87-5 | 140       | 215     |   |                     |          | JECFA     |
| 09.026 | alpha-Pentylcinnamyl acetate            | 7493-78-9  | 677       | 216     |   |                     |          | EFSA      |
| 09.027 | Cyclohexyl acetate                      | 622-45-7   | 1093      | 217     |   |                     |          | EFSA      |
| 09.028 | 2-Cyclohexylethyl acetate               | 21722-83-8 | 964       | 218     |   |                     |          | EFSA      |
| 09.029 | 1,1-Dimethyl-3-phenylpropyl acetate     | 103-07-1   | 1460      | 219     |   |                     |          | EFSA      |
| 09.030 | 2-Methoxy-4-(prop-1-enyl)phenyl acetate | 93-29-8    | 1262      | 220     |   |                     |          | EFSA      |
| 09.031 | Phenethyl acetate                       | 103-45-7   | 989       | 221     |   |                     |          | EFSA      |
| 09.032 | 3-Phenylpropyl acetate                  | 122-72-5   | 638       | 222     |   |                     |          | EFSA      |
| 09.033 | Rhodinyl acetate                        | 141-11-7   | 60        | 223     | At least 87%; secondary component 9-12% rhodinol                      |                     |          | JECFA     |
| 09.034 | Santalyl acetate                        | 1323-00-8  | 985       | 224     |   |                     | 2        | EFSA      |
| 09.035 | Vanillyl acetate                        | 881-68-5   | 890       | 225     |   |                     |          | EFSA      |
| 09.036 | p-Tolyl acetate                         | 140-39-6   | 699       | 226     |   |                     |          | EFSA      |
| 09.037 | Ethyl acrylate                          | 140-88-5   | 1351      | 245     |   |                     |          | EFSA      |
| 09.038 | Methyl butyrate                         | 623-42-7   | 149       | 263     |   |                     |          | JECFA     |

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| (1)    | (2)                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.039 | Ethyl butyrate          | 105-54-4   | 29        | 264     |   |                     |          | JECFA     |
| 09.040 | Propyl butyrate         | 105-66-8   | 150       | 266     |   |                     |          | JECFA     |
| 09.041 | Isopropyl butyrate      | 638-11-9   | 307       | 267     |   |                     |          | JECFA     |
| 09.042 | Butyl butyrate          | 109-21-7   | 151       | 268     |   |                     |          | JECFA     |
| 09.043 | Isobutyl butyrate       | 539-90-2   | 158       | 269     |   |                     |          | JECFA     |
| 09.044 | Pentyl butyrate         | 540-18-1   | 152       | 270     |   |                     |          | JECFA     |
| 09.045 | Hexyl butyrate          | 2639-63-6  | 153       | 271     |   |                     |          | JECFA     |
| 09.046 | Octyl butyrate          | 110-39-4   | 155       | 272     |   |                     |          | JECFA     |
| 09.047 | Decyl butyrate          | 5454-09-1  | 156       | 273     |   |                     |          | JECFA     |
| 09.048 | Geranyl butyrate        | 106-29-6   | 66        | 274     | At least 92%; secondary components 3-5% geraniol and 1% nerol         |                     |          | JECFA     |
| 09.049 | Citronellyl butyrate    | 141-16-2   | 65        | 275     | At least 90%; secondary component 6-8% citronellol                    |                     |          | JECFA     |
| 09.050 | Linalyl butyrate        | 78-36-4    | 361       | 276     |   |                     |          | JECFA     |
| 09.051 | Benzyl butyrate         | 103-37-7   | 843       | 277     |   |                     |          | EFSA      |
| 09.052 | Terpinyl butyrate       | 2153-28-8  | 370       | 278     |   |                     |          | JECFA     |
| 09.053 | Cinnamyl butyrate       | 103-61-7   | 652       | 279     |   |                     |          | EFSA      |
| 09.054 | Allyl butyrate          | 2051-78-7  | 2         | 280     |   |                     | 2        | JECFA     |
| 09.055 | 3-Methylbutyl butyrate  | 106-27-4   | 45        | 282     |   |                     |          | JECFA     |
| 09.057 | 2-Phenylpropyl butyrate | 80866-83-7 | 1469      | 285     |   |                     |          | EFSA      |
| 09.058 | p-Anisyl butyrate       | 6963-56-0  | 875       | 286     |   |                     |          | EFSA      |

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| (1)    | (2)                      | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name            | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.059 | Ethyl decanoate          | 110-38-3   | 35        | 309     |   |                     |          | JECFA     |
| 09.060 | Ethyl hexanoate          | 123-66-0   | 31        | 310     |   |                     |          | JECFA     |
| 09.061 | Propyl hexanoate         | 626-77-7   | 161       | 311     |   |                     |          | JECFA     |
| 09.062 | Isopropyl hexanoate      | 2311-46-8  | 308       | 312     |   |                     |          | JECFA     |
| 09.063 | Butyl hexanoate          | 626-82-4   | 162       | 313     |   |                     |          | JECFA     |
| 09.064 | Isobutyl hexanoate       | 105-79-3   | 166       | 314     |   |                     |          | JECFA     |
| 09.065 | Pentyl hexanoate         | 540-07-8   | 163       | 315     |   |                     |          | JECFA     |
| 09.066 | Hexyl hexanoate          | 6378-65-0  | 164       | 316     |   |                     |          | JECFA     |
| 09.067 | Geranyl hexanoate        | 10032-02-7 | 70        | 317     |   |                     |          | JECFA     |
| 09.068 | Linalyl hexanoate        | 7779-23-9  | 364       | 318     |   |                     |          | JECFA     |
| 09.069 | Methyl hexanoate         | 106-70-7   | 1871      | 319     |   |                     |          | SCF/CoE   |
| 09.070 | 3-Methylbutyl hexanoate  | 2198-61-0  | 46        | 320     |   |                     |          | JECFA     |
| 09.071 | 3-Phenylpropyl hexanoate | 6281-40-9  | 642       | 321     |   |                     |          | EFSA      |
| 09.072 | Ethyl formate            | 109-94-4   | 26        | 339     |   |                     |          | JECFA     |
| 09.073 | Propyl formate           | 110-74-7   | 117       | 340     | At least 94%; secondary component 4-6% propyl alcohol                 |                     |          | JECFA     |
| 09.074 | Heptyl formate           | 112-23-2   | 121       | 341     | At least 94%; secondary component 1-5% heptanal                       |                     |          | JECFA     |
| 09.075 | Octyl formate            | 112-32-3   | 122       | 342     |   |                     |          | JECFA     |
| 09.076 | Geranyl formate          | 105-86-2   | 54        | 343     | At least 85%; secondary components 8-10% geraniol and 2-4% nerol      |                     |          | JECFA     |
| 09.077 | Benzyl formate           | 104-57-4   | 841       | 344     |   |                     |          | EFSA      |

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| (1)    | (2)                                | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|------------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                      | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified        | Restrictions of Use | Footnote | Reference |
| 09.078 | Citronellyl formate                | 105-85-1   | 53        | 345     | At least 90%; secondary component 5-10% citronellool                         |                     |          | JECFA     |
| 09.079 | Rhodinyll formate                  | 141-09-3   | 56        | 346     | At least 85%; secondary component 10-13% rhodinol                            |                     |          | JECFA     |
| 09.080 | Linalyl formate                    | 115-99-1   | 358       | 347     | At least 90%; secondary component 6-8% linalool                              |                     |          | JECFA     |
| 09.081 | alpha-Terpinyl formate             | 2153-26-6  | 367       | 348     |  |                     |          | JECFA     |
| 09.082 | DL-Bornyl formate                  | 7492-41-3  | 1389      | 349     |  |                     |          | EFSA      |
| 09.083 | Phenethyl formate                  | 104-62-1   | 988       | 350     |  |                     |          | EFSA      |
| 09.084 | 3-Phenylpropyl formate             | 104-64-3   | 637       | 351     |  |                     |          | EFSA      |
| 09.085 | Cinnamyl formate                   | 104-65-4   | 649       | 352     |  |                     |          | EFSA      |
| 09.086 | 2-Methyl-1-phenyl-2-propyl formate | 10058-43-2 | 1654      | 353     | At least 93%; secondary component 5-7% alpha,alpha-dimethylphenethyl alcohol |                     |          | EFSA      |
| 09.087 | p-Anisyl formate                   | 122-91-8   | 872       | 354     | At least 90%; secondary component 8% anisyl alcohol                          |                     |          | EFSA      |
| 09.088 | Eugenyl formate                    | 10031-96-6 | 1530      | 355     | At least 94%; secondary component 2-3% eugenol                               |                     |          | EFSA      |
| 09.089 | Isoeugenyl formate                 | 7774-96-1  | 1261      | 356     |  |                     |          | EFSA      |
| 09.090 | alpha-Pentylcinnamyl formate       | 7493-79-0  | 676       | 357     | At least 85%; secondary component 10-12% alpha-amylcinnamyl alcohol          |                     |          | EFSA      |
| 09.091 | Butyl heptanoate                   | 5454-28-4  | 169       | 363     |  |                     |          | JECFA     |



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| (1)    | (2)                       | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 09.092 | Isobutyl heptanoate       | 7779-80-8  | 172       | 364     |  |                     |          | JECFA     |
| 09.093 | Ethyl heptanoate          | 106-30-9   | 32        | 365     |  |                     |          | JECFA     |
| 09.094 | Octyl heptanoate          | 5132-75-2  | 171       | 366     |  |                     |          | JECFA     |
| 09.095 | Propyl heptanoate         | 7778-87-2  | 168       | 367     |  |                     |          | JECFA     |
| 09.096 | Methyl heptanoate         | 106-73-0   | 167       | 368     |  |                     |          | JECFA     |
| 09.097 | Allyl heptanoate          | 142-19-8   | 4         | 369     |  |                     | 2        | JECFA     |
| 09.098 | Pentyl heptanoate         | 7493-82-5  | 170       | 370     | At least 93%; secondary component 4-7% n-amyl 2-methylhexanoate  |                     |          | JECFA     |
| 09.099 | Ethyl dodecanoate         | 106-33-2   | 37        | 375     |  |                     |          | JECFA     |
| 09.100 | Butyl dodecanoate         | 106-18-3   | 181       | 376     |  |                     |          | JECFA     |
| 09.101 | Methyl dodecanoate        | 111-82-0   | 180       | 377     | At least 94%; secondary components 3-6% methyl tetradecanoate; 2-5% methyl decanoate; 1-2% methyl hexadecanoate    |                     |          | JECFA     |
| 09.102 | p-Tolyl dodecanoate       | 10024-57-4 | 704       | 378     | At least 90%; secondary components 3-6% p-tolyl tetradecanoate; 2-5% p-tolyl decanoate; 1-2% p-tolyl hexadecanoate |                     |          | EFSA      |
| 09.103 | 3-Methylbutyl dodecanoate | 6309-51-9  | 182       | 379     |  |                     |          | JECFA     |
| 09.104 | Ethyl tetradecanoate      | 124-06-1   | 38        | 385     |  |                     |          | JECFA     |
| 09.105 | Isopropyl tetradecanoate  | 110-27-0   | 311       | 386     |  |                     |          | JECFA     |
| 09.106 | Methyl tetradecanoate     | 124-10-7   | 183       | 387     |  |                     |          | JECFA     |

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| (1)    | (2)                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 09.107 | Ethyl nonanoate         | 123-29-5   | 34        | 388     |   |                     |          | JECFA     |
| 09.108 | Methyl nonanoate        | 1731-84-6  | 179       | 389     |   |                     |          | JECFA     |
| 09.109 | Allyl nonanoate         | 7493-72-3  | 6         | 390     |   |                     | 2        | JECFA     |
| 09.110 | 3-Methylbutyl nonanoate | 7779-70-6  | 48        | 391     |   |                     |          | JECFA     |
| 09.111 | Ethyl octanoate         | 106-32-1   | 33        | 392     |   |                     |          | JECFA     |
| 09.112 | Pentyl octanoate        | 638-25-5   | 174       | 393     |   |                     |          | JECFA     |
| 09.113 | Hexyl octanoate         | 1117-55-1  | 175       | 394     |   |                     |          | JECFA     |
| 09.114 | Octyl octanoate         | 2306-88-9  | 177       | 395     |   |                     |          | JECFA     |
| 09.115 | Nonyl octanoate         | 7786-48-3  | 178       | 396     |   |                     |          | JECFA     |
| 09.116 | Linalyl octanoate       | 10024-64-3 | 365       | 397     | At least 93%; secondary components 2-3% linalool and 2-3% octanoic acid |                     |          | JECFA     |
| 09.117 | Methyl octanoate        | 111-11-5   | 173       | 398     |   |                     |          | JECFA     |
| 09.118 | Heptyl octanoate        | 4265-97-8  | 176       | 399     |   |                     |          | JECFA     |
| 09.119 | Allyl octanoate         | 4230-97-1  | 5         | 400     |   |                     | 2        | JECFA     |
| 09.120 | 3-Methylbutyl octanoate | 2035-99-6  | 47        | 401     |   |                     |          | JECFA     |
| 09.121 | Ethyl propionate        | 105-37-3   | 28        | 402     |   |                     |          | JECFA     |
| 09.122 | Propyl propionate       | 106-36-5   | 142       | 403     |   |                     |          | JECFA     |
| 09.123 | Isopropyl propionate    | 637-78-5   | 306       | 404     |   |                     |          | JECFA     |
| 09.124 | Butyl propionate        | 590-01-2   | 143       | 405     |   |                     |          | JECFA     |
| 09.125 | Isobutyl propionate     | 540-42-1   | 148       | 406     |   |                     |          | JECFA     |

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| (1)         | (2)                       | (3)       | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---------------------------|-----------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name             | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.126      | Octyl propionate          | 142-60-9  | 145       | 407     |   |                     |          | JECFA     |
| 09.127      | Decyl propionate          | 5454-19-3 | 146       | 408     |   |                     |          | JECFA     |
| 09.128      | Geranyl propionate        | 105-90-8  | 62        | 409     | At least 92%; secondary components 3-4% geraniol and 1-2% nerol       |                     |          | JECFA     |
| 09.129      | Citronellyl propionate    | 141-14-0  | 61        | 410     | At least 90%; secondary component 5-8% citronellol                    |                     |          | JECFA     |
| 09.130      | Linalyl propionate        | 144-39-8  | 360       | 411     | At least 94%; secondary component 2-5% linalool                       |                     |          | JECFA     |
| ▼ <b>M3</b> |                           |           |           |         |   |                     |          |           |
| 09.131      | DL-Isobornyl propionate   | 2756-56-1 | 1391      | 412     |   |                     |          | EFSA      |
| 09.132      | Benzyl propionate         | 122-63-4  | 842       | 413     |   |                     |          | EFSA      |
| ▼ <b>M1</b> |                           |           |           |         |   |                     |          |           |
| 09.133      | Cinnamyl propionate       | 103-56-0  | 651       | 414     |   |                     |          | EFSA      |
| 09.134      | Methyl propionate         | 554-12-1  | 141       | 415     |   |                     |          | JECFA     |
| 09.135      | Pentyl propionate         | 624-54-4  |           | 416     |   |                     |          | SCF/CoE   |
| 09.136      | 3-Methylbutyl propionate  | 105-68-0  | 44        | 417     |   |                     |          | JECFA     |
| 09.137      | Phenethyl propionate      | 122-70-3  | 990       | 418     |   |                     |          | EFSA      |
| 09.138      | 3-Phenylpropyl propionate | 122-74-7  | 639       | 419     |   |                     |          | EFSA      |
| 09.139      | Hexyl propionate          | 2445-76-3 | 144       | 420     |   |                     |          | JECFA     |
| 09.140      | Cyclohexyl propionate     | 6222-35-1 | 1097      | 421     |   |                     |          | EFSA      |
| 09.141      | Rhodinyl propionate       | 105-89-5  | 64        | 422     |   |                     |          | JECFA     |
| 09.142      | Terpinyl propionate       | 80-27-3   | 369       | 423     |   |                     |          | JECFA     |

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| (1)    | (2)                    | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name          | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.143 | Carvyl propionate      | 97-45-0    | 383       | 424     |   |                     |          | JECFA     |
| 09.144 | 1-Phenethyl propionate | 120-45-6   | 802       | 425     |   |                     |          | EFSA      |
| 09.145 | p-Anisyl propionate    | 7549-33-9  | 874       | 426     |   |                     |          | EFSA      |
| 09.146 | Allyl undec-10-enoate  | 7493-76-7  | 9         | 441     |   |                     | 2        | JECFA     |
| 09.147 | Ethyl valerate         | 539-82-2   | 30        | 465     |   |                     |          | JECFA     |
| 09.148 | Butyl valerate         | 591-68-4   | 160       | 466     |   |                     |          | JECFA     |
| 09.149 | Pentyl valerate        | 2173-56-0  |           | 467     |   |                     |          | SCF/CoE   |
| 09.150 | (E)-Geranyl valerate   | 10402-47-8 | 1821      | 468     |   |                     |          | EFSA      |
| 09.151 | Citronellyl valerate   | 7540-53-6  | 69        | 469     | At least 85%; secondary component 10-12% rhodinol                     |                     |          | JECFA     |
| 09.152 | Benzyl valerate        | 10361-39-4 |           | 470     |   |                     |          | EFSA      |
| 09.153 | DL-Bornyl valerate     | 7549-41-9  | 1392      | 471     |   |                     |          | EFSA      |
| 09.154 | Menthyl valerate       | 89-47-4    | 1852      | 472     |   |                     |          | EFSA      |
| 09.156 | Methyl 2-nonynoate     | 111-80-8   | 1356      | 479     |   |                     |          | EFSA      |
| 09.157 | Ethyl 2-nonynoate      | 10031-92-2 | 1352      | 480     |   |                     |          | EFSA      |
| 09.158 | Methyl 2-octynoate     | 111-12-6   | 1357      | 481     |   |                     |          | EFSA      |
| 09.159 | Pentyl formate         | 638-49-3   | 119       | 497     | At least 92%; secondary component 4-8% n-amyl alcohol                 |                     |          | JECFA     |
| 09.160 | Cyclohexyl formate     | 4351-54-6  | 1095      | 498     |   |                     |          | EFSA      |
| 09.161 | Hexyl formate          | 629-33-4   | 120       | 499     |   |                     |          | JECFA     |

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| (1)    | (2)                      | (3)       | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------|-----------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name            | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.162 | 3-Methylbutyl formate    | 110-45-2  | 42        | 500     | At least 92%; secondary component 4-8% isoamyl alcohol                |                     |          | JECFA     |
| 09.163 | Butyl formate            | 592-84-7  | 118       | 501     |   |                     |          | JECFA     |
| 09.164 | Isobutyl formate         | 542-55-2  | 124       | 502     | At least 94%; secondary component 4-6% isobutyl alcohol               |                     |          | JECFA     |
| 09.165 | Isopropyl formate        | 625-55-8  | 304       | 503     |   |                     |          | JECFA     |
| 09.166 | Heptyl butyrate          | 5870-93-9 | 154       | 504     |   |                     |          | JECFA     |
| 09.167 | Neryl butyrate           | 999-40-6  | 67        | 505     |   |                     |          | JECFA     |
| 09.168 | Phenethyl butyrate       | 103-52-6  | 991       | 506     |   |                     |          | EFSA      |
| 09.169 | Neryl propionate         | 105-91-9  | 63        | 509     |   |                     |          | JECFA     |
| 09.171 | Cedryl acetate           | 77-54-3   |           | 527     |   |                     |          | EFSA      |
| 09.174 | 2-Methoxyphenyl acetate  | 613-70-7  | 718       | 552     |   |                     |          | EFSA      |
| 09.176 | DL-Isobornyl formate     | 1200-67-5 | 1390      | 565     |   |                     |          | EFSA      |
| 09.178 | 1-Phenethyl acetate      | 93-92-5   | 801       | 573     |   |                     |          | EFSA      |
| 09.179 | 1-Phenethyl formate      | 7775-38-4 | 800       | 574     |   |                     |          | EFSA      |
| 09.180 | Methyl hexadecanoate     | 112-39-0  |           | 581     |   |                     |          | EFSA      |
| 09.181 | Methyl hex-2-enoate      | 2396-77-2 |           | 583     |   |                     |          | EFSA      |
| 09.182 | Methyl valerate          | 624-24-8  | 159       | 588     |   |                     |          | JECFA     |
| 09.185 | 2-Oxopropyl acetate      | 592-20-1  |           | 607     |   |                     |          | SCF/CoE   |
| 09.186 | sec-Butan-3-onyl acetate | 4906-24-5 | 406       | 608     |   |                     |          | JECFA     |

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| (1)    | (2)                               | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|-----------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                        | Restrictions of Use | Footnote | Reference |
| 09.188 | Pentyl decanoate                  | 5933-87-9  |           | 611     |  |                     |          | SCF/CoE   |
| 09.189 | 1-Phenylpropyl butyrate           | 10031-86-4 | 823       | 628     |  |                     |          | EFSA      |
| 09.191 | Ethyl hex-3-enoate                | 2396-83-0  | 335       |         |  |                     |          | JECFA     |
| 09.192 | Ethyl oleate                      | 111-62-6   | 345       | 633     |  |                     |          | JECFA     |
| 09.193 | Ethyl hexadecanoate               | 628-97-7   | 39        | 634     |  |                     |          | JECFA     |
| 09.194 | Ethyl (E,E)-hexa-2,4-dienoic acid | 2396-84-1  | 1178      | 635     |  |                     |          | EFSA      |
| 09.197 | Hex-3(cis)-enyl acetate           | 3681-71-8  | 134       | 644     |  |                     |          | JECFA     |
| 09.198 | Isopentyl valerate                | 2050-09-1  |           | 648     |  |                     |          | SCF/CoE   |
| 09.200 | 1-Methyl-3-phenylpropyl acetate   | 10415-88-0 | 816       | 671     |  |                     |          | EFSA      |
| 09.201 | Phenethyl valerate                | 7460-74-4  |           | 673     |  |                     |          | EFSA      |
| 09.202 | Propyl valerate                   | 141-06-0   |           | 679     |  |                     |          | SCF/CoE   |
| 09.204 | Ethyl octadeca-9,12-dienoate      | 544-35-4   |           | 711     |  |                     |          | SCF/CoE   |
| 09.205 | Ethyl octadeca-9,12,15-trienoate  | 1191-41-9  |           | 712     |  |                     |          | SCF/CoE   |
| 09.208 | Butyl oleate                      | 142-77-8   |           | 741     |  |                     |          | SCF/CoE   |
| 09.209 | Butyl octanoate                   | 589-75-3   |           | 742     |  |                     |          | SCF/CoE   |
| 09.210 | Ethyl octadecanoate               | 111-61-5   | 40        | 745     | At least 89%; secondary components 6-7% ethyl palmitate and ethyl esters of other fatty acid |                     |          | JECFA     |
| 09.211 | Glyceryl tributyrates             | 60-01-5    | 922       | 747     |  |                     |          | EFSA      |

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| (1)    | (2)                               | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 09.212 | Neryl formate                     | 2142-94-1  | 55        | 2060    | At least 90%, secondary components 4-6% geraniol, 1-3% nerol and formate esters of citronellol, geraniol and rhodinol |                     |          | JECFA     |
| 09.213 | Neryl acetate                     | 141-12-8   | 59        | 2061    |   |                     |          | JECFA     |
| 09.214 | Undec-10-enyl acetate             | 112-19-6   | 136       | 2062    |   |                     |          | JECFA     |
| 09.215 | Carvyl acetate                    | 97-42-7    | 382       | 2063    |   |                     |          | JECFA     |
| 09.216 | Dihydrocarvyl acetate             | 20777-49-5 | 379       | 2064    |   |                     |          | JECFA     |
| 09.218 | DL-Isobornyl acetate              | 125-12-2   | 1388      | 2066    |   |                     |          | EFSA      |
| 09.219 | 1R,2S,5R-isopulegyl acetate       | 57576-09-7 | 756       | 2067    |   |                     | 4        | EFSA      |
| 09.220 | Piperonyl acetate                 | 326-61-4   | 894       | 2068    |   |                     |          | EFSA      |
| 09.225 | 1,3-Nonanediol acetate            | 1322-17-4  | 605       | 2075    |   |                     |          | JECFA     |
| 09.227 | 1,1-Dimethyl-2-phenethyl acetate  | 151-05-3   | 1655      | 2077    |   |                     |          | EFSA      |
| 09.228 | o-Tolyl acetate                   | 533-18-6   | 698       | 2078    |   |                     |          | EFSA      |
| 09.230 | Cyclohexyl butyrate               | 1551-44-6  | 1094      | 2082    |   |                     |          | EFSA      |
| 09.231 | 1-Phenethyl butyrate              | 3460-44-4  | 803       | 2083    |   |                     |          | EFSA      |
| 09.232 | 1,1-Dimethyl-2-phenethyl butyrate | 10094-34-5 | 1656      | 2084    |   |                     |          | EFSA      |
| 09.233 | Allyl propionate                  | 2408-20-0  | 1         | 2094    |   |                     |          | JECFA     |
| 09.234 | Methyl non-2-enoate               | 111-79-5   | 1813      | 2099    |   |                     |          | EFSA      |
| 09.235 | Butyl dec-2-enoate                | 7492-45-7  | 1348      | 2100    |   |                     |          | EFSA      |

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| (1)    | (2)                                | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                      | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.236 | Methyl undec-9-enoate              | 5760-50-9  | 342       | 2101    |   |                     |          | JECFA     |
| 09.237 | Ethyl undec-10-enoate              | 692-86-4   | 343       | 10634   |   |                     |          | JECFA     |
| 09.238 | Butyl undec-10-enoate              | 109-42-2   | 344       | 2103    |   |                     |          | JECFA     |
| 09.239 | Methyl 2-undecynoate               | 10522-18-6 | 1358      | 2111    |   |                     |          | EFSA      |
| 09.240 | Hex-3(cis)-enyl formate            | 33467-73-1 | 123       | 2153    |   |                     |          | JECFA     |
| 09.244 | Allyl hexanoate                    | 123-68-2   | 3         | 2181    |   |                     | 2        | JECFA     |
| 09.246 | Butyl octadecanoate                | 123-95-5   | 184       | 2189    |   |                     |          | JECFA     |
| 09.247 | Allyl crotonate                    | 20474-93-5 |           | 2222    |   |                     | 2        | EFSA      |
| 09.248 | Ethyl trans-2-butenolate           | 623-70-1   |           | 2244    |   |                     |          | EFSA      |
| 09.249 | 1-Methyl-2-phenethyl butyrate      | 68922-11-2 | 814       | 2276    |   |                     |          | EFSA      |
| 09.250 | Isobutyl valerate                  | 10588-10-0 |           | 2303    |   |                     |          | SCF/CoE   |
| 09.251 | Methyl decanoate                   | 110-42-9   |           | 2304    |   |                     |          | SCF/CoE   |
| 09.253 | 2-Isopropyl-5-methylphenyl acetate | 528-79-0   |           | 2308    |   |                     |          | EFSA      |
| 09.254 | 3-Octyl acetate                    | 4864-61-3  | 313       | 2347    |   |                     |          | JECFA     |
| 09.256 | Propyl nonanoate                   | 6513-03-7  |           | 2351    |   |                     |          | SCF/CoE   |
| 09.258 | D- Glucose pentaacetate            | 3891-59-6  |           |         |   |                     |          | EFSA      |
| 09.260 | Ethyl (E,Z)-deca-2,4-dienoate      | 3025-30-7  | 1192      | 10574   |   |                     |          | EFSA      |



▼ **M1**

| (1)    | (2)                       | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.261 | 2-Phenethyl hexanoate     | 6290-37-5  | 995       | 10882   |   |                     |          | EFSA      |
| 09.262 | Phenethyl octanoate       | 5457-70-5  | 996       | 10884   |   |                     |          | EFSA      |
| 09.263 | Glyceryl tripropionate    | 139-45-7   | 921       | 10657   |   |                     |          | EFSA      |
| 09.264 | sec-Butan-3-onyl butyrate | 84642-61-5 | 407       | 10525   |   |                     |          | JECFA     |
| 09.265 | Ethyl oct-4-enoate        | 34495-71-1 | 338       | 10619   |   |                     |          | JECFA     |

▼ **M3**

|        |                  |            |      |       |  |  |  |      |
|--------|------------------|------------|------|-------|--|--|--|------|
| 09.266 | Hexyl 2-butenate | 19089-92-0 | 1807 | 10688 |  |  |  | EFSA |
|--------|------------------|------------|------|-------|--|--|--|------|

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|        |                            |            |      |       |  |  |   |       |
|--------|----------------------------|------------|------|-------|--|--|---|-------|
| 09.267 | Methyl hex-3-enoate        | 2396-78-3  | 334  | 10801 |  |  |   | JECFA |
| 09.268 | Methyl oct-4(cis)-enoate   | 21063-71-8 | 337  | 10834 |  |  |   | JECFA |
| 09.269 | Fenchyl acetate            | 13851-11-1 | 1399 | 11769 |  |  |   | EFSA  |
| 09.270 | Hex-3-enyl butyrate        | 16491-36-4 | 157  | 11859 |  |  |   | JECFA |
| 09.271 | Hex-3-enyl hexanoate       | 31501-11-8 | 165  | 11779 |  |  |   | JECFA |
| 09.272 | Myrtenyl formate           | 72928-52-0 | 983  | 10858 |  |  | 2 | EFSA  |
| 09.273 | Isobutyl crotonate         | 589-66-2   | 1206 | 10706 |  |  |   | EFSA  |
| 09.274 | Ethyl undecanoate          | 627-90-7   | 36   | 10633 |  |  |   | JECFA |
| 09.275 | Hept-3(trans)-enyl acetate | 1576-77-8  | 135  | 10662 |  |  |   | JECFA |
| 09.276 | Oct-2-enyl acetate         | 3913-80-2  | 1367 | 11906 |  |  | 2 | EFSA  |
| 09.277 | Oct-2(trans)-enyl butyrate | 84642-60-4 | 1368 | 11907 |  |  | 2 | EFSA  |

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| (1)    | (2)                            | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.278 | p-Mentha-1,8-dien-7-yl acetate | 15111-96-3 | 975       | 10742   |   |                     | 2        | EFSA      |
| 09.280 | Nonane-1,4-diyl diacetate      | 67715-81-5 | 609       | 11927   | At least 92%; secondary component 5-8% monoacetate                    |                     |          | JECFA     |
| 09.281 | Oct-1-en-3-yl acetate          | 2442-10-6  | 1836      | 11716   |   |                     | 1        | EFSA      |
| 09.282 | Oct-1-en-3-yl butyrate         | 16491-54-6 | 1837      |         |   |                     | 1        | EFSA      |
| 09.283 | (E)-Ethyl dec-2-enoate         | 7367-88-6  | 1814      | 10577   |   |                     |          | EFSA      |
| 09.284 | Ethyl dec-4-enoate             | 76649-16-6 | 341       | 10578   |   |                     |          | JECFA     |
| 09.285 | Ethyl oct-2(trans)-enoate      | 7367-82-0  | 1812      | 10617   |   |                     |          | EFSA      |
| 09.286 | 2-Methylbutyl acetate          | 624-41-9   | 138       | 10762   |   |                     |          | JECFA     |
| 09.287 | Propyl deca-2,4-dienoate       | 28316-62-3 |           | 10889   |   |                     |          | EFSA      |
| 09.288 | 4-(4-Acetoxyphenyl)butan-2-one | 3572-06-3  | 731       |         | At least 93%; secondary component 2-5% ortho-isomer.                  |                     |          | EFSA      |
| 09.289 | alpha-Campholene acetate       | 36789-59-0 | 969       |         |   |                     |          | EFSA      |
| 09.290 | Ethyl octa-4,7-dienoate        | 69925-33-3 | 339       |         |   |                     |          | JECFA     |
| 09.291 | Hex-3-enyl hex-3-enoate        | 61444-38-0 | 336       |         |   |                     |          | JECFA     |
| 09.292 | Hexyl 2-hexenoate              | 33855-57-1 | 1810      |         | At least 92%; secondary component 6-8% hexyl trans-3-hexenoate        |                     |          | EFSA      |
| 09.294 | 2-Methylbenzyl acetate         | 17373-93-2 | 863       |         | At least 98% (sum of o,m,p-isomers)                                   |                     |          | EFSA      |
| 09.298 | Methyl non-3-enoate            | 13481-87-3 | 340       |         |   |                     |          | JECFA     |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|--|-------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                                  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference  |
| 09.299 | Methyl oct-2(trans)-enoate                     | 7367-81-9   | 1811      | 11800   | At least 90%; secondary component 5-6% methyl trans-3-octenoate         |                     |          | EFSA       |
| 09.300 | Methyl (E,E)-hexa-2,4-dienoic acid             | 689-89-4    | 1177      |         |   |                     |          | EFSA       |
| 09.301 | p-Tolyl octanoate                              | 59558-23-5  | 703       |         |   |                     |          | EFSA       |
| 09.302 | Myrtenyl acetate                               | 1079-01-2   | 982       | 10887   |   |                     | 2        | EFSA       |
| 09.303 | Hept-2-enyl isovalerate                        | 253596-70-2 | 1799      | 10664   |   |                     | 2        | EFSA       |
| 09.304 | sec-Heptyl isovalerate                         | 238757-71-6 |           | 10806   |   |                     |          | EFSA       |
| 09.305 | beta-Ionyl acetate                             | 22030-19-9  | 1409      | 10702   | At least 92%; secondary components 2-5% acetic acid and 1-2% beta-ionol |                     | 2        | EFSA       |
| 09.306 | 2-Methoxycinnamyl acetate (mixture of isomers) | 110823-66-0 |           | 10752   |   |                     |          | EFSA       |
| 09.307 | 2-Methylbutyl dodecanoate                      | 93815-53-3  |           | 10766   |   |                     |          | EFSA       |
| 09.312 | Allyl hexa-2,4-dienoate                        | 7493-75-6   | 8         | 2182    |   |                     | 2        | JECFA/EFSA |
| 09.313 | Benzyl 2-methylbutyrate                        | 56423-40-6  |           | 10523   |   |                     |          | EFSA       |
| 09.314 | Benzyl crotonate                               | 65416-24-2  |           |         |   |                     |          | EFSA       |
| 09.315 | Benzyl dodecanoate                             | 140-25-0    |           |         |   |                     |          | EFSA       |
| 09.316 | Benzyl hexanoate                               | 6938-45-0   |           | 10521   |   |                     |          | EFSA       |
| 09.317 | Benzyl lactate                                 | 2051-96-9   |           |         |   |                     |          | EFSA       |
| 09.318 | Benzyl octanoate                               | 10276-85-4  |           |         |   |                     |          | EFSA       |

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| (1)    | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.319 | DL-Bornyl butyrate                              | 13109-70-1  | 1412      |         |   |                     |          | EFSA      |
| 09.321 | Butyl 2-methylbut-2(cis)-enoate                 | 7785-64-0   |           |         |   |                     |          | EFSA      |
| 09.323 | sec-Butyl acetate                               | 105-46-4    |           | 10527   |   |                     |          | EFSA      |
| 09.324 | Butyl but-(2E)-enoate                           | 591-63-9    |           |         |   |                     |          | EFSA      |
| 09.325 | sec-Butyl butyrate                              | 819-97-6    |           | 10528   |   |                     |          | EFSA      |
| 09.326 | Butyl deca-(2E,4Z)-dienoate                     | 28369-24-6  |           | 10529   |   |                     |          | EFSA      |
| 09.327 | Butyl decanoate                                 | 30673-36-0  |           | 10530   |   |                     |          | EFSA      |
| 09.328 | sec-Butyl formate                               | 589-40-2    |           | 10532   |   |                     |          | EFSA      |
| 09.329 | Butyl hex-2-enoate                              | 13416-74-5  |           |         |   |                     |          | EFSA      |
| 09.330 | Butyl hex-(3E)-enoate                           | 118869-62-8 |           |         |   |                     |          | EFSA      |
| 09.331 | Butyl hexadecanoate                             | 111-06-8    |           |         |   |                     |          | EFSA      |
| 09.332 | sec-Butyl hexanoate                             | 820-00-8    |           | 10533   |   |                     |          | EFSA      |
| 09.333 | sec-Butyl lactate                               | 18449-60-0  |           |         |   |                     |          | EFSA      |
| 09.334 | Butyl nonanoate                                 | 50623-57-9  |           |         |   |                     |          | EFSA      |
| 09.335 | Butyl oct-2-enoate                              | 57403-32-4  |           | 10536   |   |                     |          | EFSA      |
| 09.337 | Carvacryl acetate                               | 6380-28-5   |           |         |   |                     |          | EFSA      |
| 09.339 | Cinnamyl 2-methylcrotonate (mixture of isomers) | 61792-12-9  |           |         |   |                     |          | EFSA      |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.340 | Citronellyl 2-methylbut-2-enoate | 24717-85-9 | 1823      |         |   |                     |          | EFSA      |
| 09.341 | Citronellyl hexanoate            | 10580-25-3 |           |         |   |                     |          | EFSA      |
| 09.342 | Cyclogeranyl acetate             | 69842-11-1 |           |         |   |                     |          | EFSA      |
| 09.345 | Di-isopentyl succinate           | 818-04-2   |           | 10555   |   |                     |          | EFSA      |
| 09.346 | Dibutyl malate                   | 6280-99-5  |           |         |   |                     |          | EFSA      |
| 09.347 | Dibutyl succinate                | 141-03-7   |           |         |   |                     |          | EFSA      |
| 09.348 | Diethyl adipate                  | 141-28-6   |           |         |   |                     |          | EFSA      |
| 09.349 | Diethyl citrate                  | 32074-56-9 |           |         |   |                     |          | EFSA      |
| 09.350 | Diethyl fumarate                 | 623-91-6   |           |         |   |                     |          | EFSA      |
| 09.351 | Diethyl maleate                  | 141-05-9   |           | 10551   |   |                     |          | EFSA      |
| 09.352 | Diethyl nonanedioate             | 624-17-9   |           | 10549   |   |                     |          | EFSA      |
| 09.353 | Diethyl oxalate                  | 95-92-1    |           |         |   |                     |          | EFSA      |
| 09.354 | Diethyl pentanedioate            | 818-38-2   |           |         |   |                     |          | EFSA      |
| 09.355 | neo-Dihydrocarvyl acetate        | 56422-50-5 |           | 10859   |   |                     |          | EFSA      |
| 09.356 | 1,1-Dimethylethyl propionate     | 20487-40-5 |           |         |   |                     |          | EFSA      |
| 09.358 | 3,7-Dimethyloctyl acetate        | 20780-49-8 |           | 10899   |   |                     |          | EFSA      |
| 09.360 | Ethyl 2-acetoxypropionate        | 2985-28-6  |           |         |   |                     |          | EFSA      |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.362 | Ethyl 2-hydroxy-4-methylbenzoate | 60770-00-5 |           |         |   |                     |          | EFSA      |
| 09.363 | Ethyl 2-methoxybenzoate          | 7335-26-4  |           |         |   |                     |          | EFSA      |
| 09.364 | Ethyl 2-phenylpropionate         | 2510-99-8  |           |         |   |                     |          | EFSA      |
| 09.365 | Ethyl 3-methylcrotonate          | 638-10-8   |           | 10610   |   |                     |          | EFSA      |
| 09.367 | Ethyl 4-hydroxybenzoate          | 120-47-8   |           |         |   |                     |          | EFSA      |
| 09.368 | Ethyl 4-methylpent-3-enoate      | 6849-18-9  |           | 10615   |   |                     |          | EFSA      |
| 09.370 | Ethyl dec-9-enoate               | 67233-91-4 |           | 10579   |   |                     |          | EFSA      |
| 09.371 | Ethyl deca-2,4,7-trienoate       | 78417-28-4 | 1193      | 10576   |   |                     |          | EFSA      |
| 09.372 | Ethyl dodec-(2E)-enoate          | 28290-90-6 |           | 10584   |   |                     |          | EFSA      |
| 09.374 | Ethyl hept-(2E)-enoate           | 54340-72-6 |           |         |   |                     |          | EFSA      |
| 09.375 | Ethyl methacrylate               | 97-63-2    |           |         |   |                     |          | EFSA      |
| 09.377 | Ethyl oct-3-enoate               | 1117-65-3  | 1632      | 10618   |   |                     |          | EFSA      |
| 09.379 | Ethyl pent-2-enoate              | 2445-93-4  |           | 10623   |   |                     |          | EFSA      |
| 09.380 | Ethyl pentadecanoate             | 41114-00-5 |           | 10622   |   |                     |          | EFSA      |
| 09.381 | 2-Ethylhexyl acetate             | 103-09-3   |           |         |   |                     |          | EFSA      |
| 09.382 | Geranyl 2-methylbutyrate         | 68705-63-5 | 1820      |         |   |                     |          | EFSA      |

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| (1)    | (2)                          | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified    | Restrictions of Use | Footnote | Reference |
| 09.383 | Geranyl 2-methylcrotonate    | 7785-33-3  | 1822      | 11829   |  |                     |          | EFSA      |
| 09.385 | Hept-2-enyl acetate          | 16939-73-4 | 1798      | 10661   |  |                     | 2        | EFSA      |
| 09.386 | sec-Hept-4(cis)-enyl acetate | 94088-33-2 |           |         |  |                     |          | EFSA      |
| 09.387 | Heptyl 2-methylbutyrate      | 50862-12-9 |           | 10668   |  |                     |          | EFSA      |
| 09.388 | sec-Heptyl acetate           | 5921-82-4  |           | 10802   |  |                     |          | EFSA      |
| 09.390 | Heptyl hexanoate             | 6976-72-3  |           | 10666   |  |                     |          | EFSA      |
| 09.391 | sec-Heptyl hexanoate         | 6624-58-4  |           | 10805   |  |                     |          | EFSA      |
| 09.392 | Heptyl isovalerate           | 56423-43-9 |           | 10667   |  |                     |          | EFSA      |
| 09.394 | E-Hex-2-enyl acetate         | 2497-18-9  | 1355      | 643     | At least 90%; secondary component 5-6% (Z)-2-hexenyl acetate             |                     | 2        | EFSA      |
| 09.395 | E -Hex-2-enyl propionate     | 53398-80-4 | 1378      | 11830   |  |                     | 2        | EFSA      |
| 09.396 | Hex-2-enyl butyrate          | 53398-83-7 | 1375      |         |  |                     | 2        | EFSA      |
| 09.397 | Hex-2-enyl formate           | 53398-78-0 | 1376      | 11858   |  |                     | 2        | EFSA      |
| 09.398 | Hex-(2E)-enyl hexanoate.     | 53398-86-0 | 1381      |         | At least 93%; secondary components 2-3% hexanoic acid and 2-3% 2-hexenol |                     | 2        | EFSA      |
| 09.399 | (2E)-Hexenyl isovalerate     | 68698-59-9 | 1377      |         |  |                     | 2        | EFSA      |
| 09.400 | Hex-2-enyl phenylacetate     | 68133-78-8 |           |         |  |                     | 2        | EFSA      |
| 09.401 | Isopentyl acetoacetate       | 2308-18-1  | 598       | 227     |  |                     |          | JECFA     |

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| (1)    | (2)                                | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|------------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                      | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.402 | Ethyl acetoacetate                 | 141-97-9   | 595       | 240     |   |                     |          | JECFA      |
| 09.403 | Butyl acetoacetate                 | 591-60-6   | 596       | 241     |   |                     |          | JECFA      |
| 09.404 | Isobutyl acetoacetate              | 7779-75-1  | 597       | 242     |   |                     |          | JECFA      |
| 09.405 | Geranyl acetoacetate               | 10032-00-5 | 599       | 243     |   |                     |          | JECFA      |
| 09.406 | Benzyl 3-oxobutyrate               | 5396-89-4  | 848       | 244     |   |                     |          | EFSA       |
| 09.407 | 2-Phenethyl 3-methylcrotonate      | 42078-65-9 | 998       | 246     |   |                     |          | EFSA       |
| 09.408 | Isobutyl 2-methylbut-2(cis)-enoate | 7779-81-9  | 1213      | 247     |   |                     |          | EFSA       |
| 09.409 | Ethyl 2-methylbutyrate             | 7452-79-1  | 206       | 265     |   |                     |          | JECFA      |
| 09.410 | Allyl 2-ethylbutyrate              | 7493-69-8  | 11        | 281     |   |                     | 2        | JECFA/EFSA |
| 09.411 | Allyl cyclohexanebutyrate          | 7493-65-4  | 14        | 283     |   |                     | 2        | JECFA/EFSA |
| 09.412 | Methyl isobutyrate                 | 547-63-7   | 185       | 287     |   |                     |          | JECFA      |
| 09.413 | Ethyl isobutyrate                  | 97-62-1    | 186       | 288     |   |                     |          | JECFA      |
| 09.414 | Propyl isobutyrate                 | 644-49-5   | 187       | 289     |   |                     |          | JECFA      |
| 09.415 | Isopropyl isobutyrate              | 617-50-5   | 309       | 290     |   |                     |          | JECFA      |
| 09.416 | Butyl isobutyrate                  | 97-87-0    | 188       | 291     |   |                     |          | JECFA      |
| 09.417 | Isobutyl isobutyrate               | 97-85-8    | 194       | 292     |   |                     |          | JECFA      |



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| (1)    | (2)                         | (3)       | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-----------------------------|-----------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name               | CAS No.   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.418 | Pentyl isobutyrate          | 2445-72-9 |           | 293     |   |                     |          | EFSA      |
| 09.419 | Isopentyl isobutyrate       | 2050-01-3 | 49        | 294     |   |                     |          | JECFA     |
| 09.420 | Heptyl isobutyrate          | 2349-13-5 | 190       | 295     |   |                     |          | JECFA     |
| 09.421 | Citronellyl isobutyrate     | 97-89-2   | 71        | 296     | At least 92%; secondary component 3-5% citronellol                    |                     |          | JECFA     |
| 09.423 | Linalyl isobutyrate         | 78-35-3   | 362       | 298     |   |                     |          | JECFA     |
| 09.424 | Neryl isobutyrate           | 2345-24-6 | 73        | 299     | At least 92%; secondary components 2-5% nerol and 1-2% geraniol       |                     |          | JECFA     |
| 09.425 | Terpinyl 2-methylpropionate | 7774-65-4 | 371       | 300     |   |                     |          | JECFA     |
| 09.426 | Benzyl isobutyrate          | 103-28-6  | 844       | 301     |   |                     |          | EFSA      |
| 09.427 | Phenethyl isobutyrate       | 103-48-0  | 992       | 302     |   |                     |          | EFSA      |
| 09.428 | 3-Phenylpropyl isobutyrate  | 103-58-2  | 640       | 303     |   |                     |          | EFSA      |
| 09.429 | p-Tolyl isobutyrate         | 103-93-5  | 701       | 304     |   |                     |          | EFSA      |
| 09.430 | Piperonyl isobutyrate       | 5461-08-5 | 895       | 305     |   |                     |          | EFSA      |
| 09.431 | Geranyl isobutyrate         | 2345-26-8 | 72        | 306     |   |                     |          | JECFA     |
| 09.432 | Methyl 4-methylvalerate     | 2412-80-8 | 216       | 322     |   |                     |          | JECFA     |
| 09.433 | Ethyl lactate               | 97-64-3   | 931       | 371     |   |                     |          | EFSA      |

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| (1)    | (2)                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-----------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.434 | Butyl lactate         | 138-22-7   | 932       | 372     |   |                     |          | EFSA      |
| 09.435 | Ethyl 4-oxovalerate   | 539-88-8   | 607       | 373     |   |                     |          | JECFA     |
| 09.436 | Butyl 4-oxovalerate   | 2052-15-5  | 608       | 374     |   |                     |          | JECFA     |
| 09.439 | Diethyl malate        | 7554-12-3  | 620       | 382     |   |                     |          | JECFA     |
| 09.441 | Butyl ethyl malonate  | 17373-84-1 | 615       | 384     |   |                     |          | JECFA     |
| 09.442 | Ethyl pyruvate        | 617-35-6   | 938       | 430     |   |                     |          | EFSA      |
| 09.443 | Isopentyl pyruvate    | 7779-72-8  | 939       | 431     |   |                     |          | EFSA      |
| 09.444 | Diethyl succinate     | 123-25-1   | 617       | 438     |   |                     |          | JECFA     |
| 09.445 | Dimethyl succinate    | 106-65-0   | 616       | 439     |   |                     |          | JECFA     |
| 09.446 | Diethyl tartrate      | 87-91-2    | 622       | 440     |   |                     |          | JECFA     |
| 09.447 | Ethyl isovalerate     | 108-64-5   | 196       | 442     |   |                     |          | JECFA     |
| 09.448 | Propyl isovalerate    | 557-00-6   | 197       | 443     |   |                     |          | JECFA     |
| 09.449 | Butyl isovalerate     | 109-19-3   | 198       | 444     |   |                     |          | JECFA     |
| 09.450 | Isopropyl isovalerate | 32665-23-9 | 310       | 445     |   |                     |          | JECFA     |
| 09.451 | Octyl isovalerate     | 7786-58-5  | 200       | 446     |   |                     |          | JECFA     |
| 09.452 | Nonyl isovalerate     | 7786-47-2  | 201       | 447     |   |                     |          | JECFA     |

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| (1)    | (2)                            | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.453 | Geranyl isovalerate            | 109-20-6   | 75        | 448     |   |                     |          | JECFA     |
| 09.454 | Linalyl isovalerate            | 1118-27-0  | 363       | 449     |   |                     |          | JECFA     |
| 09.455 | Menthyl isovalerate            | 16409-46-4 | 432       | 450     |   |                     |          | JECFA     |
| 09.456 | DL-Bornyl isovalerate          | 76-50-6    | 1393      | 451     |   |                     |          | EFSA      |
| 09.457 | DL-Isobornyl isovalerate       | 7779-73-9  | 1394      | 452     |   |                     |          | EFSA      |
| 09.458 | Benzyl isovalerate             | 103-38-8   | 845       | 453     |   |                     |          | EFSA      |
| 09.459 | Cinnamyl isovalerate           | 140-27-2   | 654       | 454     |   |                     |          | EFSA      |
| 09.460 | Citronellyl isovalerate        | 68922-10-1 |           | 455     |   |                     |          | SCF/CoE   |
| 09.461 | Terpinyl isovalerate           | 1142-85-4  | 372       | 456     |   |                     |          | JECFA     |
| 09.462 | Methyl isovalerate             | 556-24-1   | 195       | 457     |   |                     |          | JECFA     |
| 09.463 | 3-Methylbutyl 3-methylbutyrate | 659-70-1   | 50        | 458     |   |                     |          | JECFA     |
| 09.464 | Cyclohexyl isovalerate         | 7774-44-9  | 1096      | 459     |   |                     |          | EFSA      |
| 09.465 | Rhodinyl isovalerate           | 7778-96-3  | 77        | 460     |   |                     |          | JECFA     |
| 09.466 | Phenethyl isovalerate          | 140-26-1   | 994       | 461     |   |                     |          | EFSA      |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                   | Restrictions of Use | Footnote | Reference  |
| 09.467 | 3-Phenylpropyl isovalerate       | 5452-07-3  | 641       | 462     |   |                     |          | EFSA       |
| 09.468 | alpha-Pentylcinnamyl isovalerate | 7493-80-3  | 678       | 463     |   |                     |          | EFSA       |
| 09.469 | Allyl cyclohexanevalerate        | 7493-68-7  | 15        | 474     |   |                     | 2        | JECFA/EFSA |
| 09.470 | Cinnamyl isobutyrate             | 103-59-3   | 653       | 496     |   |                     |          | EFSA       |
| 09.471 | Neryl isovalerate                | 3915-83-1  | 76        | 508     |   |                     |          | JECFA      |
| 09.472 | Isobutyl isovalerate             | 589-59-3   | 203       | 568     |   |                     |          | JECFA      |
| 09.473 | Octyl isobutyrate                | 109-15-9   | 192       | 593     |   |                     |          | JECFA      |
| 09.474 | Dibutyl sebacate                 | 109-43-3   | 625       | 622     | At least 93%; secondary components 2-4% butyl ester of C14-, C16-, and C18- fatty acids |                     |          | JECFA      |
| 09.475 | Diethyl sebacate                 | 110-40-7   | 624       | 623     |   |                     |          | JECFA      |
| 09.476 | Ethyl 3-phenyl-3-oxopropionate   | 94-02-0    | 834       | 627     | At least 88%; secondary component 7-9% ethyl benzoate                                   |                     |          | EFSA       |
| 09.478 | Hexyl isobutyrate                | 2349-07-7  | 189       | 646     |   |                     |          | JECFA      |
| 09.480 | o-Tolyl isobutyrate              | 36438-54-7 | 700       | 681     |   |                     |          | EFSA       |
| 09.481 | Diethyl carbonate                | 105-58-8   |           | 710     |   |                     |          | SCF/CoE    |
| 09.482 | Allyl cyclohexaneacetate         | 4728-82-9  | 12        | 2070    |   |                     | 2        | JECFA/EFSA |
| 09.483 | Methyl 2-methylbutyrate          | 868-57-5   | 205       | 2085    | At least 92%; secondary component 5-7% methyl isovalerate                               |                     |          | JECFA      |

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| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)         |
|--------|---|------------|-----------|---------|---|---------------------|----------|-------------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference   |
| 09.484 | 1,1-Dimethyl-3-phenylpropyl isobutyrate | 10031-71-7 | 1461      | 2086    |   |                     |          | EFSA        |
| 09.485 | 2-Phenylpropyl isobutyrate              | 65813-53-8 | 1470      | 2087    |   |                     |          | EFSA        |
| 09.486 | 1-Phenethyl isobutyrate                 | 7775-39-5  | 804       | 2088    |   |                     |          | EFSA        |
| 09.487 | 2-Phenoxyethyl isobutyrate              | 103-60-6   | 1028      | 2089    |   |                     |          | EFSA        |
| 09.488 | Ethyl cyclohexanepropionate             | 10094-36-7 | 966       | 2095    |   |                     |          | EFSA        |
| 09.489 | Allyl isovalerate                       | 2835-39-4  | 7         | 2098    |   |                     | 2        | JECFA /EFSA |
| 09.490 | Diethyl malonate                        | 105-53-3   | 614       | 2106    |   |                     |          | JECFA       |
| 09.491 | Butyl-O-butyryllactate                  | 7492-70-8  | 935       | 2107    |   |                     |          | EFSA        |
| 09.492 | Allyl cyclohexanehexanoate              | 7493-66-5  | 16        | 2180    |   |                     | 2        | JECFA/EFSA  |
| 09.493 | Allyl 2-methylcrotonate                 | 7493-71-2  | 10        | 2183    |   |                     | 2        | JECFA/EFSA  |
| 09.494 | Benzyl 2-methylcrotonate                | 37526-88-8 | 846       | 2184    |   |                     |          | EFSA        |
| 09.495 | Ethyl 2-methylcrotonate                 | 5837-78-5  | 1824      | 2185    |   |                     |          | EFSA        |
| 09.496 | Phenethyl 2-methylcrotonate             | 55719-85-2 | 997       | 2186    |   |                     |          | EFSA        |
| 09.498 | Allyl cyclohexanepropionate             | 2705-87-5  | 13        | 2223    |   |                     | 2        | JECFA/EFSA  |

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| (1)    | (2)                               | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                     | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.499 | Pentyl isovalerate                | 25415-62-7 |           | 2224    |   |                     |          | EFSA      |
| 09.501 | Ethyl 2-acetyl-3-phenylpropionate | 620-79-1   | 835       | 2241    |   |                     |          | EFSA      |
| 09.502 | Ethyl butyryl lactate             | 71662-27-6 |           | 2242    |   |                     |          | EFSA      |
| 09.505 | Hex-3-enyl isovalerate            | 10032-11-8 | 202       | 2344    |   |                     |          | JECFA     |
| 09.506 | Hex-3-enyl 2-methylbutyrate       | 10094-41-4 | 211       | 2345    |   |                     |          | JECFA     |
| 09.507 | Hexyl 2-methylbutyrate            | 10032-15-2 | 208       | 4132    |   |                     |          | JECFA     |
| 09.508 | Benzyl 2,3-dimethylcrotonate      | 7492-69-5  | 847       | 11868   |   |                     |          | EFSA      |
| 09.509 | 1-Methyl-1-phenethyl isobutyrate  | 7774-60-9  | 1657      | 11828   |   |                     |          | EFSA      |
| 09.510 | Ethyl aconitate                   | 1321-30-8  | 628       | 11845   |   |                     |          | JECFA     |
| 09.511 | Tributyl acetylcitrate            | 77-90-7    | 630       |         |   |                     |          | JECFA     |
| 09.512 | Triethyl citrate                  | 77-93-0    | 629       | 11762   |   |                     |          | JECFA     |
| 09.513 | Isopropyl 2-methylcrotonate       | 1733-25-1  | 312       | 10733   |   |                     |          | JECFA     |
| 09.514 | Ethyl 2,4-dioxohexanoate          | 13246-52-1 | 603       | 11903   |   |                     |          | JECFA     |
| 09.515 | Geranyl 2-ethylbutyrate           | 73019-14-4 | 78        | 11667   |   |                     |          | JECFA     |
| 09.516 | 2-Methylbutyl 2-methylbutyrate    | 2445-78-5  | 212       | 10773   | At least 90%; secondary component 5-7% 2-methylbutyl 3-methylbutyrate |                     |          | JECFA     |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 09.517 | Methyl citronellate                             | 2270-60-2  | 354       | 10781   |   |                     |          | JECFA     |
| 09.518 | 4-Methylphenyl isovalerate                      | 55066-56-3 | 702       | 10545   |   |                     |          | EFSA      |
| 09.519 | Butyl 2-methylbutyrate                          | 15706-73-7 | 207       | 10534   |   |                     |          | JECFA     |
| 09.520 | Methyl 3-oxo-2-pentyl-1-cyclopentylacetate      | 24851-98-7 |           | 10785   |   |                     |          | EFSA      |
| 09.521 | Methyl-3-oxo-2-pent-2-enyl-1-cyclopentylacetate | 39924-52-2 | 1400      | 10821   | Mixture of isomers: trans-trans isomer: 2-8%, trans-cis isomer: 84-92%, cis-cis isomer:3-8%. Sum of three main peaks: 98-100% |                     |          | EFSA      |
| 09.522 | Ethyl 3-hydroxybutyrate                         | 5405-41-4  | 594       | 10596   |   |                     |          | JECFA     |
| 09.523 | Dodecyl isobutyrate                             | 6624-71-1  | 193       | 10563   |   |                     |          | JECFA     |
| 09.524 | Ethyl 2-methylpent-3-enoate                     | 1617-23-8  | 350       | 10612   |   |                     |          | JECFA     |
| 09.525 | Maltyl isobutyrate                              | 65416-14-0 | 1482      | 10739   |   |                     | 2        | EFSA      |
| 09.526 | Ethyl 2-methylvalerate                          | 39255-32-8 | 214       | 10616   |   |                     |          | JECFA     |
| 09.527 | Ethyl 2-methylpent-4-enoate                     | 53399-81-8 | 351       | 10613   |   |                     |          | JECFA     |
| 09.528 | trans-3-Heptenyl isobutyrate                    |            | 191       | 10663   |   |                     |          | JECFA     |
| 09.529 | Hexyl isovalerate                               | 10032-13-0 | 199       | 10692   |   |                     |          | JECFA     |
| 09.530 | Isopentyl 2-methylbutyrate                      | 27625-35-0 | 51        | 10721   |   |                     |          | JECFA     |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 09.531 | 2-Methylbutyl isovalerate        | 2445-77-4  | 204       | 10772   |  |                     |          | JECFA     |
| 09.532 | Methyl 3-hydroxyhexanoate        | 21188-58-9 | 600       | 10812   |  |                     |          | JECFA     |
| 09.533 | Ethyl brassylate                 | 105-95-3   | 626       | 10571   |  |                     |          | JECFA     |
| 09.534 | Ethyl cyclohexanecarboxylate     | 3289-28-9  | 963       | 11916   |  |                     |          | EFSA      |
| 09.535 | Ethyl 3-hydroxyhexanoate         | 2305-25-1  | 601       | 11764   |  |                     |          | JECFA     |
| 09.536 | Methyl cyclohexanecarboxylate    | 4630-82-4  | 962       | 11920   |  |                     |          | EFSA      |
| 09.537 | Octyl 2-methylbutyrate           | 29811-50-5 | 209       | 10866   |  |                     |          | JECFA     |
| 09.538 | Phenethyl 2-methylbutyrate       | 24817-51-4 | 993       | 10883   |  |                     |          | EFSA      |
| 09.539 | Oct-3-yl 2-methylcrotonate       | 94133-92-3 | 448       |         |  |                     |          | JECFA     |
| 09.540 | Ethyl 2-methylpenta-3,4-dienoate | 60523-21-9 | 353       |         |  |                     |          | EFSA      |
| 09.541 | Ethyl 3-methylvalerate           | 5870-68-8  | 215       |         |  |                     |          | JECFA     |
| 09.542 | Ethyl 3-oxohexanoate             | 3249-68-1  | 602       |         |  |                     |          | JECFA     |
| 09.543 | Glyceryl 5-hydroxydecanoate      | 26446-31-1 | 923       | 10648   | Mixture of 9-11% glycerol; 24-30% delta-decalactone; 25-34% monoglyceride, 13-21% diglyceride and 6-11% triglyceride |                     |          | EFSA      |
| 09.544 | Glyceryl 5-hydroxydodecanoate    | 26446-32-2 | 924       | 10649   | Mixture of 5-8% glycerol; 37-47% delta-dodecalactone; 16-28% monoglyceride; 11-19% diglyceride and 3-7% triglyceride |                     |          | EFSA      |



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| (1)    | (2)                                 | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.545 | Hex-(3Z)-enyl lactate               | 61931-81-5 | 934       | 10681   |   |                     |          | EFSA      |
| 09.546 | Hexyl-2-methylpent-(3 and 4)-enoate | 58625-95-9 | 352       |         |   |                     |          | JECFA     |
| 09.547 | Isopropyl 2-methylbutyrate          | 66576-71-4 | 210       |         |   |                     |          | JECFA     |
| 09.548 | Methyl 2-hydroxy-4-methylvalerate   | 40348-72-9 | 590       |         |   |                     |          | JECFA     |
| 09.549 | Methyl 2-methylvalerate             | 2177-77-7  | 213       |         |   |                     |          | JECFA     |
| 09.550 | Methyl 2-oxo-3-methylvalerate       | 3682-42-6  | 591       |         |   |                     |          | JECFA     |
| 09.551 | l-Menthyl lactate                   | 59259-38-0 | 433       |         |   |                     |          | JECFA     |
| 09.552 | 3-Oxodecanoic acid glyceride        | 91052-69-6 | 914       | 10650   |   |                     |          | EFSA      |
| 09.553 | 3-Oxododecanoic acid glyceride      | 91052-70-9 | 915       | 10651   |   |                     |          | EFSA      |
| 09.554 | 3-Oxohexadecanoic acid glyceride    | 91052-71-0 | 917       | 10652   |   |                     |          | EFSA      |
| 09.555 | 3-Oxohexanoic acid glyceride        | 91052-72-1 | 910       | 10653   |   |                     |          | EFSA      |
| 09.556 | 3-Oxooctanoic acid glyceride        | 91052-68-5 | 911       | 10654   |   |                     |          | EFSA      |
| 09.557 | 3-Oxotetradecanoic acid glyceride   | 91052-73-2 | 916       | 10655   |   |                     |          | EFSA      |
| 09.558 | Dimethyl malonate                   | 108-59-8   |           | 11754   |   |                     |          | EFSA      |
| 09.559 | Hex-3(cis)-enyl 2-methylcrotonate   | 67883-79-8 | 1277      |         |   |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)                           | (3)         | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|-------------|-------------------------------|-------------|-----------|---------|--|---------------------|----------|-----------|
| FL No.      | Chemical Name                 | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                        | Restrictions of Use | Footnote | Reference |
| 09.560      | Hex-3(cis)-enyl anisate       | 121432-33-5 |           |         |  |                     |          | EFSA      |
| 09.561      | Hex-3(cis)-enyl anthranilate  | 65405-76-7  | 1538      | 10676   |  |                     |          | EFSA      |
| ▼ <b>M3</b> |                               |             |           |         |  |                     |          |           |
| 09.562      | trans-3-Hexenyl formate       | 56922-80-6  |           |         |  |                     |          | EFSA      |
| ▼ <b>M1</b> |                               |             |           |         |  |                     |          |           |
| 09.563      | Hex-3(cis)-enyl isobutyrate   | 41519-23-7  | 1275      | 11783   |  |                     |          | EFSA      |
| 09.564      | Hex-3(cis)-enyl propionate    | 33467-74-2  | 1274      | 10683   |  |                     |          | EFSA      |
| 09.565      | (3Z)-Hexenyl 2-oxopropionate  | 68133-76-6  | 1846      | 10684   |  |                     |          | EFSA      |
| 09.566      | (3Z)-Hexenyl (E)-but-2-enoate | 65405-80-3  | 1276      |         |  |                     |          | EFSA      |
| 09.567      | Hex-(3Z)-enyl decanoate       | 85554-69-4  |           |         |  |                     |          | EFSA      |
| 09.568      | (3Z)-hexenyl (E)-hexenoate    | 53398-87-1  | 1279      |         | At least 86%; secondary components 6-7% 3-hexenyl 3-hexenoate and 4-5% 1-hexenyl 2-hexenoate |                     |          | EFSA      |
| 09.569      | Hex-(3Z)-enyl octanoate       | 61444-41-5  |           |         |  |                     |          | EFSA      |
| 09.570      | (Z)-Hex-3-enyl salicylate     | 65405-77-8  |           | 10685   |  |                     |          | EFSA      |
| 09.571      | (3Z)-hexenyl valerate         | 35852-46-1  | 1278      | 10686   |  |                     |          | EFSA      |
| 09.572      | Hex-(4Z)-enyl acetate         | 42125-17-7  |           |         |  |                     |          | EFSA      |
| 09.573      | Hexa-2,4-dienyl acetate       | 1516-17-2   | 1780      | 10675   |  |                     | 2        | EFSA      |
| 09.574      | Hexadec-1-yl acetate          | 629-70-9    |           |         |  |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.575 | (3Z)-Hexenyl heptanoate | 61444-39-1 |           |         |   |                     |          | EFSA      |

▼ **M3**

|        |                        |           |  |       |  |  |  |      |
|--------|------------------------|-----------|--|-------|--|--|--|------|
| 09.578 | Hexyl (E)-but-2-enoate | 1617-25-0 |  | 10688 |  |  |  | EFSA |
|--------|------------------------|-----------|--|-------|--|--|--|------|

▼ **M1**

|        |                                |            |      |       |  |  |  |      |
|--------|--------------------------------|------------|------|-------|--|--|--|------|
| 09.579 | Hexyl dodecanoate              | 34316-64-8 |      |       |  |  |  | EFSA |
| 09.580 | Hexyl lactate                  | 20279-51-0 |      |       |  |  |  | EFSA |
| 09.581 | Hexyl salicylate               | 6259-76-3  |      | 10695 |  |  |  | EFSA |
| 09.582 | Hexyl tetradecanoate           | 42231-99-2 |      |       |  |  |  | EFSA |
| 09.583 | Hexyl valerate                 | 1117-59-5  |      | 10696 |  |  |  | EFSA |
| 09.584 | Isobornyl isobutyrate          | 85586-67-0 | 1863 |       |  |  |  | EFSA |
| 09.585 | Isobutyl 2-methylbutyrate      | 2445-67-2  |      | 10710 |  |  |  | EFSA |
| 09.586 | Isobutyl 2-methylprop-2-enoate | 97-86-9    |      |       |  |  |  | EFSA |
| 09.587 | Isobutyl decanoate             | 30673-38-2 |      | 10707 |  |  |  | EFSA |
| 09.588 | Isobutyl dodecanoate           | 37811-72-6 |      | 10708 |  |  |  | EFSA |
| 09.589 | Isobutyl hexadecanoate         | 110-34-9   |      | 10715 |  |  |  | EFSA |
| 09.590 | Isobutyl lactate               | 585-24-0   |      | 10709 |  |  |  | EFSA |
| 09.592 | Isobutyl octadecanoate         | 646-13-9   |      |       |  |  |  | EFSA |
| 09.593 | Isobutyl octanoate             | 5461-06-3  |      | 10714 |  |  |  | EFSA |

▼ **M1**

| (1)    | (2)                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.594 | Isobutyl tetradecanoate | 25263-97-2 |           | 10712   |   |                     |          | EFSA      |

▼ **M3**

|        |                            |            |  |  |  |  |  |      |
|--------|----------------------------|------------|--|--|--|--|--|------|
| 09.596 | Isopentyl-(Z)-but-2-enoate | 10482-55-0 |  |  |  |  |  | EFSA |
|--------|----------------------------|------------|--|--|--|--|--|------|

▼ **M1**

|        |                           |            |  |       |  |  |  |      |
|--------|---------------------------|------------|--|-------|--|--|--|------|
| 09.598 | Isopentyl decanoate       | 2306-91-4  |  |       |  |  |  | EFSA |
| 09.599 | Isopentyl heptanoate      | 109-25-1   |  | 10719 |  |  |  | EFSA |
| 09.600 | Isopentyl hexadecanoate   | 81974-61-0 |  | 10723 |  |  |  | EFSA |
| 09.601 | Isopentyl lactate         | 19329-89-6 |  | 10720 |  |  |  | EFSA |
| 09.602 | Isopentyl tetradecanoate  | 62488-24-8 |  | 10722 |  |  |  | EFSA |
| 09.603 | Isopropyl crotonate       | 6284-46-4  |  | 10729 |  |  |  | EFSA |
| 09.604 | Isopropyl decanoate       | 2311-59-3  |  | 10730 |  |  |  | EFSA |
| 09.605 | Isopropyl dodecanoate     | 10233-13-3 |  |       |  |  |  | EFSA |
| 09.606 | Isopropyl hexadecanoate   | 142-91-6   |  | 10732 |  |  |  | EFSA |
| 09.608 | Isopropyl octanoate       | 5458-59-3  |  | 10731 |  |  |  | EFSA |
| 09.609 | Isopropyl valerate        | 18362-97-5 |  |       |  |  |  | EFSA |
| 09.611 | 4-Isopropylbenzyl acetate | 59230-57-8 |  |       |  |  |  | EFSA |

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| (1)    | (2)                                       | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.612 | Lavandulyl acetate                        | 25905-14-0 |           |         |   |                     |          | EFSA      |
| 09.614 | Linalyl valerate                          | 10471-96-2 |           | 10738   |   |                     |          | EFSA      |
| 09.615 | p-Menth-1-en-9-yl acetate                 | 28839-13-6 | 972       | 10748   |   |                     |          | EFSA      |
| 09.616 | mono-Menth-3-yl succinate                 | 77341-67-4 | 447       |         |   |                     |          | JECFA     |
| 09.617 | p-Menthan-8-yl acetate                    | 58985-18-5 |           |         |   |                     |          | EFSA      |
| 09.618 | Menthyl formate                           | 2230-90-2  |           | 10751   |   |                     |          | EFSA      |
| 09.619 | (1R,2S,5R)-Menthyl hexanoate              | 6070-16-2  |           |         |   |                     |          | EFSA      |
| 09.620 | Menthyl phenylacetate                     | 1154-92-3  |           |         |   |                     |          | EFSA      |
| 09.621 | (1R,2S,5R)-Menthyl salicylate             | 89-46-3    |           |         |   |                     |          | EFSA      |
| 09.623 | Methyl 2,4-dihydroxy-3,6-dimethylbenzoate | 4707-47-5  |           |         |   |                     |          | EFSA      |
| 09.624 | Methyl 2-methylcrotonate                  | 6622-76-0  |           |         |   |                     |          | EFSA      |
| 09.625 | Methyl 2-methylpent-3(E)-enoate           | 33603-30-4 |           |         |   |                     |          | EFSA      |
| 09.626 | Methyl 2-oxopropionate                    | 600-22-6   |           | 10848   |   |                     |          | EFSA      |
| 09.629 | Methyl 3-acetoxyhexanoate                 | 21188-60-3 |           | 10755   |   |                     |          | EFSA      |
| 09.631 | Methyl 4-methylbenzoate                   | 99-75-2    |           |         |   |                     |          | EFSA      |
| 09.632 | Methyl 5-acetoxyhexanoate                 | 35234-22-1 | 1719      | 10756   |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)         | (4)       | (5)      | (6)  | (7)                 | (8)      | (9)               |
|--------|---|-------------|-----------|----------|--|---------------------|----------|-------------------|
| FL No. | Chemical Name                                     | CAS No.     | JECFA No. | CoE No.  | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference         |
| 09.633 | Methyl 5-hydroxydecanoate                         | 101853-47-8 |           |          |  |                     |          | EFSA              |
| 09.634 | Methyl acetoacetate                               | 105-45-3    |           |          |  |                     |          | EFSA              |
| 09.636 | Methyl crotonate                                  | 623-43-8    |           |          |  |                     |          | EFSA              |
| 09.637 | Methyl dec-2-enoate                               | 2482-39-5   |           | 11799    |  |                     |          | EFSA              |
| 09.638 | Methyl dec-(4Z)-enoate                            | 7367-83-1   |           | 10784    |  |                     |          | EFSA              |
| 09.639 | Methyl (E,Z)-deca-2,4-dienoate                    | 4493-42-9   | 1191      |          | At least 93%; secondary component 2-5% (E,E) methyl 2,4-decadienoate   |                     |          | EFSA              |
| 09.640 | Methyl deca-4,8-dienoate                          | 1191-03-3   |           | 10782    |  |                     |          | EFSA              |
| 09.641 | Methyl dodec-(2E)-enoate                          | 6208-91-9   |           | 10792    |  |                     |          | EFSA              |
| 09.642 | Methyl formate                                    | 107-31-3    |           | 10795    |  |                     |          | EFSA              |
| 09.643 | Methyl geranate                                   | 1189-09-9   |           | 10797    |  |                     |          | EFSA              |
| 09.644 | (S)-Methyl lactate                                | 27871-49-4  |           |          |  |                     |          | EFSA              |
| 09.645 | Mixture of methyl linoleate and methyl linolenate |             | 346       | 713, 714 | 44-46% methyl linolenate; 18-20% methyl linoleate; 22-25% methyl stearate and methyl oleate; 7-8% methyl palmitate |                     |          | SCF/CoE/<br>JECFA |
| 09.647 | Methyl methacrylate                               | 80-62-6     | 1834      |          |  |                     |          | EFSA              |
| 09.648 | Methyl N,N-dimethyl-anthranilate                  | 10072-05-6  | 1551      |          |  |                     |          | EFSA              |
| 09.649 | Methyl N-acetylanthranilate                       | 2719-08-6   | 1550      |          |  |                     |          | EFSA              |
| 09.650 | Methyl N-formylan-thranilate                      | 41270-80-8  | 1549      |          |  |                     |          | EFSA              |

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| (1)    | (2)                          | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.651 | Methyl octadecanoate         | 112-61-8   |           | 10849   |   |                     |          | EFSA      |
| 09.652 | Methyl oleate                | 112-62-9   |           | 10836   |   |                     |          | EFSA      |
| 09.655 | 3-Methylbut-3-enyl acetate   | 5205-07-2  | 1269      |         |   |                     |          | EFSA      |
| 09.656 | 3-Methylbut-3-enyl benzoate  | 5205-12-9  |           |         |   |                     |          | EFSA      |
| 09.657 | 1-Methylbutyl acetate        | 626-38-0   | 1146      | 10761   |   |                     |          | EFSA      |
| 09.658 | 1-Methylbutyl butyrate       | 60415-61-4 | 1142      | 10763   |   |                     |          | EFSA      |
| 09.659 | 2-Methylbutyl butyrate       | 51115-64-1 |           |         |   |                     |          | EFSA      |
| 09.660 | 2-Methylbutyl decanoate      | 68067-33-4 |           | 10765   |   |                     |          | EFSA      |
| 09.661 | 2-Methylbutyl formate        | 35073-27-9 |           |         |   |                     |          | EFSA      |
| 09.662 | 2-Methylbutyl hexanoate      | 2601-13-0  |           | 10768   |   |                     |          | EFSA      |
| 09.663 | 2-Methylbutyl isobutyrate    | 2445-69-4  |           | 10770   |   |                     |          | EFSA      |
| 09.664 | 2-Methylbutyl octanoate      | 67121-39-5 |           | 10776   |   |                     |          | EFSA      |
| 09.665 | 2-Methylbutyl propionate     | 2438-20-2  |           | 10778   |   |                     |          | EFSA      |
| 09.666 | 2-Methylbutyl tetradecanoate | 93805-23-3 |           | 10774   |   |                     |          | EFSA      |
| 09.670 | Myrtanyl acetate             | 29021-36-1 |           |         |   |                     |          | EFSA      |

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| (1)    | (2)                              | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.671 | (3S,6Z)-Nerolidyl acetate        | 56001-43-5  |           | 10862   |   |                     |          | EFSA      |
| 09.672 | Non-(3Z)-enyl acetate            | 13049-88-2  |           |         |   |                     |          | EFSA      |
| 09.673 | Non-(6Z)-enyl acetate            | 76238-22-7  |           |         |   |                     |          | EFSA      |
| 09.674 | (E,Z)-3,6-Nonadien-1-ol, acetate | 211323-05-6 | 1285      |         |   |                     |          | EFSA      |
| 09.676 | sec-Octyl acetate                | 2051-50-5   |           | 10799   |   |                     |          | EFSA      |
| 09.677 | Octyl hexanoate                  | 4887-30-3   |           | 10865   |   |                     |          | EFSA      |
| 09.678 | Pent-2-enyl hexanoate            | 74298-89-8  | 1795      |         |   |                     | 2        | EFSA      |
| 09.679 | Pentyl 2-methylbutyrate          | 68039-26-9  |           | 10875   |   |                     |          | EFSA      |
| 09.680 | Pentyl 2-methylisocrotonate      | 7785-63-9   |           |         |   |                     |          | EFSA      |
| 09.681 | Pentyl dodecanoate               | 5350-03-8   |           |         |   |                     |          | EFSA      |
| 09.682 | Pentyl hexadecanoate             | 31148-31-9  |           |         |   |                     |          | EFSA      |
| 09.683 | Pentyl lactate                   | 6382-06-5   |           |         |   |                     |          | EFSA      |
| 09.684 | (E)-2-Phenylethyl 2-butenolate   | 68141-20-8  |           | 10880   |   |                     |          | EFSA      |
| 09.685 | 2-Phenethyl decanoate            | 61810-55-7  |           | 10881   |   |                     |          | EFSA      |
| 09.686 | Phenethyl lactate                | 155449-46-0 |           |         |   |                     |          | EFSA      |
| 09.687 | 2-Phenoxyethyl butyrate          | 23511-70-8  |           |         |   |                     |          | EFSA      |



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| (1)    | (2)                        | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|----------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name              | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.688 | Phenyl acetate             | 122-79-2   | 734       | 10878   |   |                     |          | EFSA       |
| 09.689 | Phenyl salicylate          | 118-55-8   | 736       | 11814   |   |                     |          | EFSA       |
| 09.690 | 3-Phenylpropyl butyrate    | 7402-29-1  |           |         |   |                     |          | EFSA       |
| 09.691 | Phytyl acetate             | 10236-16-5 | 1833      |         |   |                     |          | EFSA       |
| 09.692 | Prenyl acetate             | 1191-16-8  | 1827      | 11796   |   |                     |          | EFSA       |
| 09.693 | Prenyl benzoate            | 5205-11-8  |           |         |   |                     |          | EFSA       |
| 09.694 | Prenyl formate             | 68480-28-4 | 1826      |         |   |                     |          | EFSA       |
| 09.695 | Prenyl isobutyrate         | 76649-23-5 | 1828      |         |   |                     |          | EFSA       |
| 09.696 | Prenyl salicylate          | 68555-58-8 |           |         |   |                     |          | EFSA       |
| 09.698 | Propyl 2-methylbutyrate    | 37064-20-3 |           | 10891   |   |                     |          | EFSA       |
| 09.699 | Propyl crotonate           | 10352-87-1 |           |         |   |                     |          | EFSA       |
| 09.700 | Propyl decanoate           | 30673-60-0 |           |         |   |                     |          | EFSA       |
| 09.701 | Allyl phenoxyacetate       | 7493-74-5  | 18        | 228     |   |                     | 2        | JECFA/EFSA |
| 09.702 | Propyl phenylacetate       | 4606-15-9  | 1010      | 229     |   |                     |          | EFSA       |
| 09.703 | Octyl phenylacetate        | 122-45-2   | 1017      | 230     |   |                     |          | EFSA       |
| 09.704 | (2E)-Geranyl phenylacetate | 102-22-7   | 1020      | 231     |   |                     |          | EFSA       |
| 09.705 | Benzyl phenylacetate       | 102-16-9   | 849       | 232     |   |                     |          | EFSA       |
| 09.706 | Anisyl phenylacetate       | 102-17-0   | 876       | 233     |   |                     |          | EFSA       |
| 09.707 | Phenethyl phenylacetate    | 102-20-5   | 999       | 234     |   |                     |          | EFSA       |

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| (1)    | (2)                          | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.708 | Cinnamyl phenylacetate       | 7492-65-1  | 655       | 235     |   |                     |          | EFSA       |
| 09.709 | p-Tolyl phenylacetate        | 101-94-0   | 705       | 236     |   |                     |          | EFSA       |
| 09.710 | Isoeugenyl phenylacetate     | 120-24-1   | 1263      | 237     |   |                     |          | EFSA       |
| 09.711 | Guaiacyl phenylacetate       | 4112-89-4  | 719       | 238     |   |                     |          | EFSA       |
| 09.712 | Santalyl phenylacetate       | 1323-75-7  | 1022      | 239     |   |                     | 2        | EFSA       |
| 09.713 | Methyl 4-methoxybenzoate     | 121-98-2   | 884       | 248     |   |                     |          | EFSA       |
| 09.714 | Ethyl 4-methoxybenzoate      | 94-30-4    | 885       | 249     |   |                     |          | EFSA       |
| 09.715 | Methyl anthranilate          | 134-20-3   | 1534      | 250     |   |                     |          | EFSA       |
| 09.716 | Ethyl anthranilate           | 87-25-2    | 1535      | 251     |   |                     |          | EFSA       |
| 09.717 | Butyl anthranilate           | 7756-96-9  | 1536      | 252     |   |                     |          | EFSA       |
| 09.718 | Isobutyl anthranilate        | 7779-77-3  | 1537      | 253     |   |                     |          | EFSA       |
| 09.719 | Allyl anthranilate           | 7493-63-2  | 20        | 254     |   |                     | 2        | JECFA/EFSA |
| 09.721 | Linalyl anthranilate         | 7149-26-0  | 1540      | 256     |   |                     |          | EFSA       |
| 09.722 | Cyclohexyl anthranilate      | 7779-16-0  | 1541      | 257     |   |                     |          | EFSA       |
| 09.723 | Phenethyl anthranilate       | 133-18-6   | 1543      | 258     |   |                     |          | EFSA       |
| 09.724 | alpha-Terpinyll anthranilate | 14481-52-8 | 1542      | 259     |   |                     |          | EFSA       |

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| (1)    | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.725 | Methyl benzoate                       | 93-58-3    | 851       | 260     |   |                     |          | EFSA       |
| 09.726 | Ethyl benzoate                        | 93-89-0    | 852       | 261     |   |                     |          | EFSA       |
| 09.727 | Benzyl benzoate                       | 120-51-4   | 24        | 262     |   |                     |          | EFSA       |
| 09.728 | Ethyl 4-phenylbutyrate                | 10031-93-3 | 1458      | 307     |   |                     |          | EFSA       |
| 09.729 | Methyl 4-phenylbutyrate               | 2046-17-5  | 1464      | 308     |   |                     |          | EFSA       |
| 09.730 | Ethyl cinnamate                       | 103-36-6   | 659       | 323     |   |                     |          | EFSA       |
| 09.731 | Propyl cinnamate                      | 7778-83-8  | 660       | 324     |   |                     |          | EFSA       |
| 09.732 | Isopropyl cinnamate                   | 7780-06-5  | 661       | 325     |   |                     |          | EFSA       |
| 09.733 | Butyl cinnamate                       | 538-65-8   | 663       | 326     |   |                     |          | EFSA       |
| 09.734 | Isobutyl cinnamate                    | 122-67-8   | 664       | 327     |   |                     |          | EFSA       |
| 09.735 | Pentyl cinnamate (mixture of isomers) | 3487-99-8  |           | 328     |   |                     |          | EFSA       |
| 09.736 | Linalyl cinnamate                     | 78-37-5    | 668       | 329     |   |                     |          | EFSA       |
| 09.737 | (S)-Terpinyl cinnamate                | 10024-56-3 | 669       | 330     |   |                     |          | EFSA       |
| 09.738 | Benzyl cinnamate                      | 103-41-3   | 670       | 331     |   |                     |          | EFSA       |
| 09.739 | Cinnamyl cinnamate                    | 122-69-0   | 673       | 332     |   |                     |          | EFSA       |
| 09.740 | Methyl cinnamate                      | 103-26-4   | 658       | 333     |   |                     |          | EFSA       |
| 09.741 | Allyl cinnamate                       | 1866-31-5  | 19        | 334     |   |                     | 2        | JECFA/EFSA |
| 09.742 | Isopentyl cinnamate                   | 7779-65-9  | 665       | 335     |   |                     |          | EFSA       |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                | Restrictions of Use | Footnote | Reference |
| 09.743 | Phenethyl cinnamate              | 103-53-7   | 671       | 336     |  |                     |          | EFSA      |
| 09.744 | Cyclohexyl cinnamate             | 7779-17-1  | 667       | 337     |  |                     |          | EFSA      |
| 09.745 | 3-Phenylpropyl cinnamate         | 122-68-9   | 672       | 338     |  |                     |          | EFSA      |
| 09.746 | Methyl 3-phenylpropionate        | 103-25-3   | 643       | 427     |  |                     |          | EFSA      |
| 09.747 | Ethyl 3-phenylpropionate         | 2021-28-5  | 644       | 429     |  |                     |          | EFSA      |
| 09.748 | Ethyl salicylate                 | 118-61-6   | 900       | 432     |  |                     |          | EFSA      |
| 09.749 | Methyl salicylate                | 119-36-8   | 899       | 433     |  |                     |          | EFSA      |
| 09.750 | Isobutyl salicylate              | 87-19-4    | 902       | 434     |  |                     |          | EFSA      |
| 09.751 | Isopentyl salicylate             | 87-20-7    | 903       | 435     |  |                     |          | EFSA      |
| 09.752 | Benzyl salicylate                | 118-58-1   | 904       | 436     |  |                     |          | EFSA      |
| 09.753 | Phenethyl salicylate             | 87-22-9    | 905       | 437     |  |                     |          | EFSA      |
| 09.755 | Isopentyl benzoate               | 94-46-2    | 857       | 562     | 65-68% 3-methylbutyl benzoate; 30-35% 2-methylbutyl benzoate; 1-5% n-pentyl benzoate |                     |          | EFSA      |
| 09.756 | Isobornyl phenylacetate          | 94022-06-7 |           | 566     |  |                     |          | EFSA      |
| 09.757 | Isobutyl benzoate                | 120-50-3   | 856       | 567     |  |                     |          | EFSA      |
| 09.758 | Methyl p-tert-butylphenylacetate | 3549-23-3  | 1025      | 577     |  |                     |          | EFSA      |

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| (1)    | (2)                           | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.761 | Pentyl phenylacetate          | 5137-52-0  |           | 612     |   |                     |          | EFSA      |
| 09.762 | Pentyl salicylate             | 2050-08-0  |           | 613     |   |                     |          | EFSA      |
| 09.763 | Butyl salicylate              | 2052-14-4  | 901       | 614     |   |                     |          | EFSA      |
| 09.764 | Ethyl N-ethylantranilate      | 38446-21-8 | 1547      | 629     |   |                     |          | EFSA      |
| 09.765 | Ethyl N-methylantranilate     | 35472-56-1 | 1546      | 632     |   |                     |          | EFSA      |
| 09.766 | Eugenyl benzoate              | 531-26-0   | 1533      | 636     |   |                     |          | EFSA      |
| 09.767 | Geranyl benzoate              | 94-48-4    | 860       | 639     |   |                     |          | EFSA      |
| 09.768 | Hexyl benzoate                | 6789-88-4  | 854       | 645     |   |                     |          | EFSA      |
| 09.769 | Isobutyl N-methyl-antranilate | 65505-24-0 | 1548      | 649     |   |                     |          | EFSA      |
| 09.770 | Isopropyl benzoate            | 939-48-0   | 855       | 652     |   |                     |          | EFSA      |
| 09.771 | Linalyl benzoate              | 126-64-7   | 859       | 654     |   |                     |          | EFSA      |
| 09.772 | Linalyl phenylacetate         | 7143-69-3  | 1019      | 655     |   |                     |          | EFSA      |
| 09.774 | Phenethyl benzoate            | 94-47-3    |           | 667     |   |                     |          | EFSA      |
| 09.776 | Propyl benzoate               | 2315-68-6  | 853       | 677     |   |                     |          | EFSA      |
| 09.779 | Butyl benzoate                | 136-60-7   |           | 740     |   |                     |          | EFSA      |
| 09.780 | Cinnamyl benzoate             | 5320-75-2  | 760       | 743     |   |                     |          | EFSA      |
| 09.781 | Methyl N-methyl-antranilate   | 85-91-6    | 1545      | 756     |   |                     |          | EFSA      |
| 09.782 | Heptyl cinnamate              | 10032-08-3 | 666       | 2104    |   |                     |          | EFSA      |
| 09.783 | Methyl phenylacetate          | 101-41-7   | 1008      | 2155    |   |                     |          | EFSA      |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.784 | Ethyl phenylacetate              | 101-97-3   | 1009      | 2156    |   |                     |          | EFSA       |
| 09.785 | Citronellyl phenylacetate        | 139-70-8   | 1021      | 2157    |   |                     |          | EFSA       |
| 09.786 | Isopropyl phenylacetate          | 4861-85-2  | 1011      | 2158    |   |                     |          | EFSA       |
| 09.787 | Butyl phenylacetate              | 122-43-0   | 1012      | 2159    |   |                     |          | EFSA       |
| 09.788 | Isobutyl phenylacetate           | 102-13-6   | 1013      | 2160    |   |                     |          | EFSA       |
| 09.789 | 3-Methylbutyl phenylacetate      | 102-19-2   | 1014      | 2161    | 62-64% n-amyl; 33-36% isoamyl   |                     |          | EFSA       |
| 09.790 | Allyl phenylacetate              | 1797-74-6  | 17        | 2162    |   |                     | 2        | JECFA/EFSA |
| 09.791 | (3S)-Rhodiny l phenylacetate     | 10486-14-3 | 1018      | 2163    |   |                     |          | EFSA       |
| 09.796 | Methyl 2-methoxybenzoate         | 606-45-1   | 880       | 2192    |   |                     |          | EFSA       |
| 09.797 | Ethyl (p-tolyloxy)acetate        | 67028-40-4 | 1027      | 2243    |   |                     |          | EFSA       |
| 09.798 | Ethyl vanillate                  | 617-05-0   |           | 2302    |   |                     |          | EFSA       |
| 09.799 | Methyl vanillate                 | 3943-74-6  |           | 2305    |   |                     |          | EFSA       |
| 09.801 | 2-Naphthyl anthranilate          | 63449-68-3 | 1544      | 11862   |   |                     |          | EFSA       |
| 09.802 | Ethyl 2-ethyl-3-phenylpropionate | 2983-36-0  | 1475      | 10587   |   |                     |          | EFSA       |
| 09.803 | Propylene glycol dibenzoate      | 19224-26-1 | 862       | 10890   |   |                     |          | EFSA       |
| 09.804 | Hexyl phenylacetate              | 5421-17-0  | 1015      | 10694   |   |                     |          | EFSA       |
| 09.805 | Hex-3-enyl phenylacetate         | 42436-07-7 | 1016      | 10682   |   |                     |          | EFSA       |

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| (1)    | (2)                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.806 | (Z)-Hex-3-enyl benzoate | 25152-85-6 | 858       | 11778   | 93-97% cis-hexenyl benzoate; 1-2% trans-3-hexenyl benzoate            |                     |          | EFSA      |
| 09.807 | o-Tolyl salicylate      | 617-01-6   | 907       |         |   |                     |          | EFSA      |
| 09.808 | Guaiyl acetate          | 134-28-1   |           | 10659   |   |                     |          | EFSA      |

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|--------|---|------------|------|-------|--|--|---|------|
| 09.811 | Vanillin isobutyrate                          | 20665-85-4 | 891  |       |  |  |   | EFSA |
| 09.812 | Glyceryl tribenzoate                          | 614-33-5   | 861  | 10656 |  |  |   | EFSA |
| 09.813 | Propyl dodecanoate                            | 3681-78-5  |      |       |  |  |   | EFSA |
| 09.814 | Propyl hexadecanoate                          | 2239-78-3  |      | 10893 |  |  |   | EFSA |
| 09.815 | Propyl lactate                                | 616-09-1   |      |       |  |  |   | EFSA |
| 09.816 | Propyl octanoate                              | 624-13-5   |      | 10892 |  |  |   | EFSA |
| 09.818 | 3,7,11-Trimethyldodeca-2,6,10-trienyl acetate | 29548-30-9 | 1831 |       |  |  |   | EFSA |
| 09.819 | 3,5,5-Trimethylhexyl acetate                  | 58430-94-7 |      |       |  |  |   | EFSA |
| 09.820 | Undecyl acetate                               | 1731-81-3  |      | 10906 |  |  |   | EFSA |
| 09.821 | Vetiveryl acetate                             | 117-98-6   | 1867 | 11887 |  |  | 2 | EFSA |
| 09.822 | iso-Propenyl acetate                          | 108-22-5   | 1835 |       |  |  |   | EFSA |
| 09.824 | Ethyl 2-acetylbutyrate                        | 607-97-6   |      |       |  |  |   | EFSA |
| 09.825 | Pentyl benzoate                               | 2049-96-9  |      | 2307  |  |  |   | EFSA |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                              | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.829 | Ethyl cyclohexyl acetate                   | 5452-75-5   |           | 218     |   |                     |          | EFSA      |
| 09.830 | Terpineol acetate                          | 8007-35-0   | 368       | 205     |   |                     |          | JECFA     |
| 09.831 | Ethyl 3,7-dimethyl-2,6-octadienoate        | 13058-12-3  |           |         |   |                     |          | EFSA      |
| 09.832 | Ethyl 3-acetohexanoate                     | 21188-61-4  |           | 10566   |   |                     |          | EFSA      |
| 09.833 | iso-Propyl 4-oxopentanoate                 | 21884-26-4  |           |         |   |                     |          | EFSA      |
| 09.835 | Benzyl decanoate                           | 42175-41-7  |           |         |   |                     |          | EFSA      |
| 09.836 | 3-Phenylpropyl benzoate                    | 60045-26-3  |           |         |   |                     |          | EFSA      |
| 09.837 | 3-Phenylpropyl 3-phenylpropionate          | 60045-27-4  |           |         |   |                     |          | EFSA      |
| 09.838 | (3Z)-Hexenyl methyl carbonate              | 67633-96-9  |           |         |   |                     |          | EFSA      |
| 09.839 | Decyl 3-methylbutyrate                     | 72928-48-4  |           |         |   |                     |          | EFSA      |
| 09.840 | Propyl 2,4-decadienoate                    | 84788-08-9  | 1194      | 10889   |   |                     |          | EFSA      |
| 09.841 | 2-Hexenyl octanoate                        | 85554-72-9  | 1796      |         |   |                     | 2        | EFSA      |
| 09.842 | l-Menthol ethylene glycol carbonate        | 156324-78-6 | 443       |         |   |                     |          | JECFA     |
| 09.843 | Menthol 1-and 2-propylene glycol carbonate | 30304-82-6  |           |         |   |                     | 1        | EFSA      |
| 09.846 | 3-Hexenyl formate                          | 2315-09-5   | 1272      | 2153    |   |                     |          | EFSA      |
| 09.848 | (-)-bornyl acetate                         | 5655-61-8   | 1864      |         |   |                     |          | EFSA      |



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| (1)         | (2)                                | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|------------------------------------|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name                      | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.850      | Ethyl trans-2-hexenoate            | 27829-72-7  | 1808      | 631     |   |                     |          | EFSA      |
| 09.852      | 2-Methylbutyl 2-hydroxybenzoate    | 51115-63-0  |           |         |   |                     |          | EFSA      |
| ▼ <u>M3</u> |                                    |             |           |         |   |                     |          |           |
| 09.854      | cis-3-Hexenyl 2-methylbutanoate    | 53398-85-9  |           |         |   |                     |          | EFSA      |
| ▼ <u>M1</u> |                                    |             |           |         |   |                     |          |           |
| 09.855      | (3E)-Hexenyl hexanoate             | 56922-82-8  |           |         |   |                     |          | EFSA      |
| ▼ <u>M3</u> |                                    |             |           |         |   |                     |          |           |
| 09.858      | Phenylmethyl 2-methyl-2-butenolate | 67674-41-3  |           |         | Mixture of stereoisomers: 60-90 % E-form and 10-40 % Z-form           |                     |          | EFSA      |
| ▼ <u>M1</u> |                                    |             |           |         |   |                     |          |           |
| 09.862      | Ethyl 3-acetoxy octanoate          | 85554-66-1  |           |         |   |                     |          | EFSA      |
| 09.865      | Hexyl (9Z)-octadecenoate           | 20290-84-0  |           |         |   |                     |          | EFSA      |
| 09.866      | Allyl valerate                     | 6321-45-5   |           |         |   |                     | 2        | EFSA      |
| 09.870      | Carvyl-3-methylbutyrate            | 94386-39-7  |           |         |   |                     |          | EFSA      |
| 09.871      | Citronellyl decanoate              | 72934-06-6  |           |         |   |                     |          | EFSA      |
| 09.872      | Citronellyl dodecanoate            | 72934-07-7  |           |         |   |                     |          | EFSA      |
| 09.874      | Di(2-methylbutyl) malate           | 253596-99-5 |           |         |   |                     |          | EFSA      |
| 09.878      | Eugenyl isovalerate                | 61114-24-7  | 1532      |         |   |                     |          | EFSA      |
| ▼ <u>M3</u> |                                    |             |           |         |   |                     |          |           |
| 09.880      | (Z)-Hept-4-en-2-yl butanoate       | 94088-12-7  |           |         |   |                     |          | EFSA      |
| ▼ <u>M1</u> |                                    |             |           |         |   |                     |          |           |
| 09.884      | Hex-3-enyl-2-ethylbutyrate         | 233666-04-1 |           |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                    | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 09.885 | Hex-3-enyl hexadecanoate                         | 233666-03-0 |           |         |   |                     |          | EFSA      |
| 09.888 | Isobornyl 2-methylbutyrate                       | 94200-10-9  | 1869      |         |   |                     |          | EFSA      |
| 09.893 | 2-Isopropyl-5-methylphenyl formate               | 406700-80-9 |           |         |   |                     |          | EFSA      |
| 09.894 | 2-Methoxy-4-(prop-1-enyl)phenyl 3-methylbutyrate | 61114-23-6  |           |         |   |                     |          | EFSA      |
| 09.895 | 4-Methoxybenzyl-2-methylpropionate               | 71172-26-4  |           |         |   |                     |          | EFSA      |
| 09.897 | 3-Methylbut-3-en-1-yl butyrate                   | 54702-13-5  |           |         |   |                     |          | EFSA      |
| 09.898 | 3-Methylbut-3-en-1-yl hexanoate                  | 53655-22-4  |           |         |   |                     |          | EFSA      |
| 09.899 | Myrtenyl-2-methylbutyrate                        | 138530-44-6 |           |         |   |                     | 2        | EFSA      |
| 09.900 | Myrtenyl-3-methylbutyrate                        | 33900-84-4  |           |         |   |                     | 2        | EFSA      |
| 09.916 | Ethyl 3-hydroxyoctanoate                         | 7367-90-0   |           | 10603   |   |                     |          | EFSA      |
| 09.917 | 4-Pentenyl acetate                               | 1576-85-8   | 1270      |         |   |                     |          | EFSA      |
| 09.918 | cis-4-Decenyl acetate                            | 67452-27-1  | 1288      |         |   |                     |          | EFSA      |
| 09.919 | Ethyl 3-acetoxy-2-methylbutyrate                 | 139564-43-5 | 1718      |         |   |                     |          | EFSA      |
| 09.921 | Ethyl 5-hexenoate                                | 54653-25-7  | 1273      |         |   |                     |          | EFSA      |
| 09.922 | (4Z)-Ethylheptenoate                             | 39924-27-1  | 1281      |         |   |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name                                       | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                     | Restrictions of Use | Footnote | Reference |
| 09.923      | Hept-2-yl butyrate                                  | 39026-94-3  | 1144      |         |   |                     |          | EFSA      |
| 09.924      | 3-Heptyl acetate (mixture of R and S)               | 5921-83-5   | 1143      |         |   |                     |          | EFSA      |
| 09.925      | Nonan-3-yl acetate                                  | 60826-15-5  | 1145      |         |   |                     |          | EFSA      |
| 09.926      | Octan-3-yl formate                                  | 84434-65-1  |           |         |   |                     |          | EFSA      |
| 09.927      | Rhodinyl butyrate                                   | 141-15-1    | 68        |         | At least 85%; secondary component 10-13% rhodinol   |                     |          | JECFA     |
| 09.928      | (3E)-Hexenyl acetate                                | 3681-82-1   |           |         |   |                     |          | EFSA      |
| 09.929      | L-Monomenthyl glutarate                             | 220621-22-7 |           |         |   |                     |          | EFSA      |
| 09.930      | Cyclohexyl, 2-methylene-5-(1-methylethenyl) acetate | 71660-03-2  | 1098      |         |   |                     |          | EFSA      |
| 09.931      | 2,6-Dimethyl-2,5,7-octatriene-1-ol acetate          | 999999-91-4 | 1226      |         |   |                     | 2        | EFSA      |
| 09.932      | (5Z)-Octenylpropionate                              | 196109-18-9 | 1282      |         | At least 93%; secondary components 2-3% (E)-5-Octenyl propionate and 0.5-1% (Z)-5-Octenol |                     |          | EFSA      |
| 09.933      | Ethyl vanillin isobutyrate                          | 188417-26-7 | 953       |         |   |                     |          | EFSA      |
| 09.934      | Methyl (5Z)-Octenoate                               | 41654-15-3  | 1630      |         |   |                     |          | EFSA      |
| 09.935      | Dimenthyl glutarate                                 | 406179-71-3 |           |         |   |                     |          | EFSA      |
| ▼ <b>M3</b> |   |             |           |         |   |                     |          |           |
| 09.936      | 4,8-Dimethyl-3,7-nonadien-2-yl acetate              | 91418-25-6  | 1847      |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |   |             |           |         |   |                     |          |           |
| 09.937      | Methyl (3Z)-hexenoate                               | 13894-62-7  | 1624      |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|--|-------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name                              | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| 09.938 | 6-Methyl-5-hepten-2-yl acetate             | 19162-00-6  | 1838      |         |   |                     |          | EFSA       |
| 09.939 | Ethyl (3Z)-hexenoate                       | 64187-83-3  | 1626      |         |   |                     |          | EFSA       |
| 09.940 | Rhodinyl isobutyrate                       | 138-23-8    | 74        | 592     |   |                     |          | JECFA      |
| 09.942 | 2-Methylbutyl-3-methyl-2-butenolate        | 97890-13-6  |           |         |   |                     |          | EFSA       |
| 09.943 | Guaiacol propionate                        | 7598-60-9   |           |         |   |                     |          | EFSA       |
| 09.944 | Guaiacol butyrate                          | 4112-92-9   |           |         |   |                     |          | EFSA       |
| 09.945 | Guaiacol isobutyrate                       | 723759-62-4 |           |         |   |                     |          | EFSA       |
| 09.946 | Dihydrogalangal acetate                    | 129319-15-9 |           |         |   |                     |          | EFSA       |
| 09.947 | (E,Z)-2,6-nonadienyl acetate               | 68555-65-7  | 1188      |         |   |                     | 2        | JECFA/EFSA |
| 09.948 | (2E)-2-nonenyl acetate                     | 30418-89-4  |           |         |   |                     | 2        | EFSA       |
| 09.949 | L-Menthyl (S)-3-hydroxybutyrate            | 115869-76-6 |           |         |   |                     |          | EFSA       |
| 09.950 | Z-5-Octenyl acetate                        | 71978-00-2  |           |         |   |                     |          | EFSA       |
| 09.951 | Bis(2-ethylhexyl)adipate (dioctyl adipate) | 123-79-5    | 1968      |         |   |                     |          | EFSA       |
| 10.001 | Nonano-1,4-lactone                         | 104-61-0    | 229       | 178     |   |                     |          | JECFA      |
| 10.002 | Undecano-1,4-lactone                       | 104-67-6    | 233       | 179     |   |                     |          | JECFA      |
| 10.003 | Hexadec-6-eno-1,16-lactone                 | 7779-50-2   | 240       | 180     |   |                     |          | JECFA      |

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| (1)    | (2)                       | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 10.004 | Pentadecano-1,15-lactone  | 106-02-5   | 239       | 181     |   |                     |          | JECFA     |
| 10.005 | 3-Propylideneephthalide   | 17369-59-4 | 1168      | 494     |   |                     |          | EFSA      |
| 10.006 | Butyro-1,4-lactone        | 96-48-0    | 219       | 615     |   |                     |          | JECFA     |
| 10.007 | Decano-1,5-lactone        | 705-86-2   | 232       | 621     |   |                     |          | JECFA     |
| 10.008 | Dodecano-1,5-lactone      | 713-95-1   | 236       | 624     |   |                     |          | JECFA     |
| 10.009 | Dodec-6-eno-1,4-lactone   | 18679-18-0 | 249       | 625     |   |                     |          | JECFA     |
| 10.010 | Hexano-1,5-lactone        | 823-22-3   | 224       | 641     |   |                     |          | JECFA     |
| 10.011 | Undecano-1,5-lactone      | 710-04-3   | 234       | 688     |   |                     |          | JECFA     |
| 10.012 | 5-Methylfuran-2(3H)-one   | 591-12-8   | 221       | 731     |   |                     |          | JECFA     |
| 10.013 | Pentano-1,4-lactone       | 108-29-2   | 220       | 757     |   |                     |          | JECFA     |
| 10.014 | Nonano-1,5-lactone        | 3301-94-8  | 230       | 2194    |   |                     |          | JECFA     |
| 10.015 | Octano-1,5-lactone        | 698-76-0   | 228       | 2195    |   |                     |          | JECFA     |
| 10.016 | Tetradecano-1,5-lactone   | 2721-22-4  | 238       | 2196    |   |                     |          | JECFA     |
| 10.017 | Decano-1,4-lactone        | 706-14-9   | 231       | 2230    |   |                     |          | JECFA     |
| 10.018 | 4-Butyloctano-1,4-lactone | 7774-47-2  | 227       | 2231    |   |                     |          | JECFA     |
| 10.019 | Dodecano-1,4-lactone      | 2305-05-7  | 235       | 2240    |   |                     |          | JECFA     |
| 10.020 | Heptano-1,4-lactone       | 105-21-5   | 225       | 2253    |   |                     |          | JECFA     |
| 10.021 | Hexano-1,4-lactone        | 695-06-7   | 223       | 2254    |   |                     |          | JECFA     |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|--------|--|------------|-----------|---------|---|---------------------|----------|------------|
| FL No. | Chemical Name  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                 | Restrictions of Use | Footnote | Reference  |
| 10.022 | Octano-1,4-lactone                                   | 104-50-7   | 226       | 2274    |   |                     |          | JECFA      |
| 10.023 | 5-Ethyl-3-hydroxy-4-methylfuran-2(5H)-one            | 698-10-2   | 222       | 2300    |   |                     | 2        | JECFA/EFSA |
| 10.024 | 3-Butylidenephthalide                                | 551-08-6   | 1170      | 10083   |   |                     |          | EFSA       |
| 10.025 | 3-Butylphthalide                                     | 6066-49-5  | 1169      | 10084   |   |                     |          | EFSA       |
| 10.026 | 3-Heptyldihydro-5-methyl-2(3H)-furanone              | 40923-64-6 | 244       | 10953   |   |                     |          | JECFA      |
| 10.027 | 3,7-Dimethyloctano-1,6-lactone                       | 499-54-7   | 237       | 11833   | At least 90%; secondary component 5-6% 6-hydroxy-3,7-dimethyl-2-octenoic acid lactone |                     |          | JECFA      |
| 10.028 | Dodecano-1,6-lactone                                 | 16429-21-3 | 242       |         |   |                     |          | JECFA      |
| 10.029 | Decano-1,6-lactone                                   | 5579-78-2  | 241       |         |   |                     |          | JECFA      |
| 10.030 | 3-Hydroxy-4,5-dimethylfuran-2(5H)-one                | 28664-35-9 | 243       | 11834   |   |                     | 2        | JECFA/EFSA |
| 10.031 | 6-Pentyl-2H-pyran-2-one                              | 27593-23-3 | 245       | 10967   |   |                     |          | EFSA       |
| 10.033 | Dec-7-eno-1,5-lactone                                | 34686-71-0 | 247       |         |   |                     |          | JECFA      |
| 10.034 | 5,6-Dihydro-3,6-dimethylbenzofuran-2(4H)-one         | 80417-97-6 | 1163      |         |   |                     | 2        | EFSA       |
| 10.035 | Undec-8-eno-1,5-lactone                              | 68959-28-4 | 248       |         |   |                     |          | JECFA      |
| 10.036 | 5,6,7,7a-Tetrahydro-3,6-dimethylbenzofuran-2(4H)-one | 13341-72-5 | 1162      |         |   |                     | 2        | EFSA       |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 10.037 | 5-Hydroxy-2-decenoic acid delta-lactone       | 54814-64-1 | 246       |         |  |                     |          | EFSA      |
| 10.038 | Dec-7-eno-1,4-lactone                         | 67114-38-9 |           |         |  |                     |          | EFSA      |
| 10.039 | cis-Dec-7-eno-1,4-lactone                     | 63095-33-0 |           |         |  |                     |          | EFSA      |
| 10.040 | Dec-8-eno-1,5-lactone                         | 32764-98-0 |           |         |  |                     |          | EFSA      |
| 10.042 | 3,4-Dimethyl-5-pentylidene-furan-2(5H)-one    | 774-64-1   |           | 11873   | At least 93%; secondary component 1-2% 3,4-dimethyl 5-ketobutanoic acid gamma-lactone  |                     | 2        | EFSA      |
| 10.043 | 2,7-Dimethylocta-5(trans),7-dieno-1,4-lactone | 78548-56-8 |           |         |  |                     | 2        | EFSA      |
| 10.044 | Dodec-2-eno-1,5-lactone                       | 16400-72-9 | 438       |         | At least 88% 6-heptyl-5,6-dihydro-2H-pyran-2-one; secondary components 3-5% E-6-(3-heptenyl)-5,6-dihydro-2H-pyran-2-one and 1-2% 6-heptyl-3,6-dihydro-2H-pyran-2-one |                     |          | EFSA      |
| 10.045 | Heptano-1,5-lactone                           | 3301-90-4  |           | 10660   |  |                     |          | EFSA      |
| 10.046 | Hex-2-eno-1,4-lactone                         | 2407-43-4  |           |         |  |                     | 2        | EFSA      |
| 10.047 | Hexadecano-1,16-lactone                       | 109-29-5   |           |         |  |                     |          | EFSA      |
| 10.048 | Hexadecano-1,4-lactone                        | 730-46-1   |           | 10673   |  |                     |          | EFSA      |
| 10.049 | Hexadecano-1,5-lactone                        | 7370-44-7  |           | 10674   |  |                     |          | EFSA      |
| 10.050 | Hexahydro-3,6-dimethyl-2(3H)-benzofuranone    | 92015-65-1 | 1161      |         |  |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified             | Restrictions of Use | Footnote | Reference |
| 10.051 | 5-Hexyl-5-methyldihydrofuran-2(3H)-one                | 7011-83-8  | 250       |         |   |                     |          | JECFA     |
| 10.052 | 3-Methylnonano-1,4-lactone                            | 33673-62-0 |           |         |   |                     |          | EFSA      |
| 10.053 | 3-Methyloctano-1,4-lactone                            | 39212-23-2 | 437       | 10535   |   |                     |          | JECFA     |
| 10.054 | Non-2-eno-1,4-lactone                                 | 21963-26-8 |           |         |   |                     | 2        | EFSA      |
| 10.055 | Pentano-1,5-lactone                                   | 542-28-9   |           | 10907   |   |                     |          | EFSA      |
| 10.056 | Phthalide   | 87-41-2    |           |         |   |                     |          | EFSA      |
| 10.057 | 3a,4,5,7a-Tetrahydro-3,6-dimethylbenzofuran-2(3H)-one | 57743-63-2 |           |         |   |                     | 2        | EFSA      |
| 10.058 | Tridecano-1,5-lactone                                 | 7370-92-5  |           | 10902   |   |                     |          | EFSA      |
| 10.059 | Hexadec-7-en-1,16-lactone                             | 123-69-3   |           |         |   |                     |          | EFSA      |
| 10.060 | 2-Decen-1,4-lactone                                   | 2518-53-8  |           |         |   |                     | 2        | EFSA      |
| 10.061 | cis-5-Hexenyldihydro-5-methylfuran-2(3H)-one          | 70851-61-5 | 1159      |         |   |                     |          | EFSA      |
| 10.063 | Hexadec-9-en-1,16 lactone                             | 28645-51-4 | 1991      |         |   |                     |          | EFSA      |
| 10.066 | Furan-2(5H)-one                                       |            |           |         |   |                     | 2        | EFSA      |
| 10.068 | Pentadecano-1,14-lactone                              | 32539-85-8 |           |         |   |                     |          | EFSA      |
| 10.069 | 3-Methyl gamma-deca-lactone                           | 67663-01-8 | 1158      |         | At least 94% (sum of cis and trans isomers); secondary component 1-2% heptan-1-ol |                     |          | EFSA      |



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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                                      | Restrictions of Use | Footnote | Reference |
| 10.070 | 4-Methyl-5-hexen-1,4-olide  | 1073-11-6  | 1157      |         |  |                     |          | EFSA      |
| 10.072 | Dimethyl-3,6-benzo-2(3H)-furanone                                 | 65817-24-5 | 1167      |         |  |                     |          | EFSA      |
| 10.168 | 5,6-Dimethyl-tetrahydro-pyran-2-one                               | 10413-18-0 |           |         |  |                     |          | EFSA      |
| 10.169 | 5,6,7,7alpha-Tetrahydro-4,4,7alpha-trimethyl-2-(4H)-benzofuranone | 15356-74-8 | 1164      |         | At least 90%; secondary components 3-5 % 2,9-dimethyl 3,8-decanedione, 3-5% 4-hydroxy-5,6-oxo- beta-ionone |                     |          | EFSA      |
| 10.170 | 5-Pentyl-3H-furan-2-one   | 51352-68-2 | 1989      |         | Mixture of 3H- and 5H-isomers (2:1)  |                     | 2        | EFSA      |
| 11.001 | 3-Methylbutylamine  | 107-85-7   | 1587      | 512     |  |                     |          | EFSA      |
| 11.002 | Isobutylamine   | 78-81-9    | 1583      | 513     |  |                     |          | EFSA      |
| 11.003 | Butylamine  | 109-73-9   | 1582      | 524     |  |                     |          | EFSA      |
| 11.004 | Propylamine   | 107-10-8   | 1580      | 601     |  |                     |          | EFSA      |
| 11.005 | sec-Butylamine  | 13952-84-6 | 1584      | 707     |  |                     |          | EFSA      |
| 11.006 | Phenethylamine  | 64-04-0    | 1589      | 708     |  |                     |          | EFSA      |
| 11.007 | 2-(4-Hydroxyphenyl)ethylamine                                     | 51-67-2    | 1590      | 709     |  |                     |          | EFSA      |
| 11.008 | 2-Aminoacetophenone   | 551-93-9   |           | 2041    |  |                     | 4        | EFSA      |
| 11.009 | Trimethylamine  | 75-50-3    | 1610      | 10497   |  |                     |          | EFSA      |
| 11.015 | Ethylamine  | 75-04-7    | 1579      | 10477   |  |                     |          | EFSA      |
| 11.016 | Hexylamine  | 111-26-2   | 1588      | 10478   |  |                     |          | EFSA      |
| 11.017 | N-Isopentylidene isopentylamine                                   | 35448-31-8 | 1606      |         |  |                     |          | EFSA      |
| 11.018 | Isopropylamine  | 75-31-0    | 1581      | 10480   |  |                     |          | EFSA      |

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| (1)    | (2)                             | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                                    | Restrictions of Use | Footnote | Reference |
| 11.020 | 2-Methylbutylamine              | 96-15-1    | 1586      | 10484   |  |                     |          | EFSA      |
| 11.021 | Pentylamine                     | 110-58-7   | 1585      | 11734   |  |                     |          | EFSA      |
| 11.023 | Triethylamine                   | 121-44-8   | 1611      | 10496   |  |                     |          | EFSA      |
| 11.025 | Trimethylamine oxide            | 1184-78-7  | 1614      | 10494   |  |                     |          | EFSA      |
| 11.026 | Tripropylamine                  | 102-69-2   | 1612      | 10495   |  |                     |          | EFSA      |
| 12.001 | 3-(Methylthio)propionaldehyde   | 3268-49-3  | 466       | 125     |  |                     |          | JECFA     |
| 12.002 | Methyl 3-(methylthio)propionate | 13532-18-8 | 472       | 428     |  |                     |          | JECFA     |
| 12.003 | Methanethiol                    | 74-93-1    | 508       | 475     |  |                     |          | JECFA     |
| 12.004 | Allylthiol                      | 870-23-5   | 521       | 476     | At least 75%; secondary components 20-25% allyl disulfide and 5-7% allylsulfide                          |                     |          | JECFA     |
| 12.005 | Phenylmethanethiol              | 100-53-8   | 526       | 477     |  |                     |          | JECFA     |
| 12.006 | Dimethyl sulfide                | 75-18-3    | 452       | 483     |  |                     |          | JECFA     |
| 12.007 | Dibutyl sulfide                 | 544-40-1   | 455       | 484     |  |                     |          | JECFA     |
| 12.008 | Diallyl disulfide               | 2179-57-9  | 572       | 485     | At least 80%; secondary components 10-15% allyl sulfide and 5-7% allyl mercaptan                         |                     |          | JECFA     |
| 12.009 | Diallyl trisulfide              | 2050-87-5  | 587       | 486     | At least 65%; secondary components 20-25% allyl disulfide, 5-7% allylsulfide and 5-7% allyl tetrasulfide |                     | 4        | JECFA     |
| 12.010 | Butane-1-thiol                  | 109-79-5   | 511       | 526     |  |                     |          | JECFA     |
| 12.012 | Diethyl disulfide               | 110-81-6   | 1699      | 533     |  |                     |          | EFSA      |
| 12.013 | Dimethyl trisulfide             | 3658-80-8  | 582       | 539     |  |                     | 4        | JECFA     |

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| (1)    | (2)                      | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name            | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 12.014 | Dipropyl disulfide       | 629-19-6   | 566       | 540     |   |                     |          | JECFA     |
| 12.015 | Dipropyl sulfide         | 111-47-7   |           | 541     |   |                     |          | SCF/CoE   |
| 12.016 | Di-isopropyl sulfide     | 625-80-9   |           | 542     |   |                     |          | SCF/CoE   |
| 12.017 | Ethanethiol              | 75-08-1    | 1659      | 546     |   |                     |          | EFSA      |
| 12.018 | S-Ethyl acetothioate     | 625-60-5   | 483       | 11665   |   |                     |          | JECFA     |
| 12.019 | Methyl propyl disulfide  | 2179-60-4  | 565       | 585     |   |                     |          | JECFA     |
| 12.020 | Methyl propyl trisulfide | 17619-36-2 | 584       | 586     | At least 45%; secondary components 25% dipropyl trisulfide, 12% dipropyl disulfide, 14% dimethyl disulfide and 3% methyl propyl sulfide |                     | 4        | JECFA     |
| 12.021 | Allyl propyl disulfide   | 2179-59-1  | 1700      | 600     |   |                     |          | EFSA      |
| 12.022 | Butane-2,3-dithiol       | 4532-64-3  | 539       | 725     |   |                     |          | JECFA     |
| 12.023 | Dipropyl trisulfide      | 6028-61-1  | 585       | 726     |   |                     | 4        | JECFA     |
| 12.024 | 3-Mercaptobutan-2-ol     | 37887-04-0 | 546       | 760     |   |                     |          | JECFA     |
| 12.025 | Allyl isothiocyanate     | 57-06-7    | 1560      | 2110    |   |                     |          | EFSA      |
| 12.026 | Dimethyl disulfide       | 624-92-0   | 564       | 2175    |   |                     |          | JECFA     |
| 12.027 | 2-Methylbenzene-1-thiol  | 137-06-4   | 528       | 2272    |   |                     |          | JECFA     |
| 12.028 | Dicyclohexyl disulfide   | 2550-40-5  | 575       | 2320    |   |                     |          | JECFA     |
| 12.029 | Cyclopentanethiol        | 1679-07-8  | 516       | 2321    |   |                     |          | JECFA     |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)        |
|--------|--|------------|-----------|---------|--|---------------------|----------|------------|
| FL No. | Chemical Name                                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                        | Restrictions of Use | Footnote | Reference  |
| 12.030 | 3-(Methylthio)propyl isothiocyanate            | 505-79-3   | 1564      | 2326    |  |                     |          | EFSA       |
| 12.031 | 3-Mercaptopentan-2-one                         | 67633-97-0 | 560       | 2327    |  |                     |          | JECFA      |
| 12.032 | S-Methyl butanethioate                         | 2432-51-1  | 484       | 2328    |  |                     |          | JECFA      |
| 12.033 | Naphthalene-2-thiol                            | 91-60-1    | 531       | 2330    |  |                     |          | JECFA      |
| 12.034 | Octane-1,8-dithiol                             | 1191-62-4  | 541       | 2331    |  |                     |          | JECFA      |
| 12.035 | 2-,3- and 10-Mercapto-pinane                   |            | 520       | 2332    | Mixture of isomers (about 54 % of 10-isomer, about 31 % of 2-isomer, about 10 % of 3-isomer) |                     |          | JECFA      |
| 12.036 | 3-[(2-Mercapto-1-methyl-propyl)thio]butan-2-ol | 54957-02-7 | 547       | 2353    |  |                     |          | JECFA      |
| 12.037 | Allyl methyl disulfide                         | 2179-58-0  | 568       | 11866   | At least 90%; secondary components 3-5% dimethyl sulfide and 3-5% diallyl sulfide            |                     |          | JECFA      |
| 12.038 | 8-Mercapto-p-menthan-3-one                     | 38462-22-5 | 561       | 11789   |  |                     | 2        | JECFA/EFSA |
| 12.039 | 2-Mercaptopropionic acid                       | 79-42-5    | 551       | 11790   |  |                     |          | JECFA      |
| 12.040 | 2-Methylthioacetaldehyde                       | 23328-62-3 | 465       | 11686   |  |                     |          | JECFA      |
| 12.041 | 1-(Methylthio)butan-2-one                      | 13678-58-5 | 496       | 11543   |  |                     |          | JECFA      |
| 12.042 | 2-(Methylthio)phenol                           | 1073-29-6  | 503       | 11553   |  |                     |          | JECFA      |
| 12.043 | Diphenyl disulfide                             | 882-33-7   | 578       | 11757   |  |                     |          | JECFA      |

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| (1)    | (2)                                 | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                   | Restrictions of Use | Footnote | Reference |
| 12.044 | Prop-1-enyl propyl disulfide        | 5905-46-4  | 570       | 11699   | At least 92%; secondary component 3-6% dipropyl disulfide                               |                     |          | JECFA     |
| 12.045 | Methyl allyl trisulfide             | 34135-85-8 | 586       | 11867   | At least 80%; secondary components 10-12% dimethyl trisulfide and 6-8% allyl trisulfide |                     | 4        | JECFA     |
| 12.046 | Ethyl 2-mercaptopropionate          | 19788-49-9 | 552       | 11469   |   |                     |          | JECFA     |
| 12.047 | 3-Mercaptobutan-2-one               | 40789-98-8 | 558       | 11497   |   |                     |          | JECFA     |
| 12.048 | 2-Methylbutane-1-thiol              | 1878-18-8  | 515       | 11509   |   |                     |          | JECFA     |
| 12.049 | 3-Methylbutane-2-thiol              | 2084-18-6  | 517       | 11510   |   |                     |          | JECFA     |
| 12.052 | Di-(3-oxobutyl) sulfide             | 40790-04-3 | 502       | 11441   |   |                     |          | JECFA     |
| 12.053 | Ethyl 3-(methylthio)propionate      | 13327-56-5 | 476       | 11476   |   |                     |          | JECFA     |
| 12.054 | 2-(Ethylthio)phenol                 | 4500-58-7  | 529       | 11666   |   |                     |          | JECFA     |
| 12.055 | 4-Mercaptobutan-2-one               | 34619-12-0 | 559       | 11498   |   |                     |          | JECFA     |
| 12.056 | 3-(Methylthio)butanal               | 16630-52-7 | 467       | 11687   |   |                     |          | JECFA     |
| 12.057 | 4-(Methylthio)butan-2-one           | 34047-39-7 | 497       | 11688   |   |                     |          | JECFA     |
| 12.058 | 4-(Methylthio)-4-methylpentan-2-one | 23550-40-5 | 500       | 11551   |   |                     |          | JECFA     |
| 12.059 | Propyl thioacetate                  | 2307-10-0  | 485       | 11576   |   |                     |          | JECFA     |
| 12.060 | Methyl 4-(methylthio)butyrate       | 53053-51-3 | 474       | 11526   |   |                     |          | JECFA     |

▼ **M1**

| (1)                   | (2)                                 | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|-----------------------|-------------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No.                | Chemical Name                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                          | Restrictions of Use | Footnote | Reference |
| 12.061                | 4-(Methylthio)butanal               | 42919-64-2 | 468       | 11542   |  |                     |          | JECFA     |
| 12.062                | 3-(Methylthio)propan-1-ol           | 505-10-2   | 461       | 11554   |  |                     |          | JECFA     |
| 12.063                | 3-(Methylthio)hexan-1-ol            | 51755-66-9 | 463       | 11548   |  |                     |          | JECFA     |
| 12.064                | Thiogueraniol                       | 39067-80-6 | 524       | 11583   |  |                     |          | JECFA     |
| 12.065                | 2,8-dithianon-4-en-4-carboxaldehyde | 59902-01-1 | 471       | 11904   |  |                     | 1        | EFSA      |
| 12.066                | Ethane-1,2-dithiol                  | 540-63-6   | 532       | 11467   |  |                     |          | JECFA     |
| 12.067                | Hexane-1,6-dithiol                  | 1191-43-1  | 540       | 11486   |  |                     |          | JECFA     |
| 12.068                | Benzyl methyl disulfide             | 699-10-5   | 577       | 11508   |  |                     |          | JECFA     |
| 12.069                | Nonane-1,9-dithiol                  | 3489-28-9  | 542       | 11558   |  |                     |          | JECFA     |
| 12.070                | Propane-1,2-dithiol                 | 814-67-5   | 536       | 11564   |  |                     |          | JECFA     |
| 12.071                | 1-Propane-1-thiol                   | 107-03-9   | 509       | 11816   |  |                     |          | JECFA     |
| 12.072                | Butane-1,2-dithiol                  | 16128-68-0 | 537       | 11909   |  |                     |          | JECFA     |
| 12.073                | Butane-1,3-dithiol                  | 24330-52-7 | 538       | 11910   |  |                     |          | JECFA     |
| 12.074                | Diallyl polysulfides                | 72869-75-1 | 588       | 11912   |  |                     | 4        | JECFA     |
| ▼ <b>M3</b><br>12.075 | Methyl prop-1-enyl disulfide        | 5905-47-5  | 569       | 11712   | At least 90 %; secondary components 3-4 % dimethyl disulfide and 3-4 % di-1-propenyl disulfide |                     |          | JECFA     |
| ▼ <b>M1</b><br>12.076 | Propane-1,3-dithiol                 | 109-80-8   | 535       | 11929   |  |                     |          | JECFA     |
| 12.077                | Benzyl methyl sulfide               | 766-92-7   | 460       |         |  |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)                                   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name                         | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.078      | 4-(Methylthio)butan-1-ol              | 20582-85-8 | 462       |         |   |                     |          | JECFA     |
| 12.079      | 2-(methylthiomethyl)but-2-enal        | 40878-72-6 | 470       | 11549   |   |                     | 1        | EFSA      |
| 12.080      | Thiophenol                            | 108-98-5   | 525       | 11585   |   |                     |          | JECFA     |
| 12.081      | Dibenzyl disulfide                    | 150-60-7   | 579       |         |   |                     |          | JECFA     |
| 12.082      | 2,6-(Dimethyl)thiophenol              | 118-72-9   | 530       |         |   |                     |          | JECFA     |
| 12.083      | Ethyl 3-mercaptopropionate            | 5466-06-8  | 553       |         |   |                     |          | JECFA     |
| 12.084      | Ethyl 4-(methylthio)butyrate          | 22014-48-8 | 477       |         |   |                     |          | JECFA     |
| 12.085      | p-Menth-1-ene-8-thiol                 | 71159-90-5 | 523       |         |   |                     | 2        | EFSA      |
| ▼ <b>M3</b> |                                       |            |           |         |   |                     |          |           |
| 12.086      | S-Methyl 2-methylbutanethioate        | 42075-45-6 | 486       |         |   |                     |          | JECFA     |
| ▼ <b>M1</b> |                                       |            |           |         |   |                     |          |           |
| 12.087      | 2-(Methylthiomethyl)-3-phenylpropenal | 65887-08-3 | 505       |         |   |                     |          | JECFA     |
| 12.088      | Diallyl sulfide                       | 592-88-1   | 458       | 11846   |   |                     |          | EFSA      |
| 12.089      | Ethyl 3-(methylthio)butyrate          |            | 480       | 11475   |   |                     |          | JECFA     |
| 12.096      | Allyl methyl sulfide                  | 10152-76-8 |           | 11429   |   |                     |          | EFSA      |
| 12.098      | Allyl prop-1-enyl disulfide           | 33368-82-0 |           | 11433   |   |                     |          | EFSA      |
| 12.099      | Allyl propyl sulfide                  | 27817-67-0 |           | 11434   |   |                     |          | EFSA      |

▼ **M1**

| (1)                  | (2)                             | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|----------------------|---------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.               | Chemical Name                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.101               | Allyl thiopropionate            | 41820-22-8 | 490       | 11436   | At least 83%; secondary component 15-18% diallyl sulfide              |                     |          | JECFA     |
| 12.102               | Benzyl isothiocyanate           | 622-78-6   | 1562      | 11863   |   |                     |          | EFSA      |
| 12.103               | Butane-1,4-dithiol              | 1191-08-8  |           |         |   |                     |          | EFSA      |
| 12.104               | Butane-2-thiol                  | 513-53-1   |           |         |   |                     |          | EFSA      |
| 12.106               | S-2-Butyl 3-methylbutanethioate | 2432-91-9  |           |         |   |                     |          | EFSA      |
| 12.107               | Butyl isothiocyanate            | 592-82-5   | 1561      | 11488   |   |                     |          | EFSA      |
| 12.108               | Di-isopentyl thiomalate         | 68084-03-7 | 1672      | 11454   |   |                     |          | EFSA      |
| 12.109               | Di-isopropyl disulfide          | 4253-89-8  | 567       | 11455   |   |                     |          | JECFA     |
| 12.111               | Dibutyl disulfide               | 629-45-8   |           |         |   |                     |          | EFSA      |
| 12.113               | Diethyl sulfide                 | 352-93-2   | 454       | 11450   |   |                     |          | JECFA     |
| ▼ <b>M4</b><br>_____ |                                 |            |           |         |   |                     |          |           |
| ▼ <b>M1</b>          |                                 |            |           |         |   |                     |          |           |
| 12.117               | Dipentyl sulfide                | 872-10-6   |           |         |   |                     |          | EFSA      |
| 12.118               | 2,4-Dithiapentane               | 1618-26-4  | 533       |         |   |                     |          | JECFA     |
| ▼ <b>M4</b><br>_____ |                                 |            |           |         |   |                     |          |           |
| ▼ <b>M1</b>          |                                 |            |           |         |   |                     |          |           |
| 12.121               | Ethyl 2-(methylthio)propionate  | 23747-43-5 | 581       | 11471   |   |                     |          | JECFA     |
| 12.122               | Ethyl 2-(methylthio)acetate     | 4455-13-4  | 475       |         |   |                     |          | JECFA     |
| 12.124               | Ethyl butyl sulfide             | 638-46-0   |           |         |   |                     |          | EFSA      |



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| (1)    | (2)                                  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                        | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.125 | Ethyl propanethioate                 | 2432-42-0  |           |         |   |                     |          | EFSA      |
| 12.126 | Ethyl propyl disulfide               | 30453-31-7 | 1694      | 11478   |   |                     |          | EFSA      |
| 12.127 | Ethyl propyl sulfide                 | 4110-50-3  |           | 11479   |   |                     |          | EFSA      |
| 12.128 | 2-Ethylhexane-1-thiol                | 7341-17-5  | 519       |         |   |                     |          | JECFA     |
| 12.129 | 3-(Ethylthio)propan-1-ol             | 18721-61-4 |           |         |   |                     |          | EFSA      |
| 12.130 | Heptane-1-thiol                      | 1639-09-4  | 1663      | 11485   |   |                     |          | EFSA      |
| 12.132 | Hexane-1-thiol                       | 111-31-9   | 518       | 11487   |   |                     |          | JECFA     |
| 12.134 | S-Isopropyl 3-methylbut-2-enethioate | 34365-79-2 | 1679      |         |   |                     |          | EFSA      |
| 12.135 | 3-Mercapto-2-methylpropionic acid    | 26473-47-2 |           |         |   |                     |          | EFSA      |
| 12.136 | 3-Mercapto-2-oxopropionic acid       | 2464-23-5  |           |         |   |                     |          | EFSA      |
| 12.137 | 3-Mercapto-3-methylbutan-1-ol        | 34300-94-2 | 544       |         |   |                     | 2        | EFSA      |
| 12.138 | 3-Mercapto-3-methylbutyl formate     | 50746-10-6 | 549       |         |   |                     | 2        | EFSA      |
| 12.139 | 2-Mercaptoanisole                    | 7217-59-6  | 1666      | 11880   |   |                     |          | EFSA      |
| 12.143 | 1-Mercaptopropan-2-one               | 24653-75-6 | 557       |         |   |                     |          | JECFA     |
| 12.145 | 4-Methoxy-2-methylbutane-2-thiol     | 94087-83-9 | 548       |         |   |                     | 2        | EFSA      |
| 12.146 | Methyl (methylthio)acetate           | 16630-66-3 | 1691      | 11525   |   |                     |          | EFSA      |

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| (1)    | (2)                             | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---------------------------------|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified              | Restrictions of Use | Footnote | Reference |
| 12.148 | S-Methyl 4-methylpentanethioate | 61122-71-2 | 488       |         |  |                     |          | JECFA     |
| 12.149 | S-Methyl acetothioate           | 1534-08-3  | 482       |         |  |                     |          | JECFA     |
| 12.150 | S-Methyl benzothioate           | 5925-68-8  | 504       | 11505   |  |                     |          | JECFA     |
| 12.151 | Methyl butyl disulfide          | 60779-24-0 |           |         |  |                     |          | EFSA      |
| 12.152 | Methyl butyl sulfide            | 628-29-5   |           |         |  |                     |          | EFSA      |
| 12.153 | Methyl ethyl disulfide          | 20333-39-5 | 1693      | 11470   | At least 80%, secondary components 7-8% diethyl sulfide and 8-10% dimethyl sulfide |                     |          | EFSA      |
| 12.154 | Methyl ethyl sulfide            | 624-89-5   | 453       | 11474   |  |                     |          | JECFA     |
| 12.155 | Methyl ethyl trisulfide         | 31499-71-5 | 583       |         |  |                     | 4        | JECFA     |
| 12.156 | S-Methyl hexanethioate          | 20756-86-9 | 489       | 11515   |  |                     |          | JECFA     |
| 12.157 | S-Methyl isopentanethioate      | 23747-45-7 | 487       | 11506   |  |                     |          | JECFA     |
| 12.158 | Methyl 3-methyl-2-butylsulphide | 5897-45-0  |           |         |  |                     |          | EFSA      |
|        |                                 |            |           |         |  |                     |          |           |
|        |                                 |            |           |         |  |                     |          |           |
|        |                                 |            |           |         |  |                     |          |           |
| 12.161 | Methyl phenyl disulfide         | 14173-25-2 | 576       | 11532   |  |                     |          | JECFA     |
| 12.162 | Methyl phenyl sulfide           | 100-68-5   | 459       | 11533   |  |                     |          | EFSA      |

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## ▼M1

| (1)    | (2)                                | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                      | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.163 | Methyl prop-1-enyl sulfide         | 10152-77-9 |           | 11538   |   |                     |          | EFSA      |
| 12.165 | S-Methyl propanethioate            | 5925-75-7  | 1678      |         |   |                     |          | EFSA      |
| 12.166 | Methyl propyl sulfide              | 3877-15-4  |           | 11541   |   |                     |          | EFSA      |
| 12.168 | 2-Methyl-2-(methyl-dithio)propanal | 67952-60-7 | 580       |         |   |                     |          | JECFA     |
| 12.169 | 2-Methyl-4-oxopentane-2-thiol      | 19872-52-7 | 1293      | 11500   | 48% 2-methyl-4-oxopentane-2-thiol and 48-50% 4-methyl-3-penten-2-one. |                     | 2        | EFSA      |
| 12.170 | 3-Methylbut-2-ene-1-thiol          | 5287-45-6  | 522       | 11511   |   |                     |          | JECFA     |
| 12.171 | 3-Methylbutane-1-thiol             | 541-31-1   | 513       |         |   |                     |          | JECFA     |
| 12.173 | 2-Methylpropane-1-thiol            | 513-44-0   | 512       | 11536   |   |                     |          | JECFA     |
| 12.175 | Methylsulfinylmethane              | 67-68-5    | 507       |         |   |                     |          | JECFA     |
| 12.176 | 4-(Methylthio)-2-oxobutyric acid   | 583-92-6   | 501       |         |   |                     |          | JECFA     |
| 12.177 | 8-(Methylthio)-p-menthan-3-one     | 32637-94-8 |           |         |   |                     |          | EFSA      |
| 12.178 | 3-(Methylthio)butyric acid         | 16630-65-2 |           |         |   |                     |          | EFSA      |
| 12.179 | 2-(Methylthio)ethan-1-ol           | 5271-38-5  | 1297      | 11545   |   |                     |          | EFSA      |
| 12.180 | 1-(Methylthio)ethane-1-thiol       | 31331-53-0 |           |         |   |                     |          | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.181 | 1-(Methylthio)pentan-3-one                   | 66735-69-1 |           |         |   |                     |          | EFSA      |
| 12.182 | 2-(Methylthio)propionic acid                 | 58809-73-7 |           |         |   |                     |          | EFSA      |
| 12.183 | 3-(Methylthio)propionic acid                 | 646-01-5   |           |         |   |                     |          | EFSA      |
| 12.187 | Methylthiomethyl butyrate                    | 74758-93-3 | 473       |         |   |                     |          | JECFA     |
| 12.188 | Methylthiomethyl hexanoate                   | 74758-91-1 | 479       |         |   |                     |          | JECFA     |
| 12.189 | S-(Methylthiomethyl) methylpropanethioate 2- | 77974-85-7 |           |         |   |                     |          | EFSA      |
| 12.191 | Pentane-1-thiol                              | 110-66-7   | 1662      |         |   |                     |          | EFSA      |
| 12.192 | Pentane-2-thiol                              | 2084-19-7  | 514       |         |   |                     |          | JECFA     |
| 12.193 | Phenethyl isothiocyanate                     | 2257-09-2  | 1563      | 11495   |   |                     |          | EFSA      |
| 12.194 | 2-Phenylethane-1-thiol                       | 4410-99-5  | 527       | 11561   |   |                     |          | JECFA     |
| 12.195 | S-Prenyl thioacetate                         | 33049-93-3 | 491       |         |   |                     |          | JECFA     |
| 12.196 | S-Prenyl thioisobutyrate                     | 53626-94-1 |           |         |   |                     |          | EFSA      |
| 12.197 | Propane-2-thiol                              | 75-33-2    | 510       | 11565   |   |                     |          | JECFA     |
| 12.198 | 2,3,5-Trithiahexane                          | 42474-44-2 | 1299      |         |   |                     |          | EFSA      |
| 12.200 | 1,1-bis(Ethylthio)-ethane                    | 14252-42-7 |           |         |   |                     |          | EFSA      |
| 12.201 | 8-Acetylthio-p-menthanone-3                  | 94293-57-9 | 506       |         |   |                     |          | JECFA     |

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| (1)    | (2)                                   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------------|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                         | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                         | Restrictions of Use | Footnote | Reference |
| 12.203 | Methylthio 2-(acetyloxy)propionate    | 74586-09-7  | 492       |         |   |                     |          | JECFA     |
| 12.205 | Mercaptoacetaldehyde                  | 4124-63-4   |           |         |   |                     |          | EFSA      |
| 12.211 | But-1-enyl methyl sulphide            |             | 457       |         |   |                     |          | JECFA     |
| 12.212 | Ethyl-5-(methylthio)valerate          | 233665-98-0 | 1298      |         |   |                     |          | EFSA      |
| 12.214 | Isobutyl-3-(methylthio)butyrate       | 127931-21-9 | 1677      |         |   |                     |          | EFSA      |
| 12.217 | 3-Mercaptohexan-1-ol                  |             | 545       |         |   |                     |          | JECFA     |
| 12.218 | Methyl-3-methyl-1-butenyl disulphide  |             | 571       |         |   |                     |          | JECFA     |
| 12.221 | S-Prenyl thioisopentanoate            | 75631-91-3  |           |         |   |                     |          | EFSA      |
| 12.227 | Methylthio-2-(propionyloxy)propionate |             | 493       |         |   |                     |          | JECFA     |
| 12.234 | 3-Mercaptohexyl acetate               | 136954-20-6 | 554       |         | At least 82%; secondary components 8% 3-mercaptohexanol and 10% 3-acetylmercaptohexyl acetate |                     |          | JECFA     |
| 12.235 | 3-Mercaptohexyl butyrate              | 136954-21-7 | 555       |         | At least 90%; secondary component 5-6% 3-mercaptohexanol                                      |                     |          | JECFA     |
| 12.236 | 3-(Methylthio)hexyl acetate           | 51755-85-2  | 481       |         |   |                     |          | JECFA     |
| 12.237 | 3-(Methylthio)propyl acetate          | 16630-55-0  | 478       |         |   |                     |          | JECFA     |
| 12.238 | 3-Mercapto-2-methylpentan-1-ol        | 227456-27-1 | 1291      |         |   |                     |          | EFSA      |
| 12.239 | 3-Mercapto-2-methylpentanal           | 227456-28-2 | 1292      |         |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)                             | (3)         | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---------------------------------|-------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                | Restrictions of Use | Footnote | Reference |
| 12.240 | 2,4,6-Trithiaheptane            | 6540-86-9   | 1684      |         |  |                     |          | EFSA      |
| 12.241 | 2-Mercapto-2-methyl-pentan-1-ol | 258823-39-1 | 1290      |         |  |                     | 2        | EFSA      |
| 12.242 | Methylthiomethylmercaptan       | 29414-47-9  | 1675      |         |  |                     |          | EFSA      |
| 12.243 | Dimercaptomethane               | 6725-64-0   | 1661      |         |  |                     |          | EFSA      |
| 12.244 | 1-Methylthio-2-propanone        | 14109-72-9  | 495       |         |  |                     |          | JECFA     |
| 12.250 | 3-Mercaptohexanal               | 51755-72-7  |           |         |  |                     |          | EFSA      |
| 12.251 | 3-Mercaptohexyl hexanoate       | 136954-22-8 | 556       |         |  |                     |          | JECFA     |
| 12.252 | 4-Mercapto-4-methyl-2-pentanol  | 31539-84-1  | 1669      |         |  |                     | 2        | EFSA      |
| 12.253 | Amyl methyl disulfide           | 72437-68-4  | 1697      |         |  |                     |          | EFSA      |
| 12.254 | Butyl ethyl disulfide           | 63986-03-8  | 1698      |         | At least 90%, secondary components 2-3% diethyl disulfide and 5-6% dibutyl disulfide |                     |          | EFSA      |
| 12.255 | Ethyl 3-mercaptopbutyrate       | 156472-94-5 | 1294      |         |  |                     |          | EFSA      |
|        |                                 |             |           |         |  |                     |          |           |
|        |                                 |             |           |         |  |                     |          |           |
|        |                                 |             |           |         |  |                     |          |           |
| 12.257 | Ethyl 4-(acetylthio)butyrate    | 104228-51-5 | 1295      |         |  |                     |          | EFSA      |
| 12.259 | 1-Mercapto-p-menthan-3-one      | 29725-66-4  | 1673      |         | At least 89%, secondary components 8-9% piperitone and 1-2% alpha-terpineol          |                     | 2        | EFSA      |
| 12.264 | 4,2-Thiopentanone               | 92585-08-5  | 1670      |         |  |                     |          | EFSA      |

▼ **M4**▼ **M1**

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| (1)    | (2)  | (3)                    | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--|------------------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.                | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 12.265 | (E)-2-Methyl-1-methylthio-2-butene   | 89534-74-7             | 1683      |         |  |                     |          | EFSA      |
| 12.266 | Methyl-2-mercaptopropionate  | 53907-46-3             |           |         |  |                     |          | EFSA      |
| 12.267 | Propyl-2-mercaptopropionate  | 19788-50-2             | 1667      |         |  |                     |          | EFSA      |
|        |  |                        |           |         |  |                     |          |           |
|        |  |                        |           |         |  |                     |          |           |
| 12.273 | 3-(Methylthio)heptanal   | 51755-70-5             | 1692      |         | At least 92 %; secondary component 5-7 % (E)-hept-2-enal   |                     |          | EFSA      |
| 12.274 | 3,6-Diethyl-1,2,4,5-tetrathiane and 3,5-diethyl-1,2,4-trithiolane mix in vegetable oil triglycerides | 54644-28-9, 54717-12-3 | 1687      |         | 0.18% 3,6-diethyl-1,2,4,5-tetrathiane isomer I+ II; 0.05% 3,5-diethyl-1,2,4-trithiolane isomer I; 0.1% 3,5-diethyl-1,2,4-trithiolane isomer II; 99% vegetable oil triglyceride |                     |          | EFSA      |
| 12.275 | Allyl thiohexanoate  | 156420-69-8            | 1681      |         |  |                     |          | EFSA      |
| 12.276 | (S)-1-Methoxy-3-heptanethiol   | 400052-49-5            | 1671      |         |  |                     |          | EFSA      |
| 12.277 | 3-(Methylthio)propyl butyrate  | 16630-60-7             |           |         |  |                     |          | EFSA      |
| 12.278 | 3-Acetyl-mercaptohexyl acetate   | 136954-25-1            |           |         |  |                     |          | EFSA      |
| 12.279 | 3-Methylthiohexanal  | 38433-74-8             | 469       |         |  |                     |          | JECFA     |
| 12.280 | Diisopropyl trisulphide  | 5943-34-0              | 1300      |         |  |                     | 4        | EFSA      |
| 12.282 | (S)-Methyl octanethioate   | 2432-83-9              |           |         |  |                     |          | EFSA      |
| 12.283 | 3-Butenyl isothiocyanate   | 3386-97-8              | 1889      |         |  |                     |          | EFSA      |

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| (1)    | (2)                              | (3)                                      | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|--|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.                                  | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 12.284 | bis(1-Mercaptopropyl)sulphide    | 53897-60-2                               | 1709      |         |   |                     |          | EFSA      |
| 12.285 | 3-Methylthio-2-butanone          | 53475-15-3                               | 1688      |         |   |                     |          | EFSA      |
| 12.286 | 4-Methylthio-2-pentanone         | 143764-28-7                              | 1689      |         |   |                     |          | EFSA      |
| 12.287 | Methyl 3-(methylthio)butanoate   | 207983-28-6                              | 1690      |         |   |                     |          | EFSA      |
| 12.288 | Heptan-2-thiol                   | 628-00-2                                 | 1664      |         |   |                     |          | EFSA      |
| 12.289 | 1-Phenylethylmercaptan           | 6263-65-6                                | 1665      |         |   |                     |          | EFSA      |
| 12.290 | Methyl-3-mercaptopbutanoate      | 54051-19-3                               | 1674      |         |   |                     |          | EFSA      |
| 12.291 | 3-Mercapto-2-methyl-1-butanol    | 227456-33-9                              | 1289      |         |   |                     |          | EFSA      |
| 12.292 | Hexyl 3-mercaptopbutanoate       | 796857-79-9                              | 1704      |         |   |                     |          | EFSA      |
| 12.293 | Ethane-1,1-dithiol               | 69382-62-3                               | 1660      |         | 1% solution of ethane-1,1-dithiol, solvent 95% ethanol                |                     |          | EFSA      |
| 12.294 | Isopentyl methyl disulfide       | 72437-56-0                               | 1696      |         |   |                     |          | EFSA      |
| 12.297 | 3-Mercaptoheptyl acetate         | 548774-80-7                              | 1708      |         |   |                     |          | EFSA      |
| 12.298 | Di-(1-propenyl)-sulfid (mixture) | 65819-74-1,<br>37981-37-6,<br>37981-36-5 |           |         |   |                     |          | EFSA      |
| 12.299 | 3-(Methylthio)propyl hexanoate   | 906079-63-8                              |           |         |   |                     |          | EFSA      |
| 12.300 | 1,1-Propanedithiol               | 88497-17-0                               |           |         |   |                     |          | EFSA      |



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| (1)    | (2)                                    | (3)          | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--|--------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                          | CAS No.      | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 12.301 | Methyl-2-oxo-propyl disulfide          | 122861-78-3  |           |         | At least 90%, secondary components 1-mercaptopropan-2-one (less than 8%), 1,1-disulfanediyldipropan-2-one (less than 5%) and 1,3-dimethyltrisulfane (less than 3%) |                     |          | EFSA      |
| 12.302 | 2-Butanol, 4-mercapto-3-methyl         | 33959-27-2   |           |         |  |                     |          | EFSA      |
| 12.303 | 3-Pentanethiol                         | 616-31-9     |           |         |  |                     |          | EFSA      |
| 12.304 | Ethyl-2-mercapto-2-methyl propanoate   | 33441-50-8   |           |         |  |                     | 1        | EFSA      |
| 12.305 | 2-Mercapto-4-heptanol                  | 1006684-20-3 |           |         |  |                     |          | EFSA      |
| 12.306 | 3-(Methylthio)-decanal                 | 1256932-15-6 |           |         |  |                     |          | EFSA      |
| 13.001 | 5-Methylfurfural                       | 620-02-0     | 745       | 119     |  |                     |          | EFSA      |
| 13.002 | Methyl 2-furoate                       | 611-13-2     | 746       | 358     |  |                     |          | EFSA      |
| 13.003 | Propyl 2-furoate                       | 615-10-1     | 747       | 359     |  |                     |          | EFSA      |
| 13.004 | Allyl 2-furoate                        | 4208-49-5    | 21        | 360     |  |                     | 2        | EFSA      |
| 13.005 | Hexyl 2-furoate                        | 39251-86-0   | 749       | 361     |  |                     |          | EFSA      |
| 13.006 | Phenethyl 2-furoate                    | 7149-32-8    | 1517      | 362     |  |                     |          | EFSA      |
| 13.007 | 2-(3-Phenylpropyl)tetrahydrofuran      | 3208-40-0    | 1441      | 489     |  |                     |          | EFSA      |
| 13.009 | 3,4-Dihydrocoumarin                    | 119-84-6     | 1171      | 535     |  |                     |          | EFSA      |
| 13.010 | 4-Hydroxy-2,5-dimethyl-furan-3(2H)-one | 3658-77-3    | 1446      | 536     |  |                     | 1        | EFSA      |

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| (1)    | (2)                                  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                        | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.011 | (E)-Ethyl furfuracrylate             | 623-20-1   |           | 545     |   |                     |          | EFSA      |
| 13.012 | 6-Methylcoumarin                     | 92-48-8    | 1172      | 579     |   |                     |          | EFSA      |
| 13.015 | bis-(2,5-Dimethyl-3-furyl) disulfide | 28588-73-0 | 1067      | 722     |   |                     |          | EFSA      |
| 13.016 | bis-(2-Methyl-3-furyl) disulfide     | 28588-75-2 | 1066      | 723     |   |                     |          | EFSA      |
| 13.017 | bis-(2-Methyl-3-furyl) tetra-sulfide | 28588-76-3 | 1068      | 724     |   |                     |          | EFSA      |
| 13.018 | Furfural                             | 98-01-1    | 450       | 2014    |   |                     |          | EFSA      |
| 13.019 | Furfuryl alcohol                     | 98-00-0    | 451       | 2023    |   |                     |          | EFSA      |
| 13.020 | Tetrahydrofurfuryl alcohol           | 97-99-4    | 1443      | 2029    |   |                     |          | EFSA      |
| 13.021 | Isopentyl 4-(2-furan)butyrate        | 7779-66-0  | 1516      | 2080    |   |                     |          | EFSA      |
| 13.022 | Ethyl 3(2-furyl)propionate           | 10031-90-0 | 1513      | 2091    |   |                     |          | EFSA      |
| 13.023 | Isopentyl 3-(2-furan)propionate      | 7779-67-1  | 1515      | 2092    |   |                     |          | EFSA      |
| 13.024 | Isobutyl 3-(2-furyl)propionate       | 105-01-1   | 1514      | 2093    |   |                     |          | EFSA      |
| 13.025 | Pentyl 2-furoate                     | 1334-82-3  | 748       | 2109    |   |                     |          | EFSA      |
| 13.026 | 2-Furanmethanethiol                  | 98-02-2    | 1072      | 2202    |   |                     |          | EFSA      |
| 13.027 | 2-Pentyl-5 or 6-keto-1,4-dioxane     | 65504-96-3 | 1485      | 2205    |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.028 | 2-Butyl-5 or 6-keto-1,4-dioxane                 | 65504-95-2 | 1484      | 2206    |   |                     |          | EFSA      |
|        |   |            |           |         |   |                     |          |           |
| 13.031 | 2-Benzofurancarboxaldehyde                      | 4265-16-1  | 751       | 2247    |   |                     |          | EFSA      |
| 13.032 | Furfuryl isopropyl sulfide                      | 1883-78-9  | 1077      | 2248    |   |                     |          | EFSA      |
| 13.033 | S-Furfuryl acetothioate                         | 13678-68-7 | 1074      | 2250    |   |                     |          | EFSA      |
| 13.034 | 3-(2-furyl)acrylaldehyde                        | 623-30-3   | 1497      |         |   |                     | 1        | EFSA      |
| 13.037 | 2-(2-Methylprop-1-enyl)-4-methyltetrahydropyran | 16409-43-1 | 1237      | 2269    |   |                     |          | EFSA      |
| 13.038 | 2-Phenyl-3-carbethoxyfuran                      | 50626-02-3 | 752       | 2309    |   |                     |          | EFSA      |
| 13.039 | 2,4,5-Trimethyl-delta-3-oxazoline               | 22694-96-8 | 1559      | 2319    |   |                     |          | EFSA      |
| 13.040 | (S)-2,5-dimethyl-3-thiofuroylfuran              | 65505-16-0 | 1071      | 2323    |   |                     |          | EFSA      |
| 13.041 | 2,5-Dimethyl-3-(isopentylthio)furan             | 55764-28-8 | 1070      | 2324    |   |                     |          | EFSA      |
| 13.042 | 4,5-Dihydro-2-methylfuran-3(2H)-one             | 3188-00-9  | 1448      | 2338    |   |                     |          | EFSA      |
| 13.043 | Furfurylidene-2-butanal                         | 770-27-4   | 1501      | 11885   |   |                     | 1        | EFSA      |

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| (1)    | (2)                             | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.044 | 4-(2-Furyl)but-3-en-2-one       | 623-15-4   | 1511      | 11838   |   |                     | 1        | EFSA      |
| 13.045 | 1-(2-Furyl)-propan-2-one        | 6975-60-6  | 1508      | 11837   |   |                     | 4        | EFSA      |
| 13.046 | 3-(2-Furyl)-2-methylprop-2-enal | 874-66-8   | 1498      | 11878   |   |                     | 1        | EFSA      |
| 13.047 | Propyl 3-(2-furyl)acrylate      | 623-22-3   | 1518      | 11842   |   |                     |          | EFSA      |
| 13.048 | Tetrahydrofurfuryl butyrate     | 2217-33-6  | 1444      | 11841   |   |                     |          | EFSA      |
| 13.049 | Tetrahydrofurfuryl propionate   | 637-65-0   | 1445      | 11843   |   |                     |          | EFSA      |
| 13.050 | Difurfuryl disulfide            | 4437-20-1  | 1081      | 11480   |   |                     |          | EFSA      |
| 13.051 | S-Furfuryl thioformate          | 59020-90-5 | 1073      | 11770   |   |                     |          | EFSA      |
| 13.052 | Furfuryl methyl ether           | 13679-46-4 | 1520      | 10944   |   |                     | 4        | EFSA      |
| 13.053 | Methyl furfuryl sulfide         | 1438-91-1  | 1076      | 11482   |   |                     |          | EFSA      |
| 13.054 | 2-Acetylfuran                   | 1192-62-7  | 1503      |         |   |                     | 4        | EFSA      |
| 13.055 | 2-Methylfuran-3-thiol           | 28588-74-1 | 1060      | 11678   |   |                     |          | EFSA      |
| 13.056 | Difurfuryl sulfide              | 13678-67-6 | 1080      | 11438   |   |                     | 4        | EFSA      |
| 13.057 | Furfuryl isovalerate            | 13678-60-9 | 743       | 10642   |   |                     |          | EFSA      |
| 13.058 | 3-(5-Methyl-2-furyl) butanal    | 31704-80-0 | 1500      | 10355   |   |                     | 4        | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.059 | 2-Pentylfuran   | 3777-69-3  | 1491      | 10966   |   |                     | 3        | EFSA      |
| 13.060 | Tetrahydrofurfuryl cinnamate                                | 65505-25-1 | 1447      | 11821   |   |                     |          | EFSA      |
| 13.061 | Difurfuryl ether  | 4437-22-3  | 1522      | 10930   |   |                     | 4        | EFSA      |
| 13.062 | Furfuryl propionate   | 623-19-8   | 740       | 10646   |   |                     |          | EFSA      |
| 13.063 | S-Furfuryl propanethioate                                   | 59020-85-8 | 1075      | 11484   |   |                     |          | EFSA      |
| 13.064 | Methyl furfuryl disulfide                                   | 57500-00-2 | 1078      | 11513   |   |                     |          | EFSA      |
| 13.065 | 2-Methyl-5-(methyl-thio)furan                               | 13678-59-6 | 1062      | 11550   |   |                     |          | EFSA      |
| 13.066 | 3-Acetyl-2,5-dimethylfuran                                  | 10599-70-9 | 1506      | 10921   |   |                     | 4        | EFSA      |
| 13.067 | Furfuryl octanoate  | 39252-03-4 | 742       | 10645   |   |                     |          | EFSA      |
| 13.068 | Furfuryl valerate   | 36701-01-6 | 741       | 10647   |   |                     |          | EFSA      |
| 13.069 | 2-Heptylfuran   | 3777-71-7  | 1492      | 10952   |   |                     | 3        | EFSA      |
| 13.070 | 2-Hexanoylfuran   | 14360-50-0 | 1512      | 11180   |   |                     | 4        | EFSA      |
| 13.071 | 2,5-Dimethylfuran-3-thiol                                   | 55764-23-3 | 1063      | 11457   |   |                     |          | EFSA      |
| 13.072 | 1,5,5,9-Tetramethyl-13-oxatricyclo [8.3.0.0.(4.9)]tridecane | 3738-00-9  | 1240      | 10514   |   |                     |          | EFSA      |
| 13.073 | Octyl 2-furoate   | 39251-88-2 | 750       | 10864   |   |                     |          | EFSA      |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                             | Restrictions of Use | Footnote | Reference |
| 13.074 | 2,3-Dimethylbenzofuran                              | 3782-00-1  | 1495      | 11913   |   |                     |          | EFSA      |
| 13.075 | 2,6-Dimethyl-3-((2-methyl-3-furyl)thio)heptan-4-one | 61295-51-0 | 1086      | 11915   | At least 94%; secondary component at least 1% 2,6-dimethyl-2-[(2-methyl-3-furyl)thio]-4-heptanone |                     |          | EFSA      |
| 13.076 | 6-Hydroxydihydrotheaspirane                         | 65620-50-0 | 1648      | 11917   |   |                     | 2        | EFSA      |
| 13.077 | 3-((2-Methyl-3-furyl)thio)heptan-4-one              | 61295-41-8 | 1085      | 11922   |   |                     |          | EFSA      |
| 13.078 | 4-((2-Methyl-3-furyl)thio)nonan-5-one               | 61295-50-9 | 1087      | 11923   |   |                     |          | EFSA      |
| 13.079 | Methyl 2-methyl-3-furyl disulfide                   | 65505-17-1 | 1064      | 11924   |   |                     |          | EFSA      |
| 13.082 | Propyl 2-methyl-3-furyl disulfide                   | 61197-09-9 | 1065      |         |   |                     |          | EFSA      |
| 13.083 | 2-Acetyl-5-methylfuran                              | 1193-79-9  | 1504      | 11038   |   |                     | 4        | EFSA      |
| 13.084 | 2-Ethyl-4-hydroxy-5-methyl-3(2H)-furanone           | 27538-09-6 | 1449      |         |   |                     | 1        | EFSA      |
| 13.085 | 4-Hydroxy-5-methylfuran-3(2H)-one                   | 19322-27-1 | 1450      | 11785   |   |                     | 1        | EFSA      |
| 13.086 | 4,5-Dihydro-2-methyl-3-thioacetoxyfuran             | 26486-14-6 | 1089      |         |   |                     |          | EFSA      |
| 13.087 | 6-Acetoxydihydrotheaspirane                         | 57893-27-3 | 1647      |         |   |                     | 2        | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.088 | 3,6-Dihydro-4-methyl-2-(2-methylprop-1-en-1-yl)-2H-pyran | 1786-08-9  | 1235      |         |   |                     |          | EFSA      |
| 13.089 | 2,5-Dimethyl-4-methoxy-furan-3(2H)-one                   | 4077-47-8  | 1451      |         |   |                     | 2        | EFSA      |
| 13.090 | 2,2-Dimethyl-5-(1-methylprop-1-enyl)tetrahydrofuran      | 7416-35-5  | 1452      | 10937   |   |                     |          | EFSA      |
| 13.091 | 4,5-Dimethyl-2-ethylloxazole                             | 53833-30-0 | 1555      |         |   |                     |          | EFSA      |
|        |  |            |           |         |   |                     |          |           |
|        |  |            |           |         |   |                     |          |           |
|        |  |            |           |         |   |                     |          |           |
| 13.093 | Ethyl 3-(2-furfurylthio)propionate                       | 94278-27-0 | 1088      |         |   |                     |          | EFSA      |
| 13.094 | 2,6,6-Trimethyl-2-vinyltetrahydrofuran                   | 7392-19-0  | 1236      | 10976   |   |                     |          | EFSA      |
| 13.095 | 2,5-Diethyltetrahydrofuran                               | 41239-48-9 | 1453      | 11882   |   |                     |          | EFSA      |
| 13.097 | Anhydrolinalool oxide (5)                                | 13679-86-2 | 1455      | 11944   |   |                     | 2        | EFSA      |
| 13.098 | Theaspirane  | 36431-72-8 | 1238      | 10515   |   |                     |          | EFSA      |
| 13.099 | 4-Acetoxy-2,5-dimethylfuran-3(2H)-one                    | 4166-20-5  | 1456      |         |   |                     | 1        | EFSA      |
| 13.101 | 2-Acetyl-3,5-dimethylfuran                               | 22940-86-9 | 1505      |         |   |                     | 4        | EFSA      |
| 13.102 | Butyl 2-furoate  | 583-33-5   |           |         |   |                     |          | EFSA      |
| 13.103 | 2-Butylfuran   | 4466-24-4  | 1490      | 10927   |   |                     | 3        | EFSA      |

▼ **M4**▼ **M1**

## ▼ M1

| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                              | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.105 | 2-Butyrylfuran                             | 4208-57-5  | 1507      |         |   |                     | 4        | EFSA      |
| 13.106 | 2-Decylfuran                               | 83469-85-6 | 1493      |         |   |                     | 3        | EFSA      |
| 13.108 | 4,5-Dihydro-3-mercapto-2-methylfuran       | 26486-13-5 |           |         |   |                     |          | EFSA      |
| 13.112 | 4,5-Dimethyl-2-propyloxazole               | 53833-32-2 | 1569      | 11379   |   |                     |          | EFSA      |
| 13.113 | 2,5-Dimethyl-3-(methyl-dithio)furan        | 61197-06-6 |           |         |   |                     |          | EFSA      |
| 13.114 | 2,5-Dimethyl-3-(methyl-thio)furan          | 63359-63-7 |           |         |   |                     |          | EFSA      |
| 13.115 | 2,4-Dimethyl-3-oxazoline                   | 77311-02-5 | 1558      |         |   |                     |          | EFSA      |
| 13.116 | 2,5-Dimethyl-3-thioacetoxymethylfuran      | 55764-22-2 | 1523      |         |   |                     |          | EFSA      |
| 13.117 | 2,5-Dimethyl-4-ethoxymethylfuran-3(2H)-one | 65330-49-6 |           |         |   |                     | 2        | EFSA      |
| 13.118 | 2,5-Dimethyl-4-ethylloxazole               | 30408-61-8 | 1554      |         |   |                     |          | EFSA      |
| 13.119 | 2,5-Dimethylfuran-3(2H)-one                | 14400-67-0 |           | 11066   |   |                     | 2        | EFSA      |
| 13.120 | 2,5-Dimethyltetrahydrofuran                | 1003-38-9  |           |         |   |                     |          | EFSA      |
| 13.122 | Ethyl 2-furoate                            | 614-99-3   |           | 10588   |   |                     |          | EFSA      |
| 13.123 | Ethyl furfuryl ether                       | 6270-56-0  | 1521      | 10940   |   |                     | 4        | EFSA      |
| 13.124 | Ethyl furfuryl sulfide                     | 2024-70-6  |           |         |   |                     |          | EFSA      |



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| (1)    | (2)                             | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---------------------------------|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.125 | 2-Ethyl-5-methylfuran           | 1703-52-2   |           | 10942   |   |                     | 3        | EFSA      |
| 13.127 | Furfuryl 2-methylbutyrate       | 13678-61-0  |           | 10643   |   |                     |          | EFSA      |
| 13.128 | Furfuryl acetate                | 623-17-6    | 739       | 2065    |   |                     |          | EFSA      |
| 13.129 | Furfuryl but-2(E)-enoate        | 59020-84-7  |           |         |   |                     |          | EFSA      |
| 13.130 | Furfuryl butyrate               | 623-21-2    | 759       | 638     |   |                     |          | EFSA      |
| 13.132 | Furfuryl hexanoate              | 39252-02-3  |           |         |   |                     |          | EFSA      |
| 13.133 | Furfuryl isobutyrate            | 6270-55-9   |           | 10641   |   |                     |          | EFSA      |
| 13.134 | 1-Furfurylpyrrole               | 1438-94-4   | 1310      | 2317    |   |                     | 4        | EFSA      |
| 13.135 | 1-(2-Furfurylthio)propanone     | 58066-86-7  |           |         |   |                     |          | EFSA      |
| 13.136 | 2-Furoic acid                   | 88-14-2     |           | 10098   |   |                     |          | EFSA      |
| 13.137 | 3-(2-Furyl)-2-phenylprop-2-enal | 65545-81-5  | 1502      | 11928   |   |                     | 1        | EFSA      |
| 13.138 | 1-(2-Furyl)butan-3-one          | 699-17-2    | 1510      | 11084   |   |                     | 4        | EFSA      |
| 13.139 | 5-Hydroxymethylfurfuraldehyde   | 67-47-0     |           | 11112   |   |                     |          | EFSA      |
| 13.140 | Linalool oxide (5-ring)         | 1365-19-1   | 1454      | 11876   |   |                     |          | EFSA      |
| 13.141 | Methyl (2-furfurylthio)acetate  | 108499-33-8 |           |         |   |                     |          | EFSA      |

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| (1)    | (2)                                       | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                          | Restrictions of Use | Footnote | Reference |
| 13.142 | S-Methyl 2-furanthiocarboxylate           | 13679-61-3 | 1083      | 11547   |  |                     |          | EFSA      |
| 13.143 | Methyl 3-(furfurylthio)propionate         | 94278-26-9 |           |         |  |                     |          | EFSA      |
| 13.144 | Methyl 5-methylfurfuryl disulfide         | 78818-78-7 |           |         |  |                     |          | EFSA      |
| 13.145 | Methyl 5-methylfurfuryl sulfide           | 13679-60-2 |           | 11522   |  |                     |          | EFSA      |
| 13.146 | Methyl furfuryl trisulfide                | 66169-00-4 |           |         |  |                     |          | EFSA      |
| 13.148 | 3-Methyl-2(3-methylbut-2-enyl)furan       | 15186-51-3 | 1494      |         |  |                     | 3        | EFSA      |
| 13.149 | 5-Methyl-2-furanmethanethiol              | 59303-05-8 |           |         |  |                     |          | EFSA      |
| 13.150 | 3-(5-Methyl-2-furyl)prop-2-enal           | 5555-90-8  | 1499      |         |  |                     | 1        | EFSA      |
| 13.151 | 2-Methyl-3,5 and 6-(furfurylthio)pyrazine | 65530-53-2 | 1082      | 2287    | Mixture of isomers: 70% 2,3-; 29% 2,6;- trace 2,5-   |                     |          | EFSA      |
| 13.152 | 2-Methyl-3-(methylthio)furan              | 63012-97-5 | 1061      |         |  |                     |          | EFSA      |
| 13.153 | 2-Methyl-3-furyl thioacetate              | 55764-25-5 | 1069      |         | At least 92%; secondary component 5-7 % cis- and trans-2-methyl-3-tetrahydrofuranthiol acetate |                     |          | EFSA      |
| 13.154 | 2-Methyl-4,5-benzo-oxazole                | 95-21-6    | 1557      |         |  |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 13.160      | 2-Methyltetrahydrofuran-3-thiol                             | 57124-87-5  | 1090      |         |   |                     | 4        | EFSA      |
| 13.161      | Octahydrocoumarin   | 4430-31-3   | 1166      |         |   |                     |          | EFSA      |
| 13.162      | 2-Octylfuran  | 4179-38-8   |           | 10965   |   |                     | 3        | EFSA      |
| 13.163      | 2-Pentanoylfuran  | 3194-17-0   | 1509      |         |   |                     | 4        | EFSA      |
| 13.165      | 6,7,8,8a-Tetrahydro-2,5,5,8a-tetramethyl-5H-1-benzopyran    | 5552-30-7   | 1239      |         |   |                     |          | EFSA      |
| 13.166      | Tetrahydrofurfuryl acetate                                  | 637-64-9    | 1442      | 2069    |   |                     |          | EFSA      |
| 13.167      | (tetrahydrofuryl)methyl phenylacetate                       | 5421-00-1   |           |         |   |                     |          | EFSA      |
| 13.169      | Trimethyloxazole  | 20662-84-4  | 1553      | 11424   |   |                     |          | EFSA      |
| ▼ <b>M3</b> |   |             |           |         |   |                     |          |           |
| 13.170      | 2S-cis-Tetrahydro-4-methyl-2-(2-methyl-1-propenyl)-2H-pyran | 3033-23-6   |           |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |   |             |           |         |   |                     |          |           |
| 13.175      | 4-Acetyl-2,5-dimethylfuran-3(2H)-one                        |             |           |         |   |                     | 2        | EFSA      |
| 13.176      | Furanyl butyrate  | 114099-96-6 | 1519      |         |   |                     | 1        | EFSA      |
| 13.178      | 3-[(2-Furfuryl)dithio]-2-methyl-furan                       | 109537-55-5 | 1524      |         |   |                     |          | EFSA      |
| 13.185      | 3-[(2-Furfuryl)dithio]-2-butanone                           | 159113-17-4 |           |         |   |                     |          | EFSA      |
| 13.189      | Linalool oxide(5) acetate                                   | 56469-39-7  |           |         |   |                     |          | EFSA      |

▼ **M1**

| (1)                   | (2)   | (3)          | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)        |
|-----------------------|---|--------------|-----------|---------|---|---------------------|----------|------------|
| FL No.                | Chemical Name                                       | CAS No.      | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference  |
| ▼ <b>M3</b><br>13.190 | 3-((2-methyl-3-furyl)thio)-2-butanone               | 61295-44-1   | 1525      |         |   |                     |          | EFSA       |
| ▼ <b>M1</b><br>13.193 | 2,5-Dimethyltetrahydro-3-furanthiol                 | 26486-21-5   | 1091      |         |   |                     | 4        | EFSA       |
| 13.194                | 2,5-Dimethyltetrahydro-3-furyl thio acetate         | 252736-39-3  | 1092      |         |   |                     | 4        | EFSA       |
| 13.195                | 2-Isobutyl-4,5-dimethyl oxazole                     | 26131-91-9   | 1556      |         |   |                     |          | EFSA       |
| 13.196                | [(2-furanylmethyl)thio]-2-pentanone                 | 180031-78-1  | 1084      |         |   |                     |          | EFSA       |
| 13.197                | Furfuryl propyl disulphide                          | 252736-36-0  | 1079      |         |   |                     |          | EFSA       |
| 13.198                | 3,6-Dimethyl-2,3,3a,4,5,7a-hexahydrobenzofuran      | 70786-44-6   |           |         |   |                     |          | EFSA       |
| 13.199                | 3-[(2-Methyl-3-furyl)thio]-butanal                  | 915971-43-6  |           |         |   |                     |          | EFSA       |
| 13.200                | 5-isopropyl-2,6-diethyl-2-methyltetrahydro-2H-pyran | 1120363-98-5 |           |         |   |                     |          | EFSA       |
| 14.001                | Isoquinoline  | 119-65-3     | 1303      | 487     |   |                     | 4        | EFSA       |
| 14.003                | Piperine  | 94-62-2      | 1600      | 492     |   |                     | 4        | JECFA/EFSA |
| 14.004                | 3-Methylindole                                      | 83-34-1      | 1304      | 493     |   |                     |          | EFSA       |
| 14.005                | 2,3-Diethylpyrazine                                 | 15707-24-1   | 771       | 534     |   |                     |          | EFSA       |
| 14.006                | 2-Ethyl-3-methylpyrazine                            | 15707-23-0   | 768       | 548     |   |                     |          | EFSA       |
| 14.007                | Indole  | 120-72-9     | 1301      | 560     |   |                     |          | EFSA       |
| 14.010                | Piperidine  | 110-89-4     | 1607      | 675     |   |                     |          | EFSA       |

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| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)   | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---|----------|-----------|
| FL No. | Chemical Name                               | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use   | Footnote | Reference |
| 14.011 | Quinine hydrochloride                       | 130-89-2   |           | 715     |   | In categories 14.1 and 14.2 – not more than 100 mg/kg<br><br>In spirit drinks as defined in Regulation (EC) No 110/2008 - not more than 250 mg/kg<br><br>Individually or in combination with FL 14.152 and/or FL 14.155 expressed as quinine base |          | EFSA      |
| 14.014 | 5,7-Dihydro-2-methylthieno(3,4-d)pyrimidine | 36267-71-7 | 1566      | 720     |   |   |          | EFSA      |
| 14.015 | 5,6,7,8-Tetrahydroquin-oxaline              | 34413-35-9 | 952       | 721     |   |   |          | EFSA      |
| 14.017 | 2-Ethyl-5-methylpyrazine                    | 13360-64-0 | 770       | 728     |   |   |          | EFSA      |
| 14.018 | 2,3,5,6-Tetramethylpyrazine                 | 1124-11-4  | 780       | 734     |   |   |          | EFSA      |
| 14.019 | 2,3,5-Trimethylpyrazine                     | 14667-55-1 | 774       | 735     |   |   |          | EFSA      |
| 14.020 | 2,5-Dimethylpyrazine                        | 123-32-0   | 766       | 2210    |   |   |          | EFSA      |
| 14.021 | 2,6-Dimethylpyrazine                        | 108-50-9   | 767       | 2211    |   |   |          | EFSA      |
| 14.022 | Ethylpyrazine                               | 13925-00-3 | 762       | 2213    |   |   |          | EFSA      |

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| (1)    | (2)  | (3)                                   | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)        |
|--------|--|---------------------------------------|-----------|---------|--|---------------------|----------|------------|
| FL No. | Chemical Name                              | CAS No.                               | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified                  | Restrictions of Use | Footnote | Reference  |
| 14.024 | 2-Ethyl-3,5-dimethylpyrazine               | 13925-07-0                            | 776       | 2245    |  |                     |          | EFSA       |
| 14.025 | 2,5 or 6-Methoxy-3-methylpyrazine          | 2847-30-5,<br>2822-22-6,<br>2882-21-5 | 788       | 2266    |  |                     |          | EFSA       |
| 14.026 | 2-Isopropyl-5-methylpyrazine               | 13925-05-8                            | 772       | 2268    |  |                     |          | EFSA       |
| 14.027 | 2-Methylpyrazine                           | 109-08-0                              | 761       | 2270    |  |                     |          | EFSA       |
| 14.028 | 5-Methylquinoxaline                        | 13708-12-8                            | 798       | 2271    |  |                     |          | EFSA       |
| 14.029 | 1-Phenyl-(3 or 5)-propylpyrazole           | 65504-93-0                            | 1568      | 2277    |  |                     |          | EFSA       |
| 14.030 | 2-Pyridine methanethiol                    | 2044-73-7                             | 1308      | 2279    |  |                     |          | EFSA       |
| 14.031 | 2-Pyrazinyl ethanethiol                    | 35250-53-4                            | 795       | 2285    |  |                     |          | EFSA       |
| 14.032 | Acetylpyrazine                             | 22047-25-2                            | 784       | 2286    |  |                     |          | EFSA       |
| 14.034 | Pyrazinyl methyl sulfide                   | 21948-70-9                            | 796       | 2288    |  |                     |          | EFSA       |
| 14.035 | 2-Methyl-3,5 or 6-methylthiopyrazine       | 67952-65-2                            | 797       | 2290    | 70-90% 2-methylthio-3-methylpyrazine and<br>10-30% 2-methylthio-5 or 6-methylpyrazine. |                     |          | EFSA       |
| 14.037 | 6,7-Dihydro-5-methyl-5H-cyclopentapyrazine | 23747-48-0                            | 781       | 2314    |  |                     |          | EFSA       |
| 14.038 | 2-Acetylpyridine                           | 1122-62-9                             | 1309      | 2315    |  |                     |          | EFSA       |
| 14.039 | 3-Acetylpyridine                           | 350-03-8                              | 1316      | 2316    |  |                     |          | EFSA       |
| 14.041 | Pyrrrole                                   | 109-97-7                              | 1314      | 2318    |  |                     | 4        | JECFA/EFSA |
| 14.042 | 6-Methylquinoline                          | 91-62-3                               | 1302      | 2339    |  |                     | 4        | EFSA       |

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| (1)    | (2)                              | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|----------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                    | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 14.043 | 2-Isobutyl-3-methoxy-pyrazine    | 24683-00-9 | 792       | 11338   |   |                     |          | EFSA      |
| 14.044 | 2-Isobutyl-3-methylpyrazine      | 13925-06-9 | 773       |         |   |                     |          | EFSA      |
| 14.045 | 2-Acetyl-1-ethylpyrrole          | 39741-41-8 | 1305      | 11371   |   |                     | 2        | EFSA      |
| 14.046 | 2-Acetyl-1-methylpyrrole         | 932-16-1   | 1306      | 11373   |   |                     | 2        | EFSA      |
| 14.047 | 2-Acetylpyrrole                  | 1072-83-9  | 1307      | 11721   |   |                     | 2        | EFSA      |
| 14.049 | 2-Acetyl-3-ethylpyrazine         | 32974-92-8 | 785       | 11293   |   |                     |          | EFSA      |
| 14.050 | 2,3-Dimethylpyrazine             | 5910-89-4  | 765       | 11323   |   |                     |          | EFSA      |
| 14.053 | Mercaptomethylpyrazine           | 59021-02-2 | 794       | 11502   |   |                     |          | EFSA      |
| 14.054 | Methoxypyrazine                  | 3149-28-8  | 787       | 11347   |   |                     |          | EFSA      |
| 14.055 | 2-Acetyl-3,5-dimethyl-pyrazine   | 54300-08-2 | 786       | 11294   |   |                     |          | EFSA      |
| 14.056 | 2,3-Diethyl-5-methyl-pyrazine    | 18138-04-0 | 777       | 11303   |   |                     |          | EFSA      |
| 14.057 | 2-Isopropyl-3-methoxy-pyrazine   | 25773-40-4 |           |         |   |                     |          | EFSA      |
| 14.058 | 2-Isobutylpyridine               | 6304-24-1  | 1311      | 11395   |   |                     |          | EFSA      |
| 14.059 | 3-Isobutylpyridine               | 14159-61-6 | 1312      | 11396   |   |                     |          | EFSA      |
| 14.060 | 2-Pentylpyridine                 | 2294-76-0  | 1313      | 11412   |   |                     |          | EFSA      |
| 14.061 | 3-Ethylpyridine                  | 536-78-7   | 1315      | 11386   |   |                     |          | EFSA      |
| 14.062 | 2-(sec-Butyl)-3-methoxy-pyrazine | 24168-70-5 | 791       | 11300   |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)                      | (3)      | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------|----------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name            | CAS No.  | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 14.064 | Pyrrolidine              | 123-75-1 | 1609      | 10491   |   |                     |          | EFSA      |
| 14.065 | 2,6-Dimethylpyridine     | 108-48-5 | 1317      | 11381   |   |                     |          | EFSA      |
| 14.066 | 5-Ethyl-2-methylpyridine | 104-90-5 | 1318      | 11385   |   |                     |          | EFSA      |

▼ **M3**

|        |                           |            |     |       |   |  |  |      |
|--------|---------------------------|------------|-----|-------|---|--|--|------|
| 14.067 | 2-Ethoxy-3-methylpyrazine | 32737-14-7 | 793 | 11921 | At least 82 % 2-ethoxy-3-methylpyrazine. Secondary components 15 % 2-ethoxy-5-methylpyrazine (CAS no 67845-34-5) or 2-ethoxy-6-methylpyrazine (CAS no 53163-97-6) |  |  | EFSA |
|--------|---------------------------|------------|-----|-------|---|--|--|------|

▼ **M1**

|        |  |  |      |       |  |  |   |      |
|--------|--|--|------|-------|--|--|---|------|
| 14.068 | 2-Propionylpyrrole   | 1073-26-3  | 1319 | 11942 |  |  | 2 | EFSA |
| 14.069 | Cyclohexylmethylpyrazine   | 28217-92-7   | 783  |       |  |  |   | EFSA |
| 14.070 | 4-Acetyl-2-methylpyrimidine  | 67860-38-2   | 1565 |       |  |  |   | EFSA |
| 14.071 | Methyl nicotinate  | 93-60-7  | 1320 |       |  |  |   | EFSA |
| 14.072 | 2-(3-Phenylpropyl)pyridine   | 2110-18-1  | 1321 |       |  |  |   | EFSA |
| 14.077 | 2-Ethyl-(3,5 or 6)-methoxy-pyrazine (85%) and 2-Methyl-(3,5 or 6)-methoxy-pyrazine (13%) | 2-Et-3-MeO: 25680-58-4,<br>2-Et-5-MeO: 68039-50-9,<br>2-Et-6-MeO: 67845-38-9,<br>2-Me-3-MeO: 2847-30-5, 2-Me-5-MeO: 2882-22-6, 2-Me-6-MeO: 2882-21-5 | 789  | 11329 |  |  |   | EFSA |
| 14.079 | 2-Acetyl-1,4,5,6-tetrahydro-pyridine   | 27300-27-2   |      |       |  |  | 2 | EFSA |



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| (1)    | (2)                           | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|-------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                 | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 14.080 | 2-Acetyl-1-pyrroline          | 99583-29-6 | 1604      |         |   |                     |          | EFSA      |
| 14.081 | 5-Acetyl-2,3-dimethylpyrazine | 54300-10-6 |           |         |   |                     |          | EFSA      |
| 14.082 | 2-Acetyl-3-methylpyrazine     | 23787-80-6 | 950       | 11296   |   |                     |          | EFSA      |
| 14.083 | 2-Acetyl-5-ethylpyrazine      | 43108-58-3 |           |         |   |                     |          | EFSA      |
| 14.084 | 2-Acetyl-5-methylpyrazine     | 22047-27-4 |           | 11297   |   |                     |          | EFSA      |
| 14.085 | 2-Acetyl-5-methylpyrrole      | 6982-72-5  |           |         |   |                     | 2        | EFSA      |
| 14.086 | 2-Acetyl-6-ethylpyrazine      | 34413-34-8 |           | 11295   |   |                     |          | EFSA      |
| 14.087 | 2-Acetyl-6-methylpyrazine     | 22047-26-3 |           | 11298   |   |                     |          | EFSA      |
| 14.088 | 1-Acetyldiole                 | 576-15-8   |           |         |   |                     |          | EFSA      |
| 14.089 | 4-Acetylpyridine              | 1122-54-9  |           |         |   |                     |          | EFSA      |
| 14.091 | 2-Butyl-3-methylpyrazine      | 15987-00-5 |           |         |   |                     |          | EFSA      |
| 14.092 | 2-Butylpyridine               | 5058-19-5  |           |         |   |                     |          | EFSA      |
| 14.093 | 3-Butylpyridine               | 539-32-2   |           |         |   |                     |          | EFSA      |
| 14.095 | 3,5-Diethyl-2-methylpyrazine  | 18138-05-1 | 779       | 11305   |   |                     |          | EFSA      |
| 14.096 | 2,5-Diethyl-3-methylpyrazine  | 32736-91-7 | 778       | 11304   |   |                     |          | EFSA      |
| 14.097 | 2,5-Diethylpyrazine           | 13238-84-1 |           | 11306   |   |                     |          | EFSA      |

## ▼M1

| (1)    | (2)  | (3)                       | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|--|---------------------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                                  | CAS No.                   | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 14.098 | 6,7-Dihydro-2,3-dimethyl-5H-cyclopentapyrazine | 38917-63-4                | 782       | 11309   |  |                     |          | EFSA      |
| 14.099 | 6,7-Dihydro-5,7-dimethyl-5H-cyclopentapyrazine | 41330-21-6                |           |         |  |                     |          | EFSA      |
| 14.100 | 3,(5- or 6)-Dimethyl-2-ethylpyrazine           | 55031-15-7                | 775       | 727     | About 50% 2-ethyl-3,5-dimethylpyrazine; about 50% 2-ethyl-3,6-dimethylpyrazine   |                     |          | EFSA      |
| 14.101 | 2,5-Dimethyl-3-isopropylpyrazine               | 40790-20-3                |           | 11318   |  |                     |          | EFSA      |
| 14.102 | 2,5-Dimethyl-6,7-dihydro-5H-cyclopentapyrazine | 38917-61-2,<br>38917-62-3 |           |         | Mixture of 2,5-dimethyl-6,7-dihydro-5H-cyclopentapyrazine (60-100%) and 3,5-dimethyl-6,7-dihydro-5H-cyclopentapyrazine (up to 40 %). |                     |          | EFSA      |
| 14.103 | 2,3-Dimethylpyridine                           | 583-61-9                  |           |         |  |                     |          | EFSA      |
| 14.104 | 2,4-Dimethylpyridine                           | 108-47-4                  |           |         |  |                     |          | EFSA      |
| 14.105 | 3,4-Dimethylpyridine                           | 583-58-4                  |           |         |  |                     |          | EFSA      |
| 14.106 | 3,5-Dimethylpyridine                           | 591-22-0                  |           | 11382   |  |                     |          | EFSA      |
| 14.108 | 2,3-Dimethylquinoxaline                        | 2379-55-7                 |           |         |  |                     |          | EFSA      |
| 14.109 | 2-Ethoxy-3-methylpyrazine                      | 32737-14-7                |           |         |  |                     |          | EFSA      |
| 14.110 | Ethyl nicotinate                               | 614-18-6                  |           |         |  |                     |          | EFSA      |
| 14.111 | 3-Ethyl-2,5-dimethylpyrazine                   | 13360-65-1                |           |         |  |                     |          | EFSA      |
| 14.112 | 2-Ethyl-3-methoxypyrazine                      | 25680-58-4                |           |         |  |                     |          | EFSA      |

## ▼M1

| (1)    | (2)                                       | (3)        | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|--|---------------------|----------|-----------|
| FL No. | Chemical Name                             | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified      | Restrictions of Use | Footnote | Reference |
| 14.113 | 5-Ethyl-6,7-dihydro-5H-cyclopentapyrazine | 52517-53-0 |           |         |  |                     |          | EFSA      |
| 14.114 | 2-Ethyl-6-methylpyrazine                  | 13925-03-6 | 769       | 11331   | 95% (sum of 2,5- and 2,6-isomers); 60-63% 2,5-isomer and 30-35% 2,6-isomer |                     |          | EFSA      |
| 14.115 | 2-Ethylpyridine                           | 100-71-0   |           | 11767   |  |                     |          | EFSA      |
| 14.116 | 4-Ethylpyridine                           | 536-75-4   |           | 11387   |  |                     |          | EFSA      |
| 14.117 | 2-Hexylpyridine                           | 1129-69-7  |           |         |  |                     |          | EFSA      |
| 14.118 | 2-Hydroxypyridine                         | 142-08-5   |           |         |  |                     |          | EFSA      |
| 14.120 | Isopropyl nicotinate                      | 553-60-6   |           |         |  |                     |          | EFSA      |
| 14.121 | 2-Isopropyl-(3,5 or 6)-methoxypyrazine    | 93905-03-4 | 790       | 11344   |  |                     |          | EFSA      |
| 14.122 | 2-Isopropyl-3-methylthiopyrazine          | 67952-59-4 |           | 11342   |  |                     |          | EFSA      |
| 14.123 | Isopropylpyrazine                         | 29460-90-0 | 764       | 11343   |  |                     |          | EFSA      |
| 14.124 | 2-Isopropylpyridine                       | 644-98-4   |           | 11400   |  |                     |          | EFSA      |
| 14.125 | 4-Isopropylpyridine                       | 696-30-0   |           |         |  |                     |          | EFSA      |
| 14.126 | 2-Methoxy-3-methylpyrazine                | 2847-30-5  |           |         |  |                     |          | EFSA      |
| 14.127 | 2-Methoxy-3-propylpyrazine                | 25680-57-3 |           |         |  |                     |          | EFSA      |
| 14.128 | 2-Methyl-3-methylthiopyrazine             | 2882-20-4  |           |         |  |                     |          | EFSA      |
| 14.129 | 2-Methyl-3-propylpyrazine                 | 15986-80-8 |           |         |  |                     |          | EFSA      |
| 14.131 | 2-Methylindole                            | 95-20-5    |           |         |  |                     |          | EFSA      |

▼ **M1**

| (1)         | (2)                                    | (3)        | (4)       | (5)     | (6)   | (7)   | (8)      | (9)       |
|-------------|--|------------|-----------|---------|---|---|----------|-----------|
| FL No.      | Chemical Name                          | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use   | Footnote | Reference |
| 14.133      | 2-Methylpiperidine                     | 109-05-7   | 1608      |         |   |   |          | EFSA      |
| 14.134      | 2-Methylpyridine                       | 109-06-8   |           | 11415   |   |   |          | EFSA      |
| 14.135      | 3-Methylpyridine                       | 108-99-6   |           | 11801   |   |   |          | EFSA      |
| 14.136      | 4-Methylpyridine                       | 108-89-4   |           | 11416   |   |   |          | EFSA      |
| 14.137      | 1-Methylpyrrolidine                    | 120-94-5   |           |         |   |   |          | EFSA      |
| 14.140      | 3-Pentylpyridine                       | 1802-20-6  |           |         |   |   |          | EFSA      |
| 14.141      | Piperazine                             | 110-85-0   | 1615      |         |   |   |          | EFSA      |
| 14.142      | Propylpyrazine                         | 18138-03-9 | 763       | 11362   |   |   |          | EFSA      |
| 14.143      | 3-Propylpyridine                       | 4673-31-8  |           | 11419   |   |   |          | EFSA      |
| 14.144      | Pyrazine                               | 290-37-9   | 951       | 11363   |   |   |          | EFSA      |
| ▼ <b>M4</b> |  |            |           |         |   |   |          |           |
| ▼ <b>M1</b> |  |            |           |         |   |   |          |           |
| 14.148      | 5,6,7,8-Tetrahydro-5-methylquinoxaline | 52517-54-1 |           |         |   |   |          | EFSA      |
| 14.150      | 2,4,6-Trimethylpyridine                | 108-75-8   |           |         |   |   |          | EFSA      |
| 14.152      | Quinine sulphate                       | 804-63-7   |           |         |   | In categories 14.1 and 14.2 – not more than 100 mg/kg<br><br>In spirit drinks as defined in Regulation (EC) No 110/2008 - not more than 250 mg/kg |          | EFSA      |

▼ M1

| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)   | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|---|----------|-----------|
| FL No. | Chemical Name  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use   | Footnote | Reference |
|        |  |             |           |         |   | Individually or in combination with FL 14.011 and/or FL 14.155 expressed as quinine base  |          |           |
| 14.155 | Quinine monohydrochloride dihydrate                  | 6119-47-7   |           |         |   | In categories 14.1 and 14.2 – not more than 100 mg/kg<br><br>In spirit drinks as defined in Regulation (EC) No 110/2008 - not more than 250 mg/kg<br><br>Individually or in combination with FL 14.011 and/or FL 14.152 expressed as quinine base |          | EFSA      |
| 14.161 | 6,7-Dihydro-2,5-dimethyl-5H-cyclopentapyrazine       | 38917-61-2  |           | 11310   |   |   |          | EFSA      |
|        |  |             |           |         |   |   |          |           |
|        |  |             |           |         |   |   |          |           |
|        |  |             |           |         |   |   |          |           |
| 14.164 | 2-Propylpyridine                                     | 622-39-9    | 1322      |         |   |   |          | EFSA      |
| 14.167 | 1-Pyrroline  | 5724-81-2   | 1603      |         |   |   |          | EFSA      |
| 14.168 | 2-Propionyl pyrroline 1% vegetable oil triglycerides | 133447-37-7 | 1605      |         |   |   | 2        | EFSA      |

▼ M4▼ M1

▼ **M1**

| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)            |
|--------|---|------------|-----------|---------|---|---------------------|----------|----------------|
| FL No. | Chemical Name   | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference      |
|        |   |            |           |         |   |                     |          |                |
| 14.170 | 5-Ethyl-2,3-dimethyl pyrazine   | 15707-34-3 |           |         |   |                     |          | EFSA           |
| 15.001 | 2-Mercaptothiophene   | 7774-74-5  | 1052      | 478     |   |                     |          | EFSA           |
| 15.002 | 2-Methyl-5-methoxythiazole  | 38205-64-0 | 1057      | 736     |   |                     |          | EFSA           |
| 15.004 | 5-Methyl-2-thiophenecarbaldehyde  | 13679-70-4 | 1050      | 2203    |   |                     | 2        | EFSA           |
| 15.005 | 2,4-Dimethyl-5-vinylthiazole  | 65505-18-2 | 1039      | 2237    |   |                     | 2        | EFSA           |
| 15.006 | 2,5-Dihydroxy-2,5-dimethyl-1,4-dithiane   | 55704-78-4 | 562       | 2322    |   |                     |          | JECFA          |
| 15.007 | Spiro(2,4-dithia-1-methyl-8-oxabicyclo[3.3.0]octane-3,3'-(1'-oxa-2'-methyl)-cyclopentane) and Spiro(2,4-dithia-6-methyl-7-oxabicyclo[3.3.0]octane-3,3'-(1'-oxa-2'-methyl)-cyclopentane) | 38325-25-6 | 1296      | 2325    |   |                     | 1        | CoE/JECFA/EFSA |
| 15.008 | 2-Thienyl disulfide   | 6911-51-9  | 1053      | 2333    |   |                     |          | EFSA           |
| 15.009 | Trithioacetone  | 828-26-2   | 543       | 2334    |   |                     |          | JECFA          |
| 15.010 | 2-Acetyl-2-thiazoline   | 29926-41-8 | 1759      | 2335    |   |                     | 2        | EFSA           |
| 15.011 | 5-Acetyl-2,4-dimethylthiazole   | 38205-60-6 | 1055      | 2336    |   |                     |          | EFSA           |

▼ **M1**

| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 15.012 | 4,5-Dihydrothiophen-3(2H)-one           | 1003-04-9  | 498       | 2337    |   |                     |          | JECFA     |
| 15.013 | 2-Isobutylthiazole                      | 18640-74-9 | 1034      | 11618   |   |                     |          | EFSA      |
| 15.014 | 5-(2-Hydroxyethyl)-4-methylthiazole     | 137-00-8   | 1031      | 11621   |   |                     |          | EFSA      |
| 15.015 | 4-Methyl-5-(2-acetoxyethyl)thiazole     | 656-53-1   | 1054      | 11620   |   |                     |          | EFSA      |
| 15.016 | Benzothiazole                           | 95-16-9    | 1040      | 11594   |   |                     |          | EFSA      |
| 15.017 | 4,5-Dimethylthiazole                    | 3581-91-7  | 1035      | 11606   |   |                     |          | EFSA      |
| 15.018 | 4-Methyl-5-vinylthiazole                | 1759-28-0  | 1038      | 11633   |   |                     | 2        | EFSA      |
| 15.019 | 2,4,5-Trimethylthiazole                 | 13623-11-5 | 1036      | 11650   |   |                     |          | EFSA      |
| 15.020 | 2-Acetylthiazole                        | 24295-03-2 | 1041      | 11726   |   |                     |          | EFSA      |
| 15.021 | 2-Ethoxythiazole                        | 15679-19-3 | 1056      | 11611   |   |                     |          | EFSA      |
| 15.022 | 2-(sec-Butyl)thiazole                   | 18277-27-5 | 1033      | 11598   |   |                     |          | EFSA      |
| 15.023 | 4,5-Dihydro-2-methylthiophene-3(2H)-one | 13679-85-1 | 499       | 11601   |   |                     |          | JECFA     |
|        |   |            |           |         |   |                     |          |           |
|        |   |            |           |         |   |                     |          |           |
|        |   |            |           |         |   |                     |          |           |
| 15.025 | 3,5-Dimethyl-1,2,4-trithiolane          | 23654-92-4 | 573       | 11883   |   |                     |          | JECFA     |
| 15.026 | 2-Isopropyl-4-methylthiazole            | 15679-13-7 | 1037      |         |   |                     |          | EFSA      |
| 15.027 | 2-Propionylthiazole                     | 43039-98-1 | 1042      |         |   |                     |          | EFSA      |

▼ **M2**▼ **M1**

## ▼M1

| (1)    | (2)                                     | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                           | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 15.029 | 2-(sec-Butyl)-4,5-dimethyl-3-thiazoline | 65894-82-8 | 1059      |         |   |                     | 2        | EFSA      |
| 15.030 | 4,5-Dimethyl-2-ethyl-3-thiazoline       | 76788-46-0 | 1058      |         |   |                     | 2        | EFSA      |
| 15.032 | 4,5-Dimethyl-2-isobutyl-3-thiazoline    | 65894-83-9 | 1045      |         |   |                     | 2        | EFSA      |
| 15.033 | 2-Ethyl 4-methylthiazole                | 15679-12-6 | 1044      | 11612   |   |                     |          | EFSA      |
| 15.034 | 2-Methyl-1,3-dithiolane                 | 5616-51-3  | 534       |         |   |                     |          | JECFA     |
| 15.035 | 4-Methylthiazole                        | 693-95-8   | 1043      | 11627   |   |                     |          | EFSA      |
| 15.036 | 3-Methyl-1,2,4-trithiane                | 43040-01-3 | 574       |         |   |                     |          | JECFA     |
| 15.038 | 2-Acetyl-4-methylthiazole               | 7533-07-5  |           | 11589   |   |                     |          | EFSA      |
| 15.039 | 2-Acetyl-5-methylthiazole               | 59303-17-2 |           |         |   |                     |          | EFSA      |
| 15.040 | 2-Acetylthiophene                       | 88-15-3    |           | 11728   |   |                     | 2        | EFSA      |
| 15.044 | 2-Butylthiazole                         | 37645-61-7 |           | 11597   |   |                     |          | EFSA      |
| 15.045 | 2-Butylthiophene                        | 1455-20-5  |           |         |   |                     | 4        | EFSA      |
| 15.047 | 3,5-Di-isobutyl-1,2,4-trithiolane       | 92900-67-9 |           |         |   |                     |          | EFSA      |
| 15.048 | 3,5-Di-isopropyl-1,2,4-trithiolane      | 54934-99-5 |           |         |   |                     |          | EFSA      |
| 15.049 | 3,5-Diethyl-1,2,4-trithiolane           | 54644-28-9 | 1686      |         |   |                     |          | EFSA      |
| 15.050 | 2,5-Diethyl-4-methylthiazole            | 41981-71-9 |           |         |   |                     |          | EFSA      |



## ▼ M1

| (1)    | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 15.051 | 2,5-Diethyl-4-propylthiazole                            | 4276-68-0   |           |         |   |                     |          | EFSA      |
| 15.052 | 2,5-Diethylthiazole                                     | 15729-76-7  |           |         |   |                     |          | EFSA      |
| 15.054 | Dihydro-2,4,6-triethyl-1,3,5(4H)-dithiazine             | 54717-17-8  |           |         |   |                     | 3        | EFSA      |
| 15.055 | 2,4-Dimethyl(4H)pyrrolidino[1,2e]-1,3,5-dithiazine      | 116505-60-3 | 1763      |         |   |                     | 3        | EFSA      |
| 15.056 | 3,6-Dimethyl-1,2,4,5-tetra-thiane                       | 67411-27-2  |           |         |   |                     |          | EFSA      |
| 15.057 | 4,6-Dimethyl-2-(1-methyl-ethyl)dihydro-1,3,5-dithiazine | 104691-40-9 |           |         | At least 44% isopropyl-4,6-dimethyl and 27% 4-isopropyl-2,6-dimethyl; secondary components at least 24% 2,4,6-trimethyl-dihydro-1,3,5-dithiazine; 6-methyl-2,4-diisopropyl-1,3,5-dithiazine; 4-methyl-2,6-diisopropyl-1,3,5-dithiazine; 2,4,6-triisopropyl-dihydro-1,3,5-dithiazine |                     | 3        | EFSA      |
| 15.058 | 4,5-Dimethyl-2-ethylthiazole                            | 873-64-3    |           |         |   |                     |          | EFSA      |
| 15.060 | 2,4-Dimethyl-3-thiazoline                               | 60755-05-7  |           |         |   |                     | 2        | EFSA      |
| 15.061 | 2,5-Dimethyl-4-ethylthiazole                            | 32272-57-4  |           |         |   |                     |          | EFSA      |
| 15.062 | 2,4-Dimethylthiazole                                    | 541-58-2    |           | 11605   |   |                     |          | EFSA      |
| 15.063 | 2,5-Dimethylthiazole                                    | 4175-66-0   | 1758      |         |   |                     |          | EFSA      |
| _____  |   |             |           |         |   |                     |          |           |
| 15.066 | 1,4-Dithiane  | 505-29-3    | 456       |         |   |                     |          | JECFA     |

## ▼ M4

## ▼ M1

▼ **M1**

| (1)    | (2)                      | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name            | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 15.067 | 4-Ethyl-2-methylthiazole | 32272-48-3 |           |         |   |                     |          | EFSA      |
| 15.068 | 5-Ethyl-2-methylthiazole | 19961-52-5 |           |         |   |                     |          | EFSA      |
| 15.069 | 4-Ethyl-5-methylthiazole | 52414-91-2 |           |         |   |                     |          | EFSA      |
| 15.071 | 2-Ethylthiazole          | 15679-09-1 |           |         |   |                     |          | EFSA      |

▼ **M4**

|       |  |  |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|--|--|
| _____ |  |  |  |  |  |  |  |  |
|-------|--|--|--|--|--|--|--|--|

▼ **M1**

|        |   |             |      |       |   |  |   |            |
|--------|---|-------------|------|-------|---|--|---|------------|
| 15.074 | 5-Ethylthiophene-2-carb-<br>aldehyde                | 36880-33-8  |      |       |   |  | 2 | EFSA       |
| 15.076 | 2-Hexylthiophene                                    | 18794-77-9  | 1764 | 11616 |   |  | 4 | JECFA/EFSA |
| 15.078 | 2-Isobutyl-4,5-dimethyl-<br>thiazole                | 53498-32-1  |      | 11617 |   |  |   | EFSA       |
| 15.079 | 2-Isobutyldihydro-4,6-<br>dimethyl-1,3,5-dithiazine | 101517-87-7 |      |       | At least 64% 2-isobutyl-4,6-dimethyl and 18% 4-isobutyl-2,6-dimethyl; secondary components at least 13% 2,4,6-trimethyl-1,3,5-dithiazine; 2,4-diisobutyl-6-methyl-1,3,5-dithiazine; 2,6-dimethyl-4-butyldihydro-1,3,5-dithiazine; substituted 1,3,5-thiadiazine |  | 3 | EFSA       |
| 15.080 | 2-Isopropyl-4,5-dimethyl-<br>thiazole               | 53498-30-9  |      |       |   |  |   | EFSA       |
| 15.081 | Lenthionine   | 292-46-6    |      | 11619 |   |  |   | EFSA       |
| 15.082 | 3-Mercaptothiophene                                 | 7774-73-4   |      |       |   |  |   | EFSA       |
| 15.083 | 3-Methyl-1,2,4-trithiolane                          | 51647-38-2  |      |       |   |  |   | EFSA       |
| 15.084 | 5-Methyl-2-pentylthiazole                           | 86290-21-3  |      |       |   |  |   | EFSA       |

▼ **M1**

| (1)    | (2)                          | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 15.085 | 4-Methyl-2-propionylthiazole | 13679-83-9 |           | 11622   |   |                     |          | EFSA      |
| 15.086 | 2-Methyl-2-thiazoline        | 2346-00-1  |           |         |   |                     | 2        | EFSA      |
| 15.087 | 2-Methyl-3-mercaptothiophene | 2527-76-6  |           |         |   |                     |          | EFSA      |
| 15.089 | 2-Methylthiazole             | 3581-87-1  |           | 11626   |   |                     |          | EFSA      |

▼ **M4**▼ **M1**

|        |   |            |      |       |  |  |   |      |
|--------|---|------------|------|-------|--|--|---|------|
| 15.093 | 2-Octylthiophene  | 880-36-4   |      |       |  |  | 4 | EFSA |
| 15.096 | 2-Pentylthiophene   | 4861-58-9  |      | 11634 |  |  | 4 | EFSA |
| 15.097 | 2-Propionylthiophene                                      | 13679-75-9 |      | 11635 |  |  | 2 | EFSA |
| 15.098 | 2-Propylthiazole  | 17626-75-4 |      |       |  |  |   | EFSA |
| 15.103 | 1,2,4,5-Tetrathiane                                       | 291-22-5   |      |       |  |  |   | EFSA |
| 15.108 | 2-Thiophenemethanethiol                                   | 6258-63-5  |      |       |  |  |   | EFSA |
| 15.109 | 2,4,6-Trimethyldihydro-1,3,5(4H)-dithiazine               | 638-17-5   | 1049 | 11649 |  |  | 3 | EFSA |
| 15.110 | 2,4,6-Trimethyl-1,3,5-trithiane                           | 2765-04-0  |      |       |  |  |   | EFSA |
| 15.111 | 1,2,4-Trithiolane   | 289-16-7   |      |       |  |  |   | EFSA |
| 15.113 | 5,6-Dihydro-2,4,6-tris(2-methylpropyl)4H-1,3,5-dithiazine | 74595-94-1 | 1048 |       |  |  | 3 | EFSA |
| 15.115 | 2-Isobutyl-4-methyl thiazole                              | 61323-24-8 |      |       |  |  |   | EFSA |

▼ **M1**

| (1)         | (2)  | (3)         | (4)       | (5)     | (6)  | (7)                 | (8)      | (9)       |
|-------------|--|-------------|-----------|---------|--|---------------------|----------|-----------|
| FL No.      | Chemical Name                                  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified  | Restrictions of Use | Footnote | Reference |
| 15.116      | 2-Acetyl-4-ethylthiazole                       | 233665-91-3 |           |         |  |                     |          | EFSA      |
| 15.118      | 4-Butylthiazole                                | 53833-33-3  |           |         |  |                     |          | EFSA      |
| 15.119      | 2-Isobutyl-3-thiazoline                        | 39800-92-5  |           |         |  |                     | 2        | EFSA      |
| 15.126      | 3-(Methylthio)-methyl-thiophen                 | 61675-72-7  | 1765      |         |  |                     |          | EFSA      |
| 15.128      | 2-Propionyl-2-thiazoline                       | 29926-42-9  | 1760      |         |  |                     | 2        | EFSA      |
| 15.130      | 5-Ethyl-4-methyl-2-(2-methylpropyl)-thiazoline | 83418-53-5  | 1761      |         |  |                     | 2        | EFSA      |
| 15.131      | 5-Ethyl-4-methyl-2-(2-butyl)-thiazoline        | 83418-54-6  | 1762      |         |  |                     | 2        | EFSA      |
| ▼ <b>M3</b> |  |             |           |         |  |                     |          |           |
| 15.134      | 2,5-Dihydroxy-1,4-dithiane                     | 40018-26-6  | 550       |         | Mixture of diastereoisomers: 25-30 % of (2S,5S and 2R,5R) and 70-75 % (2S,5R and 2R,5S)  |                     |          | EFSA      |
| ▼ <b>M1</b> |  |             |           |         |  |                     |          |           |
| 15.135      | Ethyl thialdine                                | 54717-14-5  |           |         | At least 90%, secondary components less than 5% 3,5-diethyl-1,2,4-trithiolane, less than 2% thialdine, less than 3% other impurities |                     | 3        | EFSA      |
| 16.001      | Ammonium isovalerate                           | 7563-33-9   | 1203      | 464     |  |                     |          | EFSA      |
| 16.002      | Diammonium sulphide                            | 12135-76-1  |           | 482     |  |                     |          | EFSA      |
| 16.006      | N-Nonanoyl 4-hydroxy-3-methoxybenzylamide      | 2444-46-4   | 1599      | 590     |  |                     |          | EFSA      |
| 16.007      | Hydrogen sulfide                               | 7783-06-4   | 1658      | 647     |  |                     |          | EFSA      |
| 16.009      | Ammonia  | 7664-41-7   |           | 739     |  |                     |          | EFSA      |

## ▼M1

| (1)    | (2)   | (3)        | (4)       | (5)     | (6)   | (7)   | (8)      | (9)       |
|--------|---|------------|-----------|---------|---|---|----------|-----------|
| FL No. | Chemical Name                                       | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use   | Footnote | Reference |
| 16.012 | Glycyrrhizic acid                                   | 1405-86-3  |           | 2221    |   | In categories 1 and 3 – not more than 375 mg/kg<br>In category 5 – not more than 1 500 mg/kg<br>In category 5.3 – not more than 5 000 mg/kg<br>In category 7 – not more than 200 mg/kg<br>In category 8 – not more than 25 mg/kg<br>In category 9 – not more than 20 mg/kg<br>In category 14.1 – not more than 50 mg/kg<br>In category 14.2 – not more than 550 mg/kg |          | EFSA      |
| 16.013 | N-Ethyl-2-isopropyl-5-methylcyclohexane carboxamide | 39711-79-0 | 1601      | 2298    |   |   |          | EFSA      |
| 16.015 | Ethyl methylphenylglycidate                         | 77-83-8    | 1577      | 6002    |   |   |          | EFSA      |
| 16.016 | Caffeine  | 58-08-2    |           | 11741   |   | Restrictions for use as a flavouring substance:<br>In category 1 – not more than 70 mg/kg<br>In category 3 – not more than 70 mg/kg<br>In category 5 – not more than 100 mg/kg  | 1        | EFSA      |

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| (1)    | (2)  | (3)        | (4)       | (5)     | (6)   | (7)   | (8)      | (9)       |
|--------|--|------------|-----------|---------|---|---|----------|-----------|
| FL No. | Chemical Name                                | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use   | Footnote | Reference |
|        |  |            |           |         |   | In category 14.1 – not more than 150 mg/kg  |          |           |
| 16.018 | Ethyl 3-phenyl-2,3-epoxypropionate           | 121-39-1   | 1576      | 11844   |   |   |          | EFSA      |
| 16.027 | Thiamine hydrochloride                       | 67-03-8    | 1030      | 10493   |   |   |          | EFSA      |
| 16.030 | 2-Methyl-4-propyl-1,3-oxathiane              | 67715-80-4 | 464       | 11540   |   |   |          | JECFA     |
| 16.032 | Theobromine                                  | 83-67-0    |           |         |   | Restrictions for use as a flavouring substance:<br>In category 1 – not more than 70 mg/kg<br>In category 14.1 – not more than 100 mg/kg                                 | 1        | EFSA      |
| 16.039 | Potassium 2-(1'-ethoxy)ethoxypropanoate      |            | 933       |         |   |   |          | EFSA      |
| 16.040 | Ethyl 2,3-epoxy-3-methyl-3-p-tolylpropionate | 74367-97-8 | 1578      | 11707   |   |   |          | EFSA      |
| 16.041 | Sodium 2-(4-methoxyphenoxy)propionate        | 13794-15-5 | 1029      |         |   |   |          | EFSA      |
| 16.043 | beta-Caryophyllene epoxide                   | 1139-30-6  | 1575      | 10500   |   |   | 2        | EFSA      |
| 16.048 | Ammonium chloride                            | 12125-02-9 |           |         |   | In categories 1, 8, 9, and 15 – not more than 3 g/kg<br>In category 5 – <i>quantum satis</i><br>In category 12 – not more than 3g/kg except for salt substitutes 40g/kg |          | EFSA      |

## ▼M1

| (1)    | (2)                                 | (3)                    | (4)       | (5)     | (6)   | (7)  | (8)      | (9)       |
|--------|-------------------------------------|------------------------|-----------|---------|---|--|----------|-----------|
| FL No. | Chemical Name                       | CAS No.                | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use  | Footnote | Reference |
|        |                                     |                        |           |         |   | In category 14.2 – not more than 25 g/l  |          |           |
| 16.052 | 1,6-Hexalactam                      | 105-60-2               | 1594      |         |   |  |          | EFSA      |
| 16.053 | 2-Isopropyl-<br>trimethylbutanamide | N,2,3-<br>51115-67-4   | 1595      | 10459   |   |  |          | EFSA      |
| 16.055 | (R)-(+)-Sclareolide                 | 564-20-5               | 1165      |         |   |  |          | EFSA      |
| 16.056 | Taurine                             | 107-35-7               | 1435      |         |   |  |          | EFSA      |
| 16.058 | Naringin                            | 10236-47-2             |           | 10286   |   |  |          | EFSA      |
| 16.059 | Ammonium<br>sulphide                | hydrogen<br>12124-99-1 |           | 482     |   |  |          | EFSA      |
| 16.060 | Glycyrrhizic acid, ammoniated       | 53956-04-0             |           | 2221    |   | In category 1 – not more than 40 mg/kg<br>In category 3 – not more than 90 mg/kg<br>In category 5 – not more than 1 500 mg/kg<br>In category 5.3 - not more than 5 000 mg/kg<br>In category 6 – not more than 45 mg/kg<br>In categories 7 and 13 – not more than 60 mg/kg<br>In category 9 – not more than 300 mg/kg<br>In category 11 – not more than 100 mg/kg |          | EFSA      |

## ▼M1

| (1)    | (2)                                   | (3)         | (4)       | (5)     | (6)   | (7)  | (8)      | (9)       |
|--------|---------------------------------------|-------------|-----------|---------|---|--|----------|-----------|
| FL No. | Chemical Name                         | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use  | Footnote | Reference |
|        |                                       |             |           |         |   | In category 12 – not more than 50 mg/kg<br>In categories 14.1 and 14.2 – not more than 200 mg/kg<br>In category 15 – not more than 150 mg/kg   |          |           |
| 16.061 | Neohesperidin dihydrochalcone         | 20702-77-6  |           |         |   | Restrictions for use as a flavouring substance:<br>In categories 1, 3, 4.2, 6, 8, 9, 10, 12 and 14 - not more than 3 mg/kg<br>In categories 2, 5 and 7 - not more than 4 mg/kg<br>In category 15 – not more than 5 mg/kg |          | EFSA      |
| 16.062 | trans-2-Methyl-4-propyl-1,3-oxathiane | 59324-17-3  |           |         |   |  |          | EFSA      |
| 16.071 | 4,5-Epoxydec-2(trans)-enal            | 188590-62-7 | 1570      |         | At least 87%; secondary component 8-9% 4,5-epoxydec-2(cis)-enal       |  | 1        | EFSA      |
| 16.073 | Sodium diacetate                      | 126-96-5    |           |         |   |  |          | EFSA      |
| 16.075 | Ethyl vanillin beta-D-glucopyranoside | 122397-96-0 | 892       |         |   |  |          | EFSA      |
| 16.080 | Tannic acid                           | 72401-53-7  |           | 746     |   |  |          | SCF/CoE   |
| 16.081 | Sucrose octaacetate                   | 126-14-7    |           | 11819   |   |  |          | EFSA      |



▼ **M1**

| (1)         | (2)  | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|--|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 16.083      | 5,7-dihydroxy-2-(4-hydroxy-3-methoxyphenyl)-2,3-dihydro-4H-chromen-4-one sodium salt | 462631-45-4 |           |         |   |                     |          | EFSA      |
| 16.087      | Dianthramid B  | 579-93-1    | 1552      |         |   |                     |          | EFSA      |
| 16.088      | l-Menthylmethylether   | 1565-76-0   | 1415      |         |   |                     |          | EFSA      |
| 16.089      | Ferric ammonium citrate  | 1185-57-5   |           |         |   |                     |          | EFSA      |
| 16.090      | 3-(3,4-Dimethoxyphenyl)-N-[2-(3,4-dimethoxyphenyl)-ethyl]-acrylamide                 | 69444-90-2  | 1777      |         |   |                     | 3        | EFSA      |
| 16.091      | Deca-(2E,4E)-dienoic acid isobutyl-amide   | 18836-52-7  | 1598      |         |   |                     | 4        | EFSA      |
| 16.092      | (1R,2S,5R)-N,N-Dimethyl menthyl succinamide  | 544714-08-1 | 1602      |         |   |                     |          | EFSA      |
| 16.094      | N-Ethyl (2E,6Z)-nonadienamide  | 608514-56-3 | 1596      |         |   |                     | 4        | EFSA      |
| ▼ <b>M3</b> |  |             |           |         |   |                     |          |           |
| 16.095      | Cyclopropanecarboxamide, N-[(2E)-3,7-dimethyl-2,6-octadien-1-yl]-                    | 744251-93-2 | 1779      |         |   |                     |          | EFSA      |
| ▼ <b>M1</b> |  |             |           |         |   |                     |          |           |
| 16.096      | Ferrous lactate  | 5905-52-2   |           |         |   |                     |          | EFSA      |
| 16.097      | Hesperetin   | 520-33-2    |           |         |   |                     |          | EFSA      |

## ▼ M1

| (1)    | (2)   | (3)         | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|-------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 16.098 | N-(1-Propylbutyl)-1,3-benzodioxole-5-carboxamide                                  | 745047-51-2 | 1767      |         |   |                     |          | EFSA      |
| 16.099 | N-(2,4-Dimethoxy-benzyl)-N'-(2-pyridin-2-yl-ethyl)-oxalamide                      | 745047-53-4 | 1768      |         |   |                     |          | EFSA      |
| 16.100 | N1-(2-Methoxy-4-methylbenzyl)-N2-(2-(5-methylpyridin-2-yl)ethyl)oxalamide         | 745047-94-3 | 1769      |         |   |                     |          | EFSA      |
| 16.101 | N1-(2-Methoxy-4-methylbenzyl)-N2-(2-(pyridin-2-yl)ethyl)oxalamide                 | 745047-97-6 | 1770      |         |   |                     |          | EFSA      |
| 16.102 | 2,3,4,5,6-Pentahydroxy-N-(2-hydroxyethyl)-hexanamide                              | 686298-93-1 | 1772      |         |   |                     |          | EFSA      |
| 16.103 | Propanamide, 2-hydroxy-N-(2-hydroxyethyl)-  | 5422-34-4   | 1774      |         |   |                     |          | EFSA      |
| 16.104 | 2-[(2-Hydroxypropanoyl)amino]ethyl dihydrogen phosphate                           | 782498-03-7 | 1775      |         |   |                     |          | EFSA      |
| 16.105 | (2R,3S,4S,5R)-2-[(2,3,4,5,6-Pentahydroxyhexanoyl)amino]ethyl dihydrogen phosphate | 791807-20-0 | 1773      |         |   |                     |          | EFSA      |
| 16.107 | 2-Hydroxy-N-[2-(4-hydroxyphenyl)ethyl]-propionamide                               | 781674-18-8 |           |         |   |                     |          | EFSA      |

## ▼M1

| (1)    | (2)  | (3)         | (4)       | (5)     | (6)   | (7)  | (8)      | (9)       |
|--------|--|-------------|-----------|---------|---|--|----------|-----------|
| FL No. | Chemical Name  | CAS No.     | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use  | Footnote | Reference |
| 16.109 | 3-(4-Hydroxyphenyl)-1-(2,4,6-trihydroxyphenyl)propan-1-one                           | 60-82-2     |           |         |   |  |          | EFSA      |
| 16.110 | Naringin dihydrochalcone   | 18916-17-1  |           |         |   |  |          | EFSA      |
| 16.111 | Glycine, N-[[[(1R,2S,5R)-5-methyl-2-(1-methylethyl)cyclohexyl]carbonyl]-ethyl ester. | 68489-14-5  | 1776      |         |   |  | 1        | EFSA      |
| 16.112 | Trilobatin   | 4192-90-9   |           |         |   |  |          | EFSA      |
| 16.113 | Rebaudioside A   | 58543-16-1  |           |         |   | Restrictions for use as a flavouring substance:<br><br>In categories 1, 3, 4.2, 5, 6, 12, 14.1 and 14.2 – not more than 10 mg/kg |          | EFSA      |
| 16.114 | 2-Pentyl-4-propyl-1,3-oxathiane  | 59323-81-8  |           |         |   |  |          | EFSA      |
| 16.115 | Cyclopropanecarboxylic acid (2-isopropyl-5-methylcyclohexyl)-amide                   | 958660-02-1 | 2006      |         |   |  | 4        | EFSA      |
| 16.116 | 4-Amino-5,6-dimethylthieno[2,3-d]pyrimidin-2(1H)-one                                 | 121746-18-7 |           |         |   |  |          | EFSA      |
| 16.117 | N-p-Benzeneacetonitrile-menthanecarboxamide  | 852379-28-3 | 2009      |         |   |  | 1        | EFSA      |

▼ M1

| (1)         | (2)   | (3)          | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|-------------|---|--------------|-----------|---------|---|---------------------|----------|-----------|
| FL No.      | Chemical Name   | CAS No.      | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified   | Restrictions of Use | Footnote | Reference |
| 16.118      | N-(2-(Pyridine-2-yl)ethyl)-3-p-menthancarboxamide                                       | 847565-09-7  | 2008      |         |   |                     | 3        | EFSA      |
| 16.119      | N-(2-Methylcyclohexyl)-2,3,4,5,6-pentafluorobenzamide                                   | 1003050-32-5 |           |         |   |                     | 4        | EFSA      |
| 16.120      | 4-Amino-5,6-dimethyl-thieno[2,3-d]pyrimidin-2(1H)-one hydrochloride                     | 1033366-59-4 |           |         |   |                     |          | EFSA      |
| 16.121      | Spilanthol  | 25394-57-4   |           |         | Mixture of isomers of (2E,6Z,8E)-N-(2-methylpropyl)-2,6,8-decatrienamide: 74% (2E,6Z,8E)-, 17% (2E,6E,8E)-, 6% (2E,6E,8Z)-, 1% (2Z,6Z,8E)-, 0.5% (2E,6E,8E)-, 1% (2Z,6Z,8Z)-isomer, 1.5% other isomers. |                     | 3        | EFSA      |
| 16.122      | 4-Methyl, 2-propyl, 1-3-oxathiane   | 1064678-08-5 |           |         |   |                     |          | EFSA      |
| ▼ <u>M3</u> |   |              |           |         |   |                     |          |           |
| 16.123      | (1R,2S,5R)-N-(4-Methoxyphenyl)-5-methyl-2-(1-methylethyl)cyclohexanecarboxamide         | 68489-09-8   |           |         |   |                     |          | EFSA      |
| ▼ <u>M4</u> |   |              |           |         |   |                     |          |           |
| ▼ <u>M1</u> |   |              |           |         |   |                     |          |           |
| 16.125      | (2S,5R)-N-[4-(2-amino-2-oxoethyl)phenyl]-5-methyl-2-(propan-2-yl)cyclohexanecarboxamide | 1119711-29-3 |           |         |   |                     | 1        | EFSA      |

## ▼ M1

| (1)    | (2)   | (3)          | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|---|--------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name   | CAS No.      | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 16.126 | 3-[(4-amino-2,2-dioxido-1H-2,1,3-benzothiadiazin-5-yl)oxy]-2,2-dimethyl-N-propylpropanamide | 1093200-92-0 |           |         |   |                     | 1        | EFSA      |
| 17.001 | beta-Alanine  | 107-95-9     | 1418      |         |   |                     |          | EFSA      |
| 17.002 | L-Alanine   | 56-41-7      |           | 11729   |   |                     |          | EFSA      |
| 17.003 | L-Arginine  | 74-79-3      | 1438      | 11890   |   |                     |          | EFSA      |
| 17.005 | Aspartic acid   | 56-84-8      | 1429      | 10078   |   |                     |          | EFSA      |
| 17.006 | L-Cystine   | 56-89-3      |           | 11747   |   |                     |          | EFSA      |
| 17.007 | Glutamine   | 56-85-9      | 1430      |         |   |                     |          | EFSA      |
| 17.008 | L-Histidine   | 71-00-1      | 1431      |         |   |                     |          | EFSA      |
| 17.010 | D,L-Isoleucine  | 443-79-8     | 1422      | 10127   |   |                     |          | EFSA      |
| 17.012 | L-Leucine   | 61-90-5      | 1423      | 10482   |   |                     |          | EFSA      |
| 17.013 | D,L-Lysine  | 70-54-2      |           | 11947   |   |                     |          | EFSA      |
| 17.014 | D,L-Methionine  | 59-51-8      | 1424      | 569     |   |                     |          | EFSA      |
| ▼ M3   |   |              |           |         |   |                     |          |           |
| 17.015 | DL-Methylmethioninesulphonium chloride  | 3493-12-7    | 1427      | 761     |   |                     |          | EFSA      |
| ▼ M1   |   |              |           |         |   |                     |          |           |
| 17.017 | D,L-Phenylalanine   | 150-30-1     | 1432      | 10488   |   |                     |          | EFSA      |
| 17.018 | L-Phenylalanine   | 63-91-2      | 1428      | 10488   |   |                     |          | EFSA      |
| 17.019 | L-Proline   | 147-85-3     | 1425      | 10490   |   |                     |          | EFSA      |
| 17.020 | D,L-Serine  | 302-84-1     |           |         |   |                     |          | EFSA      |
| 17.021 | D,L-Threonine   | 80-68-2      |           |         |   |                     |          | EFSA      |
| 17.022 | L-Thyrosine   | 60-18-4      | 1434      |         |   |                     |          | EFSA      |

▼ **M1**

| (1)    | (2)                            | (3)        | (4)       | (5)     | (6)   | (7)                 | (8)      | (9)       |
|--------|--------------------------------|------------|-----------|---------|---|---------------------|----------|-----------|
| FL No. | Chemical Name                  | CAS No.    | JECFA No. | CoE No. | Purity of the named substance at least 95% unless otherwise specified | Restrictions of Use | Footnote | Reference |
| 17.023 | D,L-Valine                     | 516-06-3   | 1426      |         |   |                     |          | EFSA      |
| 17.024 | D,L-Alanine                    | 302-72-7   | 1437      | 11729   |   |                     |          | EFSA      |
| 17.026 | L-Lysine                       | 56-87-1    | 1439      | 11947   |   |                     |          | EFSA      |
| 17.027 | L-Methionine                   | 63-68-3    |           |         |   |                     |          | EFSA      |
| 17.028 | L-Valine                       | 72-18-4    |           |         |   |                     |          | EFSA      |
| 17.031 | L-(+)-Lysine monohydrochloride | 657-27-2   |           | 11947   |   |                     |          | EFSA      |
| 17.032 | L-Cysteine hydrochloride       | 52-89-1    |           | 11746   |   |                     |          | EFSA      |
| 17.033 | L-Cysteine                     | 52-90-4    | 1419      | 10464   |   |                     |          | EFSA      |
| 17.034 | Glycine                        | 56-40-6    | 1421      | 11771   |   |                     |          | EFSA      |
| 17.035 | 4-Amino-butyric acid           | 56-12-2    | 1771      |         |   |                     |          | EFSA      |
| 17.036 | S-allyl-L-cysteine             | 21593-77-1 | 1710      |         |   |                     |          | EFSA      |
| 17.037 | L-Methionylglycine             | 14486-03-4 |           |         |   |                     | 1        | EFSA      |

▼ **M1**

PART B

**Flavouring preparations**

PART C

**Thermal process flavourings**

PART D

**Flavour precursors**

PART E

**Other flavourings**

PART F

**Source materials**

**▼B***ANNEX II***List of traditional food preparation processes**

|   |  |
|---|--|
| Chopping  | Coating  |
| Heating, cooking, baking, frying (up to 240 °C at atmospheric pressure) and pressure cooking (up to 120 °C) | Cooling  |
| Cutting   | Distillation/rectification   |
| Drying  | Emulsification   |
| Evaporation   | Extraction, incl. solvent extraction in accordance with Directive 88/344/EEC |
| Fermentation  | Filtration   |
| Grinding  |  |
| Infusion  | Maceration   |
| Microbiological processes   | Mixing   |
| Peeling   | Percolation  |
| Pressing  | Refrigeration/Freezing   |
| Roasting/Grilling   | Squeezing  |
| Steeping  |  |



**▼B***ANNEX III***Presence of certain substances**

Part A: *Substances which shall not be added as such to food*

Agaric acid  
 Aloin  
 Capsaicin  
 1,2-Benzopyrone, coumarin  
 Hypericine  
 Beta-asarone  
 1-Allyl-4-methoxybenzene, estragole  
 Hydrocyanic acid  
 Menthofuran  
 4-Allyl-1,2-dimethoxybenzene, methyleugenol  
 Pulegone  
 Quassin  
 1-Allyl-3,4-methylene dioxy benzene, safrole  
 Teucrin A  
 Thujone (alpha and beta)

Part B: *Maximum levels of certain substances, naturally present in flavourings and food ingredients with flavouring properties, in certain compound food as consumed to which flavourings and/or food ingredients with flavouring properties have been added*

| Name of the substance                  | Compound food in which the presence of the substance is restricted                                       | Maximum level mg/kg |
|--|--|---------------------|
| Beta-asarone                           | Alcoholic beverages  | 1,0                 |
| 1-Allyl-4-methoxybenzene, Estragol (*) | Dairy products   | 50                  |
|  | Processed fruits, vegetables (incl. mushrooms, fungi, roots, tubers, pulses and legumes), nuts and seeds | 50                  |
|  | Fish products  | 50                  |
|  | Non-alcoholic beverages  | 10                  |
| Hydrocyanic acid                       | Nougat, marzipan or its substitutes or similar products  | 50                  |
|  | Canned stone fruits  | 5                   |
|  | Alcoholic beverages  | 35                  |
| Menthofuran                            | Mint/peppermint containing confectionery, except micro breath freshening confectionery                   | 500                 |
|  | Micro breath freshening confectionery  | 3 000               |
|  | Chewing gum  | 1 000               |
|  | Mint/peppermint containing alcoholic beverages   | 200                 |

## ▼ B

| Name of the substance                              | Compound food in which the presence of the substance is restricted  | Maximum level mg/kg |
|--|---|---------------------|
| 4-Allyl-1,2-dimethoxybenzene,<br>Methyleugenol (*) | Dairy products  | 20                  |
|  | Meat preparations and meat products, including poultry and game   | 15                  |
|  | Fish preparations and fish products   | 10                  |
|  | Soups and sauces  | 60                  |
|  | Ready-to-eat savouries  | 20                  |
|  | Non-alcoholic beverages   | 1                   |
| Pulegone   | Mint/peppermint containing confectionery, except micro breath freshening confectionery  | 250                 |
|  | Micro breath freshening confectionery   | 2 000               |
|  | Chewing gum   | 350                 |
|  | Mint/peppermint containing non-alcoholic beverages  | 20                  |
|  | Mint/peppermint containing alcoholic beverages  | 100                 |
| Quassin  | Non-alcoholic beverages   | 0,5                 |
|  | Bakery wares  | 1                   |
|  | Alcoholic beverages   | 1,5                 |
| 1-Allyl-3,4-methylene dioxybenzene, safrole (*)    | Meat preparations and meat products, including poultry and game   | 15                  |
|  | Fish preparations and fish products   | 15                  |
|  | Soups and sauces  | 25                  |
|  | Non-alcoholic beverages   | 1                   |
| Teucrin A  | Bitter-tasting spirit drinks or bitter <sup>(1)</sup>   | 5                   |
|  | Liqueurs <sup>(2)</sup> with a bitter taste   | 5                   |
|  | Other alcoholic beverages   | 2                   |
| Thujone (alpha and beta)                           | Alcoholic beverages, except those produced from Artemisia species   | 10                  |
|  | Alcoholic beverages produced from Artemisia species   | 35                  |
|  | Non-alcoholic beverages produced from Artemisia species   | 0,5                 |
| Coumarin   | Traditional and/or seasonal bakery ware containing a reference to cinnamon in the labelling   | 50                  |
|  | Breakfast cereals including muesli  | 20                  |
|  | Fine bakery ware, with the exception of traditional and/or seasonal bakery ware containing a reference to cinnamon in the labelling | 15                  |
|  | Desserts  | 5                   |

(\*) The maximum levels shall not apply where a compound food contains no added flavourings and the only food ingredients with flavouring properties which have been added are fresh, dried or frozen herbs and spices. After consultation with the Member States and the Authority, based on data made available by the Member States and on the newest scientific information, and taking into account the use of herbs and spices and natural flavouring preparations, the Commission, if appropriate, proposes amendments to this derogation.

<sup>(1)</sup> As defined in Annex II, paragraph 30 of Regulation (EC) No 110/2008.

<sup>(2)</sup> As defined in Annex II, paragraph 32 of Regulation (EC) No 110/2008.



*ANNEX IV*

**List of source materials to which restrictions apply for their use in the production of flavourings and food ingredients with flavouring properties**

Part A: *Source materials which shall not be used for the production of flavourings and food ingredients with flavouring properties*

| Source material                             |                            |
|---|----------------------------|
| Latin name                                  | Common name                |
| Tetraploid form of <i>Acorus calamus</i> L. | Tetraploid form of Calamus |

Part B: *Conditions of use for flavourings and food ingredients with flavouring properties produced from certain source materials*

| Source material  |                       | Conditions of use   |
|--|-----------------------|---|
| Latin name   | Common name           |   |
| <i>Quassia amara</i> L. and <i>Picrasma excelsa</i> (Sw)                             | Quassia               | Flavourings and food ingredients with flavouring properties produced from the source material may only be used for the production of beverages and bakery wares |
| <i>Laricifomes officinales</i> (Vill.: Fr) Kotl. et Pouz or <i>Fomes officinalis</i> | White agaric mushroom | Flavourings and food ingredients with flavouring properties produced from the source material may only be used for the production of alcoholic beverages        |
| <i>Hypericum perforatum</i> L.   | St John's wort        |   |
| <i>Teucrium chamaedrys</i> L.  | Wall germander        |   |

**▼B***ANNEX V***Conditions for the production of thermal process flavourings and maximum levels for certain substances in thermal process flavourings**Part A: *Conditions for the production*

- (a) The temperature of the products during processing shall not exceed 180 °C.
- (b) The duration of the thermal processing shall not exceed 15 minutes at 180 °C with correspondingly longer times at lower temperatures, i.e. a doubling of the heating time for each decrease of temperature by 10 °C, up to a maximum of 12 hours.
- (c) The pH during processing should not exceed the value of 8,0.

Part B: *Maximum levels for certain substances*

| Substance  | Maximum levels µg/kg |
|--|----------------------|
| 2-amino-3,4,8-trimethylimidazo [4,5-f] quinoxaline (4,8-DiMeIQx) | 50                   |
| 2-amino-1-methyl-6-phenylimidazol [4,5-b]pyridine (PhIP)         | 50                   |