

SCHEDULE 1

Regulations 4, 10, 15 and 17

Concentrations or Values

PART 1

Wholesomeness

TABLE A: MICROBIOLOGICAL PARAMETERS**Prescribed concentrations or values**

<i>Parameters</i>	<i>Maximum concentration or value</i>	<i>Units of Measurement</i>
<i>Escherichia coli (E. coli)</i>	0	Number/100ml
Enterococci	0	Number/100ml
In the case of water in bottles or containers:		
<i>Escherichia coli (E.coli)</i>	0	Number/250ml
Enterococci	0	Number/250ml
<i>Pseudomonas aeruginosa</i>	0	Number/250ml
Colony count 22°C	100	Number/ml
Colony count 37°C	20	Number/ml

TABLE B: CHEMICAL PARAMETERS**Prescribed concentrations or values**

<i>Parameters</i>	<i>Maximum concentration or value</i>	<i>Units of Measurement</i>
Acrylamide ^(h)	0.10	µg/l
Antimony	5.0	µg/l
Arsenic	10	µg/l
Benzene	1.0	µg/l
Benzo(a)pyrene	0.010	µg/l
Boron	1.0	mg/l
Bromate	10	µg/l
Cadmium	5.0	µg/l
Chromium	50	µg/l
Copper	2.0	mg/l
Cyanide	50	µg/l

Status: This is the original version (as it was originally made).

<i>Parameters</i>	<i>Maximum concentration or value</i>	<i>Units of Measurement</i>
1, 2 dichloroethane	3.0	µg/l
Epichlorohydrin ⁽ⁱ⁾	0.10	µg/l
Fluoride	1.5	mg/l
Lead	25 (until 25th December 2013) 10 (from 25th December 2013)	µg/l
Mercury	1.0	µg/l
Nickel	20	µg/l
Nitrate ⁽ⁱⁱ⁾	50	mg/l
Nitrite ⁽ⁱⁱⁱ⁾	0.5 (or 0.1 in the case of treatment works)	mg/l
Pesticides ⁽ⁱⁱⁱ⁾ —		
Aldrin	0.030	µg/l
Dieldrin	0.030	µg/l
Heptachlor	0.030	µg/l
Heptachlor epoxide	0.030	µg/l
Other pesticides	0.10	µg/l
Pesticides total ^(iv)	0.50	µg/l
Polycyclic aromatic hydrocarbons ^(v)	0.10	µg/l
Selenium	10	µg/l
Tetrachloroethene and Trichloroethene ^(vi)	10	µg/l
Trihalomethanes: Total ^(vii)	100	µg/l
Vinyl chloride ⁽ⁱ⁾	0.50	µg/l

(i) 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. This is controlled by product specification.

(ii) See also the nitrate-nitrite formula in regulation 4(c).

(iii) For these purposes “Pesticides” means:

organic insecticides
organic herbicides
organic fungicides
organic nematocides
organic acaricides
organic algicides
organic rodenticides
organic slimicides

related products (inter alia, growth regulators) and their relevant metabolites, degradation and reaction products. Only those pesticides likely to be present in a given supply need be monitored.

(iv) “Pesticides total” means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring process.

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- (v) The specified compounds are:
 benzo(b)fluoranthene
 benzo(k)fluoranthene
 benzo(ghi)perylene
 indeno(1,2,3-cd)pyrene.
 The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.
- (vi) The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.
- (vii) The specified compounds are:
 chloroform
 bromoform
 dibromochloromethane
 bromodichloromethane.
 The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

National requirements — Prescribed concentrations or values

<i>Parameters</i>	<i>Maximum concentration or value</i>	<i>Units of Measurement</i>
Aluminium	200	µg/l
Colour	20	mg/l Pt/Co
Iron	200	µg/l
Manganese	50	µg/l
Odour	Acceptable to consumers and no abnormal change	
Sodium	200	mg/l
Taste	Acceptable to consumers and no abnormal change	
Tetrachloromethane	3	µg/l
Turbidity	4	NTU

PART 2

Indicator Parameters

TABLE C

Prescribed concentrations, values or states

<i>Parameters</i>	<i>Maximum concentration or value or state (unless otherwise stated)</i>	<i>Units of measurement</i>
Ammonium	0.50	mg/l
(i)	The water should not be aggressive.	
(ii)	Excluding tritium, potassium-40, radon and radon decay products.	
(iii)	Only in the case of surface water or groundwater that has been influenced by surface water.	

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<i>Parameters</i>	<i>Maximum concentration or value or state (unless otherwise stated)</i>	<i>Units of measurement</i>
Chloride ⁽ⁱ⁾	250	mg/l
<i>Clostridium perfringens</i> (including spores)	0	Number/100ml
Coliform bacteria	0	Number/100ml (Number/250ml in the case of water put into bottles or containers)
Colony counts	No abnormal change	Number/ml at 22°C
	No abnormal change	Number/ml at 37°C
Conductivity ⁽ⁱ⁾	2500	µS/cm at 20°C
Hydrogen ion	9.5 (maximum)	pH value
	6.5 (minimum) (in the case of still water put into bottles or containers the minimum is 4.5)	pH value
Sulphate ⁽ⁱ⁾	250	mg/l
Total indicative dose (for radioactivity) ⁽ⁱⁱ⁾	0.10	mSv/year
Total organic carbon (TOC)	No abnormal change	mgC/l
Tritium (for radioactivity)	100	Bq/l
Turbidity ⁽ⁱⁱⁱ⁾	1	NTU

(i) The water should not be aggressive.

(ii) Excluding tritium, potassium-40, radon and radon decay products.

(iii) Only in the case of surface water or groundwater that has been influenced by surface water.

SCHEDULE 2

Regulation 9

Monitoring

PART 1

Check monitoring

Sampling

1.—(1) A local authority must undertake check monitoring in accordance with this Part.

(2) Check monitoring means sampling for each parameter listed in Table 1 in the circumstances listed in that table in order—

- (a) to determine whether or not water complies with the concentrations or values in Schedule 1;
- (b) to provide information on the organoleptic and microbiological quality of the water; and
- (c) to establish the effectiveness of the treatment of the water, including disinfection.

Table 1**Check monitoring**

<i>Parameter</i>	<i>Circumstances</i>
Aluminium	When used as flocculant or where the water originates from, or is influenced by, surface waters
Ammonium	In all supplies
<i>Clostridium perfringens</i> (including spores) waters	Where the water originates from, or is influenced by, surface
Coliform bacteria	In all supplies
Colony counts	In all supplies
Colour	In all supplies
Conductivity	In all supplies
<i>Escherichia coli</i> (<i>E. coli</i>)	In all supplies
Hydrogen ion concentration	In all supplies
Iron	When used as flocculant or where the water originates from, or is influenced by, surface waters
Manganese	Where the water originates from, or is influenced by, surface waters
Nitrate	When chloramination is practised
Nitrite	When chloramination is practised
Odour	In all supplies
<i>Pseudomonas aeruginosa</i>	Only in the case of water in bottles or containers
Taste	In all supplies
Turbidity	In all supplies

Frequency of sampling

- 2.—(1) Sampling must be carried out at frequencies specified in Table 2.

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Table 2
Sampling frequency for check monitoring

<i>Volume m³/day</i>	<i>Sampling frequency per year</i>
≤ 10	1
> 10 ≤ 100	2
> 100 ≤ 1,000	4
> 1,000 ≤ 2,000	10
> 2,000 ≤ 3,000	13
> 3,000 ≤ 4,000	16
> 4,000 ≤ 5,000	19
> 5,000 ≤ 6,000	22
> 6,000 ≤ 7,000	25
> 7,000 ≤ 8,000	28
> 8,000 ≤ 9,000	31
> 9,000 ≤ 10,000	34
> 10,000	4 + 3 for each 1,000 m ³ /day of the total volume (rounding up to the nearest multiple of 1,000 m ³ /day)

(2) The local authority may reduce the frequency of sampling for a parameter to a frequency not less than half if—

- (a) the local authority is of the opinion that the quality of water in the supply is unlikely to deteriorate;
- (b) in the case of hydrogen ion the parameter has had a pH value that is not less than 6.5 and not more than 9.5; and
- (c) in all other cases, in each of two successive years the results of samples taken for the purposes of monitoring the parameter in question are constant and significantly lower than the concentrations or values laid down in Schedule 1.

(3) The local authority may set a higher frequency for any parameter if it considers it appropriate taking into account the findings of any risk assessment, and in addition may monitor anything else identified in the risk assessment.

(4) Notwithstanding the provisions in sub-paragraph (2) above, there must be a minimum of 1 sample per year.

PART 2

Audit monitoring

Sampling

3.—(1) A local authority must undertake audit monitoring in accordance with this Part.

(2) Audit monitoring means sampling for each parameter listed in Schedule 1 (other than parameters already being sampled under check monitoring) in order to provide information necessary to determine whether or not the private supply satisfies each concentration, value or state specified in that Schedule and, if disinfection is used, to check that disinfection by-products are kept as low as possible without compromising the disinfection.

(3) The local authority may, for such time as it may decide, exclude a parameter from the audit monitoring of a private supply—

- (a) if it considers that the parameter in question is unlikely to be present in the supply or system at a concentration or value that poses a risk of the private supply failing to meet the concentration, value or state specified in Schedule 1 in respect of that parameter;
 - (b) taking into account the findings of any risk assessment; and
 - (c) taking into account any guidance issued by the Welsh Ministers.
- (4) It may monitor anything else identified in the risk assessment.

Frequency of sampling

4.—(1) Sampling must be carried out at the frequencies specified in Table 3.

Table 3

Sampling frequency for audit monitoring

<i>Volume m³/day</i>	<i>Sampling frequency per year</i>
≤ 10	1
> 10 ≤ 3,300	2
> 3,300 ≤ 6,600	3
> 6,600 ≤ 10,000	4
> 10,000 ≤ 100,000	3 + 1 for each 10,000 m ³ /day of the total volume (rounding up to the nearest multiple of 10,000 m ³ /day)
> 100,000	10 + 1 for each 25,000 m ³ /day of the total volume (rounding up to the nearest multiple of 25,000 m ³ /day)

(2) The local authority may set a higher frequency for any parameter if it considers it appropriate taking into account the findings of any risk assessment.

Status: This is the original version (as it was originally made).

PART 3

Minimum frequency for both check monitoring and audit monitoring for water put into bottles or containers

<i>Volume¹ of water produced in bottles or containers each day (m³)</i>	<i>Check monitoring number of samples per year</i>	<i>Audit monitoring number of samples per year</i>
≤ 10	1	1
$>10 \leq 60$	12	1
> 60	1 for each 5 m ³ /day of the total volume (rounding up to the nearest multiple of 5 m ³ /day)	1 for each 100 m ³ /day of the total volume (rounding up to the nearest multiple of 100 m ³ /day)

1 The volumes are calculated as averages taken over a calendar year.

SCHEDULE 3

Regulation 11

Sampling and analysis

PART 1

General

Samples: general

- 1.—(1) The local authority must ensure that each sample is—
 - (d) taken by a competent person using suitable equipment;
 - (e) representative of the water at the sampling point at the time of sampling;
 - (f) not contaminated in the course of being taken;
 - (g) kept at such temperature and in such conditions as will secure that there is no material change in what is to be measured; and
 - (h) analysed without delay by a competent person using suitable equipment.
- (2) It must ensure that the sample is analysed using a system of analytical quality control.
- (3) The system must be subjected to checking by a person who is—
 - (a) not under the control of either the analyst or the local authority; and
 - (b) approved by the Welsh Ministers for that purpose.

Analysing samples

2.—(1) The local authority must ensure that each sample is analysed in accordance with this paragraph.

(2) For each parameter specified in the first column of Table 1 in Part 2 of this Schedule the method of analysis is specified in the second column of that table.

(3) For each parameter specified in the first column of Table 2 in Part 2 of this Schedule the method is one that is capable of—

- (a) measuring concentrations and values with the trueness and precision specified in the second and third columns of that table, and
- (b) detecting the parameter at the limit of detection specified in the fourth column of that table.

(4) For hydrogen ion, the method of analysis must be capable of measuring a value with a trueness of 0.2 pH unit and a precision of 0.2 pH unit.

(5) The method of analysis used for odour and taste parameters must be capable of measuring values equal to the parametric value with a precision of 1 dilution number at 25°C.

(5) For these purposes—

“limit of detection” is —

- (a) three times the relative within-batch standard deviation of a natural sample containing a low concentration of the parameter; or
- (b) five times the relative within-batch standard deviation of a blank sample;

“precision” (the random error) is twice the standard deviation (within a batch and between batches) of the spread of results about the mean;

“trueness” (the systematic error) is the difference between the mean value of the large number of repeated measurements and the true value.

Authorisation of alternative methods of analysis

3.—(1) The Welsh Ministers may authorise a method different from that set out in paragraph 2(2) if satisfied that it is at least as reliable.

(2) An authorisation may be time-limited and may be revoked at any time.

Sampling and analysis by persons other than local authorities

4.—(1) A local authority may enter into an arrangement for any person to take and analyse samples on its behalf.

(2) A local authority must not enter into an arrangement under paragraph (1) unless—

- (a) it is satisfied that the task will be carried out promptly by a person competent to perform it, and
- (b) it has made arrangements that ensure that any breach of these Regulations is communicated to it immediately, and any other result is communicated to it within 28 days.

*Status: This is the original version (as it was originally made).***PART 2****Analytical methods****Table 1****Prescribed methods of analysis**

<i>Parameter</i>	<i>Method</i>
<i>Clostridium perfringens</i> (including spores)	Membrane filtration followed by anaerobic incubation of the membrane on m-CP agar* at 44 ± 1°C for 21 ± 3 hours. Count opaque yellow colonies that turn pink or red after exposure to ammonium hydroxide vapours for 20 to 30 seconds.
Coliform bacteria	BS-EN ISO 9308-1
Colony count 22°C — enumeration of culturable microorganisms	BS-EN ISO 6222
Colony count 37°C — enumeration of culturable microorganisms	BS-EN ISO 6222
Enterococci BS-EN ISO 7899-2	
<i>Escherichia coli</i> (<i>E. coli</i>)	BS-EN ISO 9308-1
* Use the following method to make m-CP agar : Make a basal medium consisting of—	
Tryptose	30.0g
Yeast extract	20.0g
Sucrose	5.0g
L-cysteine hydrochloride	1.0g
MgSO ₄ .7H ₂ O	0.1g
Bromocresol purple	40.0mg
Agar	15.0g
Water	1,000.0ml
Dissolve the ingredients of the basal medium, adjust pH to 7.6 and autoclave at 121°C for 15 minutes. Allow the medium to cool. Dissolve—	
D-cycloserine	400.0mg
Polymyxine-B sulphate	25.0mg
Indoxyl-β-D-glucoside	60.0mg
into 8ml sterile water and add it to the medium. Add to the medium—	
Filter-sterilised 0.5% phenolphthalein diphosphate solution	20.0ml
Filter-sterilised 4.5% FeCl ₃ .6H ₂ O	2.0ml

<i>Parameter</i>	<i>Method</i>
<i>Pseudomonas aeruginosa</i>	BS-EN-ISO 12780
* Use the following method to make m-CP agar : Make a basal medium consisting of—	
Tryptose	30.0g
Yeast extract	20.0g
Sucrose	5.0g
L-cysteine hydrochloride	1.0g
MgSO ₄ .7H ₂ O	0.1g
Bromocresol purple	40.0mg
Agar	15.0g
Water	1,000.0ml
Dissolve the ingredients of the basal medium, adjust pH to 7.6 and autoclave at 121°C for 15 minutes. Allow the medium to cool. Dissolve—	
D-cycloserine	400.0mg
Polymyxine-B sulphate	25.0mg
Indoxyl-β-D-glucoside	60.0mg
into 8ml sterile water and add it to the medium. Add to the medium—	
Filter-sterilised 0.5% phenolphthalein diphosphate solution	20.0ml
Filter-sterilised 4.5% FeCl ₃ .6H ₂ O	2.0ml

Table 2**Prescribed performance characteristics for methods of analysis**

<i>Parameters</i>	<i>Trueness % of prescribed concentration or value or specification</i>	<i>Precision % of prescribed concentration or value or specification</i>	<i>Limit of detection % of prescribed concentration or value or specification</i>
Aluminium	10	10	10
Ammonium	10	10	10

Notes:

- (i) The method of analysis should determine total cyanide in all forms.
- (ii) The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.
- (iii) The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part I of Table B in Schedule 1.
- (iv) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part I of Table B in Schedule 1.
- (v) The performance characteristics apply to the prescribed value of 4 NTU.
- (vi) The performance characteristics apply to the specification of 1 NTU for surface waters or ground waters influenced by surface water.

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<i>Parameters</i>	<i>Trueness % of prescribed concentration or value or specification</i>	<i>Precision % of prescribed concentration or value or specification</i>	<i>Limit of detection % of prescribed concentration or value or specification</i>
Antimony	25	25	25
Arsenic	10	10	10
Benzene	25	25	25
Benzo(a)pyrene	25	25	25
Boron	10	10	10
Bromate	25	25	25
Cadmium	10	10	10
Chloride	10	10	10
Chromium	10	10	10
Colour	10	10	10
Conductivity	10	10	10
Copper	10	10	10
Cyanide ⁽ⁱ⁾	10	10	10
1,2-dichloroethane	25	25	10
Fluoride	10	10	10
Iron	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
Pesticides and related products ⁽ⁱⁱ⁾	25	25	25

Notes:

- (i) The method of analysis should determine total cyanide in all forms.
- (ii) The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.
- (iii) The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part I of Table B in Schedule 1.
- (iv) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part I of Table B in Schedule 1.
- (v) The performance characteristics apply to the prescribed value of 4 NTU.
- (vi) The performance characteristics apply to the specification of 1 NTU for surface waters or ground waters influenced by surface water.

<i>Parameters</i>	<i>Trueness % of prescribed concentration or value or specification</i>	<i>Precision % of prescribed concentration or value or specification</i>	<i>Limit of detection % of prescribed concentration or value or specification</i>
Polycyclic aromatic hydrocarbons ⁽ⁱⁱⁱ⁾	25	25	25
Selenium	10	10	10
Sodium	10	10	10
Sulphate	10	10	10
Tetrachloroethene ^(iv)	25	25	10
Tetrachloromethane	20	20	20
Trichloroethene ^(iv)	25	25	10
Trihalomethanes:			
Total ⁽ⁱⁱⁱ⁾	25	25	10
Turbidity ^(v)	10	10	10
Turbidity ^(vi)	25	25	25

Notes:

- (i) The method of analysis should determine total cyanide in all forms.
- (ii) The performance characteristics apply to each individual pesticide and will depend on the pesticide concerned.
- (iii) The performance characteristics apply to the individual substances specified at 25% of the parametric value in Part I of Table B in Schedule 1.
- (iv) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Part I of Table B in Schedule 1.
- (v) The performance characteristics apply to the prescribed value of 4 NTU.
- (vi) The performance characteristics apply to the specification of 1 NTU for surface waters or ground waters influenced by surface water.

SCHEDULE 4

Regulations 12 and 13

Records

Initial records

1.—(1) A local authority must, before [], record the number of private supplies in its area, and for each supply must record—

- (a) the name of the supply, together with a unique identifier;
- (b) the type of source;
- (c) the geographical location using a grid reference;
- (d) an estimate of the number of people supplied;
- (e) an estimate of the average daily volume of water supplied in cubic metres;
- (f) the type of premises supplied;

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- (g) detail of any treatment process, together with its location;
 - (h) the name of the Health Protection Agency in whose area the supply is located.
- (2) It must review and update the record at least once a year.
- (3) It must keep the record for at least 30 years.

Additional records

- 2.—(1) For each supply it must record, within 28 days of each of the following taking place—
- (a) a plan and description of the supply;
 - (b) the monitoring programme for the supply;
 - (c) the risk assessment;
 - (d) the date, results and location of any sampling and analysis relating to that supply, and the reason for taking the sample;
 - (e) the results of any investigation undertaken in accordance with these Regulations;
 - (f) any authorisation;
 - (g) any notices served under section 80 of the Water Industry Act 1991, or regulation 18;
 - (h) any action agreed to be taken by any person under these Regulations;
 - (i) any request for the local authority to carry out sampling and analysis, undertake a risk assessment or give advice;
 - (j) a summary of any advice given in relation to the supply.
- (2) It must keep the risk assessment and records of sampling and analysis for at least thirty years, and all other records under this paragraph for at least five years.

SCHEDULE 5

Regulation 21

Fees

Fee

1. The local authority may charge a fee, payable on invoice, for the activities in the following table, and the fee is the reasonable cost of providing the service subject to the following maximum amounts.

<i>Service</i>	<i>Maximum fee (£)</i>
Risk assessment (each assessment):	500
Sampling (each visit) ⁽ⁱ⁾ :	100
Investigation (each investigation):	100
Granting an authorisation (each authorisation):	100
Analysing a sample—	
taken under regulation 10:	25
taken during check monitoring:	100

(i) No fee is payable where a sample is taken and analysed solely to confirm or clarify the results of the analysis of a previous sample.

<i>Service</i>	<i>Maximum fee (£)</i>
taken during audit monitoring:	500
(i) No fee is payable where a sample is taken and analysed solely to confirm or clarify the results of the analysis of a previous sample.	

Persons liable to pay

2.—(1) Any person requesting anything under these Regulations is liable for the cost.

(2) Otherwise fees are payable, as specified in the invoice, by the relevant person as defined in section 80(7) of the Water Industry Act 1991.

(3) Where more than one person is liable, in determining who is required to make payment the local authority—

- (a) may apportion the charge between them; and
- (b) must have regard to any agreement or other document produced to the local authority relating to the terms on which water is supplied.