

SCHEDULE 1

Regulations 2(1) and 16(2)

Conditions for treatment of natural mineral waters and spring waters with ozone-enriched air

1. Treatment of natural mineral waters and spring waters with ozone-enriched air shall only be carried out if–

- (a) it is for the purpose of separating compounds of iron, manganese, sulphur and arsenic from water in which they occur naturally at source;
- (b) prior to treatment the requirements of paragraphs 3, 4 and 5 of Schedule 4 are satisfied; and
- (c) the treatment does not have a disinfectant action.

2. Treatment of natural mineral waters and spring waters with ozone-enriched air shall not–

- (a) modify the physico-chemical composition of the water in terms of its characteristic constituents; or
- (b) leave residues in the water which could pose a risk to public health, or, in the case of the substances listed below, above the levels specified:

<i>Treatment residue</i>	<i>Maximum limit (µg/l)</i>
Dissolved ozone	50
Bromates	3
Bromoforms	1

3. A person seeking to have a process of treatment with ozone-enriched air authorised shall–

- (a) make application in writing to the food authority within whose area the water is extracted;
- (b) permit representatives of that authority to examine the proposed method of treatment, and place of treatment, and take samples for analysis in accordance with regulation 17; and
- (c) provide such information in support of the application as it requested by the food authority.

4. The food authority shall assess the application and any information in its possession and shall authorise the treatment if it is satisfied that–

- (a) the treatment process is justified by the composition of the water at source;
- (b) the person carrying out the treatment is taking all necessary measures to ensure that the treatment is effective and safe; and
- (c) the treatment process otherwise complies with paragraphs 1 and 2.

5. Where the food authority decides to authorise a treatment process pursuant to paragraph 4, it shall inform the operator of the treatment process in writing, and state the date from which the authorisation for commercial use of the treatment has effect.

6. Where the food authority refuses to authorise a treatment process pursuant to paragraph 4, it shall inform the operator of the treatment process in writing, stating its reasons.

7. Where a treatment process has been authorised pursuant to paragraph 4, the person carrying out the treatment must, for the purpose of enabling the food authority to assess whether the conditions in paragraph 4(a) and (b) continue to be satisfied–

- (a) permit representatives of the authority to examine the method of treatment and place of treatment and take samples for analysis in accordance with regulation 17; and
- (b) provide such information related to the treatment as is requested by the authority.

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8. If the food authority is satisfied that the conditions in paragraph 4 are no longer fulfilled, it may withdraw authorisation of a treatment by giving the person operating that treatment a written notice stating the grounds for withdrawal.

9. Where the food authority decides either not to grant or to withdraw authorisation of a treatment under paragraph 6 or paragraph 8 respectively, the person who wishes to carry out the treatment process may apply to the Agency for a review of that decision.

10. Upon receiving the application for review, the Agency shall make such inquiry into the matter as may seem to the Agency to be appropriate and, having considered the results of that enquiry and any relevant facts elicited by it, shall either confirm the decision or direct the food authority to grant or restore, as appropriate, authorisation of the treatment process in operation. In the case of such a direction the food authority shall comply with the said direction.

## SCHEDULE 2

Regulations 2(1), 10(1)(b), 13, 19 and  
21(2)

### Requirements for spring water and drinking water including prescribed concentrations or values of parameters

## PART 1

### Requirements for spring water and drinking water

1. Water satisfies the requirements of this Schedule if—
  - (a) the water does not contain—
    - (i) any micro-organism (other than a parameter) or parasite; or
    - (ii) any property, element or substance (other than a parameter),  
at a concentration or value which would constitute a potential danger to human health;
  - (b) the water does not contain any substance (whether or not a parameter) at a concentration or value which, in conjunction with any other property, element, substance or organism it contains (whether or not a parameter), would constitute a potential danger to human health;
  - (c) the water does not contain concentrations or values of any of the parameters listed in Tables A to D in Part 2 of this Schedule in excess of the prescribed concentrations or values; and
  - (d) in the case of water prepared from water which has been softened or desalinated, its hardness is not below a minimum concentration of 60 mg Ca/l.
2. The concentrations or values of the parameters listed in Tables A to D in Part 2 of this Schedule shall be read in conjunction with the notes thereto.

## PART 2

## Prescribed concentrations or values

**Table A**

<i>Column 1 Item</i>	<i>Column 2 Parameters</i>	<i>Column 3 Units of Measurement</i>	<i>Column 4 Concentration or Value (maximum unless otherwise stated)</i>
1.	Colour	mg/l Pt/Co scale	20
2.	Turbidity	NTU	4
3.	Odour	Dilution number	3 at 25°C
4.	Taste	Dilution number	3 at 25°C
5.	Sulphate	mg SO <sub>4</sub> /l	250
6.	Sodium	mg Na/l	200
7.	Nitrate	mg NO <sub>3</sub> /l	50 (note 1)
8.	Nitrite	mg NO <sub>2</sub> /l	0.5 (note 1)
9.	Aluminium	µgAl/l	200
10.	Copper	mg Cu/l	2
11.	Fluoride	mg F/l	1.5
12.	Hydrogen ion concentration	pH units	4.5 (minimum) 9.5 (maximum)
13.	Tritium (for radioactivity)	Bq/l	100
14.	Total indicative dose	mSv/year	0.10 (note 2)
15.	Manganese	µg Mn/l	50

**Notes:**

1. The concentration (mg/l) of nitrate divided by 50 added to the concentration (mg/l) of nitrite divided by 3 must not exceed 1.
2. Excluding tritium, potassium 40, radon and radon decay products.

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**Table B**

<i>Column 1 Item</i>	<i>Column 2 Parameters</i>	<i>Column 3 Units of Measurement</i>	<i>Column 4 Maximum Concentration</i>
1.	Arsenic	µg As/l	10
2.	Cadmium	µg Cd/l	5
3.	Cyanide	µg CN/l	50
4.	Chromium	µg Cr/l	50
5.	Mercury	µg Hg/l	1
6.	Nickel	µg Ni/l	20
7.	Selenium	µg Se/l	10
8.	Antimony	µg Sb/l	5
9.	Lead	µg Pb/l	10
10.	Pesticides and related products:		
	– individual substances	µg/l	0.10 (notes 1 and 2)
	– total substances	µg/l	0.50 (notes 1 and 3)
11.	Polycyclic aromatic Hydrocarbons	µg/l	0.1 sum of concentrations of specified compounds (note 4)
12.	Bromate	µg BrO <sub>3</sub> /l	10

**Notes:**

1. Pesticides” means:
  - organic insecticides,
  - organic herbicides,
  - organic fungicides,
  - organic nematocides,
  - organic acaricides,
  - organic algicides,
  - organic rodenticides,
  - organic slimicides, and
 related products (inter alia, growth regulators) and their relevant metabolites, degradation and reaction products.
2. Only those pesticides which are likely to be present in a given water need to be monitored. The maximum concentration applies to each individual pesticide. In the case of aldrin, dieldrin, heptachlor and heptachlor epoxide the maximum concentration is 0.030 µg/l.
3. The maximum concentration for “total substances” refers to the sum of the concentrations of all individual pesticides detected and quantified in the monitoring procedure.
4. The specified compounds are benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3 cd) pyrene.

**Table C**

<i>Column 1 Item</i>	<i>Column 2 Parameters</i>	<i>Column 3 Units of Measurement</i>	<i>Column 4 Maximum Concentration</i>
1.	<i>Escherichia coli</i>  ( <i>E.coli</i> )	number/250 ml	0/250 ml
2.	Enterococci	number/250 ml	0/250 ml
3.	Colony count 22°C	number/ml	100/ml (notes 1 and 2)
4.	Colony count 37°C	number/ml	20/ml (notes 1 and 3)
5.	<i>Pseudomonas aeruginosa</i>	number/250/ml	0/250 ml

**Notes:**

1. The total viable colony count should be measured within 12 hours of bottling, with the sample water being kept at a constant temperature during that 12 hour period. Any increase in the total viable colony count of the water between 12 hours after bottling and the time of sale should not be greater than that normally expected.
2. In 72 hours on agar-agar or an agar-gelatine mixture.
3. In 24 hours on agar-agar.

**Table D**

<i>Column 1 Item</i>	<i>Column 2 Parameters</i>	<i>Column 3 Unit of Measurements</i>	<i>Column 4 Maximum Concentration</i>
1.	Boron	Mg B/l	1.0
2.	Benzo (a) pyrene	µg/l	0.010
3.	Tetrachloroethene and Trichloroethene	µg/l	10 (note 1)
4.	Tetrachloromethane	µg/l	3
5.	Benzene	µg/l	1.0
6.	1,2-dichloroethane	µg/l	3.0
7.	Trichloromethane, Dichlorobromomethane, Dibromochloromethane and Tribromomethane	µg/l	100 (note 1)
8.	Epichlorohydrin	µg/l	0.10 (note 2)
9.	Vinyl chloride	µg/l	0.50 (note 2)
10.	Acrylamide	µg/l	0.10 (note 2)

**Notes:**

1. The maximum concentration specified applies to the sum of the concentrations of the specified parameters.
2. The parametric value refers to the residual monomer concentration in the water as calculated according to specifications of the maximum release from the corresponding polymer in contact with the water.

## SCHEDULE 3

Regulations 4(1)(a) and (d)(i), (2)(a) and  
(c), (8) and (9) and 16(1)(c)(ii)

### Recognition of natural mineral waters

## PART 1

### Natural mineral waters extracted from the ground in Scotland

1. A person seeking to have water which is extracted from the ground in Scotland recognised as a natural mineral water for the purposes of Article 1 shall make application in writing to the food authority within whose area the water is extracted, giving the particulars set out in paragraph 2.

2. The particulars are—

- (a) the particulars in paragraph 1 of Part 3;
- (b) any other information showing that the matters specified in paragraphs 2 and 3 of Part 3 are established; and
- (c) such evidence as is satisfactory to show that the water contains no substance listed in Schedule 6 at a level which exceeds the maximum limit specified in relation to that substance in that Schedule.

3. In so far as particulars of any of the anions, cations, non-ionised compounds or trace elements specified in column 1 of Schedule 5 are required to be given pursuant to sub-paragraph (b) of paragraph 2, the concentration of each such anion, cation, non-ionised compound or trace element shall, in those particulars, be expressed in the unit of measurement specified opposite it in column 2 of that Schedule.

4. Where such particulars have been given, the food authority shall assess them and shall recognise the water to which those particulars relate as natural mineral water if it is satisfied that—

- (a) the water is natural mineral water which complies with paragraph 3 of Section I of Annex I; and
- (b) the characteristics of the water have been assessed in accordance with—
  - (i) the points numbered 1 to 4 set out in paragraph 2(a) of Section I of Annex I,
  - (ii) the requirements and criteria listed in Part 3 of this Schedule, and
  - (iii) recognised scientific methods.

5. The food authority shall, on recognising a natural mineral water in accordance with paragraph 4, publish an announcement of such recognition and the grounds on which it has been granted, in the Edinburgh Gazette.

## PART 2

### Natural mineral waters extracted from the ground in a country other than an EEA State

1. A person seeking to have a water which is extracted from the ground in a country other than an EEA State recognised as a natural mineral water for the purposes of Article 1 shall make application in writing to the Agency, giving the particulars set out in paragraph 2.

2. The particulars are—

- (a) those specified in paragraph 1 of Part 3;

- (b) any other information showing that the matters specified in paragraphs 2 and 3 of Part 3; are established; and
- (c) such evidence as is satisfactory to show that the water contains no substance listed in Schedule 6 at a level which exceeds the maximum limit specified in relation to that substance in that Schedule.

**3.** In so far as particulars of any of the anions, cations, non-ionised compounds or trace elements specified in column 1 of Schedule 5 are required to be given pursuant to sub-paragraph (b) of paragraph 2, the concentration of each such anion, cation, non-ionised compound or trace element shall be expressed in those particulars in the unit of measurement specified opposite it in column 2 of that Schedule.

**4.** The Agency shall not recognise such a water unless the responsible authority of the country in which the water is extracted has certified that—

- (a) it is satisfied—
  - (i) that the requirements in paragraphs 2 and 3 of Part 3 are established; and
  - (ii) with the evidence given pursuant to sub-paragraph (c) of paragraph 2; and
- (b) periodic checks are made to ascertain that—
  - (i) the water is natural mineral water which complies with paragraph 3 of Section I of Annex I;
  - (ii) the characteristics of the water are assessed in accordance with—
    - (aa) the points numbered 1 to 4 set out in paragraph 2(a) of Section I of Annex I;
    - (bb) the requirements and criteria listed in Part 3; and
    - (cc) recognised scientific methods; and
  - (iii) the provisions of Schedule 4 are being applied by the person exploiting the spring.

**5.** Recognition of such water shall lapse after a period of five years unless the responsible authority of the country in which the water is extracted has renewed the certification required by paragraph 4.

**6.** The Agency shall, on recognising water in accordance with this Part of this Schedule, publish an announcement of such recognition in the Edinburgh Gazette, the London Gazette and the Belfast Gazette.

## PART 3

### Requirements and criteria for recognition as a natural mineral water

- 1.** Geological and hydrological surveys must include the following particulars—
  - (a) the exact site of the catchment with indication of its altitude, on a map with a scale of not more than 1:1,000;
  - (b) a detailed geological report on the origin and nature of the terrain;
  - (c) the stratigraphy of the hydrogeological layer;
  - (d) a description of the catchment operations; and
  - (e) the demarcation of the area or details of other measures protecting the spring against pollution.
- 2.** Physical, chemical and physico-chemical surveys must establish—
  - (a) the rate of flow of the spring;

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- (b) the temperature of the water at source and the ambient temperature;
- (c) the relationship between the nature of the terrain and the nature and type of minerals in the water;
- (d) the dry residues at 180°C and 260°C;
- (e) the electrical conductivity or resistivity, with the measurement temperature being specified;
- (f) the hydrogen ion concentration (pH);
- (g) the anions and cations;
- (h) the non-ionized elements;
- (i) the trace elements;
- (j) the radio-actinological properties at source;
- (k) where appropriate, the relative isotope levels of the constituent elements of water, oxygen ( $^{16}\text{O}$  —  $^{18}\text{O}$ ) and hydrogen (protium, deuterium, tritium);
- (l) the toxicity of certain constituent elements of the water, taking account of the limits laid down for each of them.

**3. Microbiological analysis at source must show—**

- (a) the absence of parasites and pathogenic micro-organisms;
- (b) quantitative determination of the revivable colony count indicative of faecal contamination, demonstrating—
  - (i) absence of *Escherichia coli* and other coliforms in 250 ml at 37°C and 44.5°C;
  - (ii) absence of faecal streptococci in 250 ml;
  - (iii) absence of sporulated sulphite-reducing anaerobes in 50 ml;
  - (iv) absence of *Pseudomonas aeruginosa* in 250 ml;
- (c) the revivable total colony count per ml of water—
  - (i) at 20 to 22°C in 72 hours on agar-agar or an agar-gelatine mixture,
  - (ii) at 37°C in 24 hours on agar-agar.

**4.—(1)** Subject to sub paragraph (2), clinical and pharmacological analyses must be carried out in accordance with scientifically recognised methods and should be suited to the particular characteristics of the natural mineral water and its effects on the human organism, such as diuresis, gastric and intestinal functions, compensation for mineral deficiencies.

(2) Clinical analyses may, in appropriate cases, take the place of analyses referred to in sub paragraph (1) provided that the consistency and concordance of a substantial number of observations enable the same results to be obtained.



#### SCHEDULE 4

Regulations 4(2)(b), (5)(1)(c) and (2),  
7(3), 9(2)(b), 10(1)(c) and (3) and 16(1)(a)  
(iv) and paragraph 1(b) of Schedule 1 and  
paragraph 4(b)(iii) of Part 2 of Schedule 3

##### Exploitation and bottling requirements for natural mineral water and spring water

1. Equipment for exploiting the water must be so installed as to avoid any possibility of contamination and to preserve the properties corresponding to those ascribed to it which the water possesses at source.

2. The spring or outlet must be protected against the risks of pollution.

3. The catchment, pipes and reservoirs must be of materials suitable for water and so built as to prevent any chemical, physico-chemical or microbiological alteration of the water.

4. The conditions of exploitation, particularly the washing and bottling plant, must meet hygiene requirements. In particular, the containers must be so treated or manufactured as to avoid adverse effects on the microbiological and chemical characteristics of the natural water.

5.—(1) Subject to sub-paragraphs (2) and (3), water must not be transported in containers other than those authorised for distribution to the ultimate consumer;

(2) Natural mineral water may be transported from the spring to the bottling plant in a container which is not for distribution to the ultimate consumer if, on or before 17th July 1980 water from that spring was so transported;

(3) Water distributed to the ultimate consumer in a bottle marked or labelled with the description “spring water” may be transported from the spring to the bottling plant in a container which is not for distribution to the ultimate consumer if, on or before 23rd November 1996, water from that spring was so transported.

6.—(1) The revivable total colony count of the water at source, determined according to sub paragraph (2), shall conform to the normal viable colony count of that water and must not show that the source of that water is contaminated.

(2) The water colony count is that determined per ml of water—

(a) at 20 to 22°C in 72 hours on agar-agar or an agar-gelatine mixture;

(b) at 37°C in 24 hours on agar-agar.

7.—(1) After bottling, the total colony count at source may not exceed—

(a) 100 per ml at 20 to 22°C in 72 hours on agar-agar or an agar-gelatine mixture; and

(b) 20 per ml at 37°C in 24 hours on agar-agar.

(2) The total colony count shall be measured within the period of 12 hours following bottling, the water being maintained at 4°C +/- 1°C during that period.

8. Water shall be free from—

(a) parasites and pathogenic micro organisms;

(b) *Escherichia coli* and other coliforms and faecal streptococci in any 250 ml sample examined;

(c) sporulated sulphite-reducing anaerobes in any 50 ml sample examined; and

(d) *Pseudomonas aeruginosa* in any 250 ml sample examined.

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## SCHEDULE 5

Regulation 4(9) and paragraph 3 of Part 1  
of Schedule 3

## Particulars of anions, cations, non-ionised compounds and trace elements

<i>Anions</i>	<i>Unit of measurement</i>
Borate $\text{BO}_3^-$	mg/l
Carbonate $\text{CO}_3^{2-}$	mg/l
Chloride $\text{Cl}^-$	mg/l
Fluoride $\text{F}^-$	mg/l
Hydrogen Carbonate $\text{HCO}_3^-$	mg/l
Nitrate $\text{NO}_3^-$	mg/l
Nitrite $\text{NO}_2^-$	mg/l
Phosphate $\text{PO}_4^{3-}$	mg/l
Silicate $\text{SiO}_2$	mg/l
Sulphate $\text{SO}_4^{2-}$	mg/l
Sulphide $\text{S}^{2-}$	mg/l
<i>Cations</i>	<i>Unit of measurement</i>
Aluminium Al	mg/l
Ammonium $\text{NH}_4^+$	mg/l
Calcium Ca	mg/l
Magnesium Mg	mg/l
Potassium K	mg/l
Sodium Na	mg/l
<i>Non-ionised compounds</i>	<i>Unit of measurement</i>
Total organic carbon C	mg/l
Free carbon dioxide $\text{CO}_2$	mg/l
Silica $\text{SiO}_2$	mg/l
<i>Trace elements</i>	<i>Unit of measurement</i>
Barium Ba	$\mu\text{g/l}$
Bromine (total) Br	$\mu\text{g/l}$
Cobalt Co	$\mu\text{g/l}$
Copper Cu	$\mu\text{g/l}$
Iodine (total) I	$\mu\text{g/l}$
Iron Fe	$\mu\text{g/l}$

<i>Anions</i>	<i>Unit of measurement</i>
Lithium Li	µg/l
Manganese Mn	µg/l
Molybdenum Mo	µg/l
Strontium Sr	µg/l
Zinc Zn	µg/l

## SCHEDULE 6

Regulation 7(1) and (2) and Part 1 of  
Schedule 3 and paragraph 2(c) of Part 2 of  
Schedule 3

## Maximum limits for constituents of natural mineral waters

<i>Constituents</i>	<i>Maximum limits (mg/l)</i>
Antimony	0.0050
Arsenic	0.010 (as total)
Barium	1.0
Cadmium	0.003
Chromium	0.050
Copper	1.0
Cyanide	0.070
Fluoride	5.0
Lead	0.010
Manganese	0.50
Mercury	0.0010
Nickel	0.020
Nitrate	50.0
Nitrite	0.1
Selenium	0.010

**Note:**

The constituents described above refer to constituents naturally present in the water at source and not to substances present as the result of contamination.

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## SCHEDULE 7

Regulation 7(2)

## Performance characteristics for analysing the constituents in Schedule 6

<i>Constituent</i>	<i>Accuracy of parametric value in %</i>	<i>Precision of parametric value</i>	<i>Detection limit of parametric value in %</i>
Antimony	25	25	25
Arsenic	10	10	10
Barium	25	25	25
Cadmium	10	10	10
Chromium	10	10	10
Copper	10	10	10
Cyanide	10	10	10
Fluoride	10	10	10
Lead	10	10	10
Manganese	10	10	10
Mercury	20	10	20
Nickel	10	10	10
Nitrate	10	10	10
Nitrite	10	10	10
Selenium	10	10	10

**Notes:**

- The method of analysis used to measure the concentration of the constituents in Schedule 6 shall be able to measure at least concentrations equal to the parametric value with the specified accuracy, precision and detection limits.
- Regardless of the sensitivity of the method of analysis, the result must be expressed to the same number of decimal places as the maximum limit set out in Schedule 6 for the particular constituent being analysed.
- Accuracy is the systematic error and represents the difference between the average value of a large number of repeated measurements and the exact value.
- Precision represents the random error and is expressed in general as the standard deviation (within a batch and between batches) of a sample of results from the average.
- Acceptable precision is equal to twice the relative standard deviation.
- The detection limit is—
  - three times the relative standard deviation within a batch of a natural sample containing a low concentration of the constituent; or
  - five times the relative standard deviation within a batch of a virgin sample.
- The method should make it possible to determine total cyanide in all its forms.

## SCHEDULE 8

Regulation 8(1)(e)

## Labelling indications for natural mineral water and criteria for use

<i>Indication</i>	<i>Criteria</i>
Low mineral content	Mineral salt content, calculated as a fixed residue, not greater than 500 mg/l
Very low mineral content	Mineral salt content, calculated as a fixed residue, not greater than 50 mg/l
Rich in mineral salts	Mineral salt content, calculated as a fixed residue, greater than 1500 mg/l
Contains bicarbonate	Bicarbonate content greater than 600 mg/l
Contains sulphate	Sulphate content greater than 200 mg/l
Contains chloride	Chloride content greater than 200 mg/l
Contains calcium	Calcium content greater than 150 mg/l
Contains magnesium	Magnesium content greater than 50 mg/l
Contains fluoride	Fluoride content greater than 1 mg/l
Contains iron	Bivalent iron content greater than 1 mg/l
Acidic	Free carbon dioxide content greater than 250 mg/l
Contains sodium	Sodium content greater than 200 mg/l
Suitable for a low-sodium diet	Sodium content less than 20 mg/l