

SCHEDULE 1

Regulations 2(1), 7, 8, 17-26 and 28

PRESCRIBED CONCENTRATIONS AND VALUES

Table A

Microbiological parameters

Part I: Directive requirements

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum)</i>	<i>Units of Measurement</i>
1.	Enterococci	0	number/100ml
2.	<i>Escherichia coli</i> (<i>E. coli</i>)	0	number/100ml

Part II: National requirements

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum)</i>	<i>Units of Measurement</i>
1.	Coliform bacteria	0	number/100ml

Table B

Chemical parameters

Part I: Directive requirements

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum)</i>	<i>Units of Measurement</i>
1.	Acrylamide(i)	0.10	µg/l
2.	Antimony	5.0	µgSb/l
3.	Arsenic	10	µgAs/l
4.	Benzene	1.0	µg/l
5.	Benzo(a)pyrene	0.010	µg/l
6.	Boron	1.0	mgB/l
7.	Bromate	10	µgBrO ₃ /l
8.	Cadmium	5.0	µgCd/l

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(1)	(2)	(3)	(4)
Item	Parameters	Concentration or Value (maximum)	Units of Measurement
9.	Chromium	50	µgCr/l
10.	Copper	2.0	mg Cu/l
11.	Cyanide	50	µgCN/l
12.	1,2 dichloroethane	3.0	µg/l
13.	Epichlorohydrin(i)	0.10	µg/l
14.	Fluoride	1.5	mg F/l
15.	Lead	(a) (a) 25, from 3/7/06 until 24/12/13 (b) (b) 10, from 25/12/13	µgPb/l
16.	Mercury	1.0	µgHg/l
17.	Nickel	20	µgNi/l
18.	Nitrate	50	mgNO ₃ /l
19.	Nitrite	0.50	mgNO ₂ /l
20.	Pesticides(ii)–		
	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
21.	Pesticides: Total(iii)	0.50	µg/l
22.	PAH(iv)	0.10	µg/l
23.	Selenium	10	µgSe/l
24.	Tetrachloroethene & Trichloroethene(v)	10	µg/l
25.	THM: Total(vi)	100	µg/l
26.	Vinyl chloride(i)	0.50	µg/l

Notes:

- (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 the definition of “pesticides and related products” in regulation 2(1). The parametric value applies to each individual pesticide.
- (iii) “Pesticides: Total” means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.
- (iv) “PAH” means Polycyclic Aromatic Hydrocarbons, the specified compounds being:

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- 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.

(v) The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

(vi) "THM: Total" means total Trihalomethanes, the specified compounds being:

- 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.

Part II: National requirements

(1)	(2)	(3)	(4)
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum unless otherwise stated)</i>	<i>Units of Measurement</i>
1.	Aluminium	200	µgAl/l
2.	Colour	20	mg/l Pt/Co
3.	Hydrogen ion	9.5 6.5 (minimum)	pH value
4.	Iron	200	µgFe/l
5.	Manganese	50	µgMn/l
6.	Odour	3 at 25°C	Dilution number
7.	Silver(i)	10	µg Ag/l
8.	Sodium	200	mgNa/l
9.	Taste	3 at 25°C	Dilution number
10.	Tetrachloromethane	3	µg/l
11.	Turbidity(ii)	4	NTU
12.	Zinc	5000	µg Zn/l

Notes:

- (i) If Silver is used in a water treatment process, 80 may be substituted for 10.
(ii) Every effort should be made to achieve 1 NTU whenever possible.

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Table C

Indicator parameters

Directive requirements

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum) or State</i>	<i>Units of Measurement</i>
1.	Ammonium	0.50	mgNH ₄ /l
2.	Chloride(i)	250	mgCl/l
3.	Clostridium perfringens (including spores)	0	Number/100 ml
4.	Coliform bacteria	0	Number/100 ml
5.	Colony count	No abnormal change	Number/1 ml at 22°C
6.	Conductivity(i)	2500	µS/cm at 20°C
7.	Sulphate(i)	250	mgSO ₄ /l
8.	Total indicative dose (for radioactivity)(ii)	0.10	mSv/year
9.	Total organic carbon (TOC)	No abnormal change	mgC/l
10.	Tritium (for radioactivity)	100	Bq/l

Notes:

(i) The water should not be aggressive.

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

Table D

Microbiological and Chemical Parameters: Type B Supplies

National Requirements

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item</i>	<i>Parameters</i>	<i>Concentration or Value (maximum)</i>	<i>Units of Measurement</i>
1.	Coliform Bacteria	0	number/100ml
2.	Conductivity (i)	2500	µS/cm at 20°C
3.	Enterococci	0	number/100ml

Notes:

(i) The water should not be aggressive.

(1) Item	(2) Parameters	(3) Concentration or Value (maximum)	(4) Units of Measurement
4.	Escherichia coli (E.coli)	0	number/100ml
5.	Hydrogen ion	9.5	pH value
6.	Lead	6.5 (minimum) (a) (a) 25, $\mu\text{gPb/l}$ from 3/7/06 until 24/12/13 (b) 10, from 25/12/13	
7.	Nitrate	50	mgNO_3/l
8.	Odour-qualitative		
9.	Taste-qualitative		
10.	Turbidity	4	NTU

Notes:
(i) The water should not be aggressive.

SCHEDULE 2

Regulations 21-23, 29 and 30

PARAMETERS, MONITORING AND SAMPLING FREQUENCIES

Table A

Check Monitoring: Type A Supplies

(1) Item	(2) Parameter	<i>Annual sampling frequency (iv)(v) Volume of water distributed or produced each day within a supply zone (m^3)(ii)(iii)</i>		
		(3) ≤ 100 Level 1	(4) > 100– ≤ 1000 Level 2	(5) > 1000 Level 3(i)
1.	Aluminium (vi)	1	4(2)	X(X/2)
2.	Ammonium	1	4(2)	X(X/2)
3.	Clostridium perfringens (vii)	1	4	X

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(1) Item	(2) Parameter	Annual sampling frequency (iv)(v) Volume of water distributed or produced each day within a supply zone (m ³)(ii)(iii)		
		(3) ≤100 Level 1	(4) > 100– ≤1000 Level 2	(5) > 1000 Level 3(i)
	(including spores)			
4.	Coliform bacteria	1	4	X
5.	Colony counts	1	4	X
6.	Colour	1	4(2)	X(X/2)
7.	Conductivity	1	4(2)	X(X/2)
8.	Escherichia coli (E.coli)	1	4	X
9.	Hydrogen ion	1	(2)	X(X/2)
10.	Iron (vi)	1	4(2)	X(X/2)
11.	Nitrite (viii)	1	4(2)	X(X/2)
12.	Odour	1	4(2)	X(X/2)
13.	Taste	1	4(2)	X(X/2)
14.	Turbidity	1	4	X

Notes:

- (i) The sampling frequency (X) shall be determined as $X = 4 + (3 \text{ for each } 1,000 \text{ m}^3/\text{d and part thereof of the total volume})$.
- (ii) A supply zone is a geographically defined area within which water intended for human consumption comes from one or more sources and within which water quality may be considered as being approximately uniform.
- (iii) The volumes are calculated as averages taken over a calendar year or using consumption based on the number of inhabitants, assuming a water consumption rate of 200 l/day/capita.
- (iv) Values in (brackets) in columns (4) and (5) are reduced sampling frequencies which may be applied if–
 - (a) the values of the results obtained from samples taken during a period of at least two successive years are constant and significantly better than the limits laid down in Schedule 1; and
 - (b) no factor is likely to cause a deterioration of the quality of the water.
- (v) As far as possible, the number of samples should be distributed equally in time and location and should be representative of the quality of water consumed or available for consumption throughout the year.
- (vi) Necessary only when used as a flocculant. In all other cases the parameter will be sampled according to the frequency specified for audit monitoring (Table B of Schedule 2).
- (vii) Necessary only if the water originates from, or is influenced by, surface water. In all other cases the parameter will be sampled according to the frequency specified for audit monitoring (Table B of Schedule 2).
- (viii) Necessary only when chloramination is used as a disinfectant. In all other cases the parameter will be sampled according to the frequency specified for audit monitoring (Table B of Schedule 2).

Table B
Audit Monitoring: Type A Supplies

(1)	(2)	<i>Annual sampling frequency</i> <i>Volume of water distributed or produced each day</i> <i>within a supply zone (m³)(ii)(iii)</i>		
		(3)	(4)	(5)
<i>Item</i>	<i>Parameters</i>	≤ 100 <i>Level 1</i>	$> 100 -$ ≤ 1000 <i>Level 2</i>	> 1000 <i>Level 3(i)</i>
1.	Acrylamide	1	1	Y
2.	Aluminium	1	1	Y
3.	Antimony	1	1	Y
4.	Arsenic	1	1	Y
5.	Benzene	1	1	Y
6.	Benzo(a)pyrene	1	1	Y
7.	Boron	1	1	Y
8.	Bromate	1	1	Y
9.	Cadmium	1	1	Y
10.	Chloride	1	1	Y
11.	Chromium	1	1	Y
12.	<i>Clostridium</i> <i>perfringens</i> (including spores)	1	1	Y
13.	Copper	1	1	Y
14.	Cyanide	1	1	Y
15.	1,2 dichloroethane	1	1	Y
16.	Enterococci	1	1	Y

Notes:

(i) The sampling frequency (Y) shall be determined by—

<i>Volume of water supplied each day (m³)</i>	<i>Y</i>
$> 1000 - \leq 10,000$	1 + (1 for each 3,300 m ³ /d and part thereof of total volume)
$> 10,000 - \leq 100,000$	3 + (1 for each 10,000 m ³ /d and part thereof of total volume)
$> 100,000$	10 + (1 for each 25,000 m ³ /d and part thereof of total volume)

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(1) <i>Item</i>	(2) <i>Parameters</i>	<i>Annual sampling frequency</i> <i>Volume of water distributed or produced each day</i> <i>within a supply zone (m³)(ii)(iii)</i>		
		(3) <i>≤100</i> <i>Level 1</i>	(4) <i>> 100 –</i> <i>≤1000</i> <i>Level 2</i>	(5) <i>> 1000</i> <i>Level 3(i)</i>
17.	Epichlorohydrin	1	1	Y
18.	Fluoride	1	1	Y
19.	Iron	1	1	Y
20.	Lead	1	1	Y
21.	Manganese	1	1	Y
22.	Mercury	1	1	Y
23.	Nickel	1	1	Y
24.	Nitrate	1	1	Y
25.	Nitrite	1	1	Y
26.	Pesticides	1	1	Y
27.	Pesticides – Total	1	1	Y
28.	Polycyclic Aromatic Hydrocarbons	1	1	Y
29.	Selenium	1	1	Y
30.	Silver	1	1	Y
31.	Sodium	1	1	Y
32.	Sulphate	1	1	Y
33.	Tetrachloroethene and Trichloroethene	1	1	Y
34.	Tetrachloromethane		1	Y

Notes:

(i) The sampling frequency (Y) shall be determined by–

<i>Volume of water supplied each day (m³)</i>	<i>Y</i>
> 1000 – ≤ 10,000	1 + (1 for each 3,300 m ³ /d and part thereof of total volume)
> 10,000 – ≤ 100,000	3 + (1 for each 10,000 m ³ /d and part thereof of total volume)
> 100,000	10 + (1 for each 25,000 m ³ /d and part thereof of total volume)

(1) Item	(2) Parameters	Annual sampling frequency Volume of water distributed or produced each day within a supply zone (m ³)(ii)(iii)		
		(3) ≤100 Level 1	(4) > 100 – ≤1000 Level 2	(5) > 1000 Level 3(i)
35.	Total indicative dose	1	1	Y
36.	Total organic carbon	1	1	Y
37.	Trihalomethanes – Total	1	1	Y
38.	Tritium	1	1	Y
39.	Vinyl chloride	1	1	Y
40.	Zinc	1	1	Y

Notes:

(i) The sampling frequency (Y) shall be determined by–

Volume of water supplied each day (m ³)	Y
> 1000 – ≤ 10,000	1 + (1 for each 3,300 m ³ /d and part thereof of total volume)
> 10,000 – ≤ 100,000	3 + (1 for each 10,000 m ³ /d and part thereof of total volume)
> 100,000	10 + (1 for each 25,000 m ³ /d and part thereof of total volume)

Table C

Routine Monitoring: Type B Supplies

Parameters

1. Coliform bacteria
2. Conductivity
3. Enterococci
4. *Escherichia coli* (E. coli)
5. Hydrogen ion
6. Lead
7. Nitrate(i)
8. Odour – qualitative(ii)
9. Taste – qualitative(ii)

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

10. Turbidity

Notes:

- (i) Samples need not be analysed for nitrate if there are reasonable grounds for believing that nitrate levels in the locality concerned are below 25 mg NO₃/l.
- (ii) Samples should not be assessed qualitatively if there are reasonable grounds for suspecting that the water may give rise to a health hazard.

SCHEDULE 3

Regulation 26

CIRCUMSTANCES AND CONDITIONS TO BE CONSIDERED BY A MONITORING LOCAL AUTHORITY: DECISION ON AUDIT MONITORING

(1) Where a monitoring local authority carries out an investigation in relation to a Type A supply for the purposes of regulation 26, it shall do so in accordance with the provisions of this Schedule and shall take into account the matters specified in Schedule 4.

(2) Where a monitoring local authority considers that one or more of the parameters listed in the Table in this Schedule is not likely to be present in a Type A supply in its area in concentrations which could lead to the risk of a breach of the parametric value in respect of the parameters specified in Table B of Schedule 2, it shall undertake such investigations as are considers reasonable to satisfy itself–

- (a) that the circumstances referred to in column 3 of the Table in this Schedule in respect of that parameter do not exist; and
- (b) whether any of the conditions referred to in column 4 of the Table in this Schedule in respect of that parameter, apply.

(3) Where a monitoring local authority is satisfied, as a result of its investigations under paragraph (2), that in respect of the supply, one or more of the parameters referred to in column 2 of the Table in this Schedule is not likely to be present in that supply in concentrations which could lead to the risk of a breach of the said parametric value in respect of such parameters, it may make a decision in accordance with regulation 26.

Table

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>
<i>Item No.</i>	<i>Parameter</i>	<i>Circumstances in which parameter is likely to be present</i>	<i>Conditions to be satisfied before a decision may be made</i>
(1)	Acrylamide	<ul style="list-style-type: none"> • Residual acrylamide monomer occurs in polyacrylamide coagulants used in drinking water treatment. • May also be used as 	<ul style="list-style-type: none"> • Coagulation is not practised. • Grouting agents are present but that they do not have an acrylamide content.

<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
(2)	Aluminium	<p>grouting agents (polyacrylamide) in wells/borehole linings.</p> <ul style="list-style-type: none"> Aluminium salts are widely used in water treatment as coagulants to reduce organic matter, colour, turbidity and micro organism levels. 	<ul style="list-style-type: none"> Coagulation is not practised.
(3)	Antimony	<ul style="list-style-type: none"> Most common source of antimony in drinking water appears to be dissolution from metal plumbing fittings. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that antimony is not present at or above 75% of PCV then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(4)	Arsenic	<ul style="list-style-type: none"> Arsenic is introduced into drinking water sources primarily through the dissolution of naturally occurring minerals and ores. Arsenic in drinking water is a significant source of health 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that arsenic is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency

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<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
		<p>effects in some areas.</p> <ul style="list-style-type: none"> • Arsenic is considered to be a high-priority substance for screening in drinking water sources. • Concentrations are highly dependent on the depth to which a well or borehole is sunk. 	<p>specified in Schedule 2.</p>
<i>(5)</i>	Benzene	<ul style="list-style-type: none"> • Benzene is used principally in the production of other organic chemicals. • As benzene is present in petrol, vehicular emissions constitute the main source of the chemical in the environment. • Benzene may be introduced into water by industrial effluents and atmospheric pollution. 	<ul style="list-style-type: none"> • Where the source of the supply comprises groundwater (well, spring, borehole or similar) the area in which the source is located must be an area devoid of industrial activity (current or historic) or hydrocarbon stores (current or historic) eg, underground petroleum tanks. • Where the source of the supply comprises surface water, the area in which the source is located must be an area remote from areas of industrial activity (current or historic)

<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
			or remote from areas of high vehicular activity.
(6)	Benzo(a)pyrene	<ul style="list-style-type: none"> • See PAH 	<ul style="list-style-type: none"> • See PAH
(7)	Boron	<ul style="list-style-type: none"> • Boron is found naturally in groundwater but its presence in surface water is frequently a consequence of the discharge of treated sewage effluent, in which it arises from its use in detergents, to surface water. 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Boron is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(8)	Bromate	<ul style="list-style-type: none"> • Bromate is not normally found in water but may be formed during ozonation when the bromide ion is present in water. • Under certain conditions bromate may also be found in concentrated hypochlorite solutions used to disinfect drinking water including electrolytic production of chlorine from sodium chloride 	<ul style="list-style-type: none"> • No ozonation or chlorination to be undertaken on the supply.

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(1) <i>Item No.</i>	(2) <i>Parameter</i>	(3) <i>Circumstances in which parameter is likely to be present</i>	(4) <i>Conditions to be satisfied before a decision may be made</i>
(9)	Cadmium	<ul style="list-style-type: none"> • Cadmium is released into the environment in wastewater. • Diffuse pollution is also caused by contamination from fertilizers and local air pollution. • Contamination in drinking water may also be caused by impurities in the zinc of galvanised pipes and solders and some metal fittings. 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Cadmium is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(10)	Chromium	<ul style="list-style-type: none"> • Chromium is widely distributed in the Earth's crust. Soils and rocks may contain small amounts. 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Chromium is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(11)	Copper	<ul style="list-style-type: none"> • Copper concentrations in drinking water vary widely with the primary source most often being the corrosion of 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Copper is not present at or above 75% of PCV, then an exemption may be granted under

<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
		interior copper plumbing. • Copper concentrations in treated water often increase during distribution, especially in systems with an acid pH or high carbonate waters with an alkaline pH. • Consumption of standing or partially flushed water from a distribution system that includes copper pipes or fittings can considerably increase total daily copper exposure, especially for infants fed formula reconstituted with tap water.	regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(12)	Cyanide	• Cyanides are occasionally found in drinking water primarily as a consequence of industrial contamination.	• If the monitoring local authority is satisfied that Cyanide is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency

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<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
(13)	1,2 dichloroethane	<ul style="list-style-type: none"> • 1,2 dichloroethane is used mainly as an intermediate in the production of vinyl chloride and other chemicals and to a lesser extent as a solvent. • It may enter surface waters via effluents from industries that manufacture or use the substance. • It may also enter groundwater, where it persists for long periods, following disposal in waste sites. 	<p>specified in Schedule 2.</p> <ul style="list-style-type: none"> • If the monitoring local authority is satisfied that 1,2 dichloroethane is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(14)	Epichlorohydrin	<ul style="list-style-type: none"> • Epichlorohydrin is used for the manufacture of glycerol, unmodified epoxy resins and water treatment resins. • It is also found in some polyamine flocculants. 	<ul style="list-style-type: none"> • Coagulation is not practiced using polyamine flocculants. • If ion exchange resins are present in the system then it should be sampled for against the prescribed frequency specified in Schedule 2.
(15)	Fluoride	<ul style="list-style-type: none"> • Fluoride is present in a number of minerals. 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Fluoride is not present at or

<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
		<ul style="list-style-type: none"> Fluoride may also be present in phosphate fertilizers. 	<p>above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.</p>
(16)	Iron	<ul style="list-style-type: none"> Iron is found in natural fresh waters. Iron may also be present in drinking water as a result of iron coagulants or the corrosion of steel and cast iron pipes during water distribution. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Iron is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(17)	Lead	<ul style="list-style-type: none"> Lead is rarely present in tap water as a result of its dissolution from natural sources. The presence of lead is primarily from household plumbing systems containing lead in pipes, solder, fittings or the service connections to homes. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Lead is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(18)	Manganese	<ul style="list-style-type: none"> Manganese is naturally 	<ul style="list-style-type: none"> If the monitoring local authority

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<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
(19)	Mercury	<p>occurring in many surface and groundwater sources, particularly in anaerobic or low oxidation conditions.</p> <ul style="list-style-type: none"> • Manganese greensands are used in some locations for potable water treatment. • Mercury can be used in the electrolytic production of chlorine. 	<p>is satisfied that Manganese is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.</p> <ul style="list-style-type: none"> • If electrolytic production of chlorine is used as part of the treatment process the supply should be sampled as specified in Schedule 2; • if electrolytic production of chlorine is not used as part of the treatment process, and if the monitoring local authority is satisfied that mercury is not present at or above 75% of PCV, then an exemption under regulation 26 may be granted, otherwise it should be sampled for at the frequency

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(20)	Nickel	<ul style="list-style-type: none"> Nickel may be present as a result of plumbing fittings eg from nickel- or chromium-plated taps. 	<p>specified in Schedule 2.</p> <ul style="list-style-type: none"> If the monitoring local authority is satisfied that Nickel is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(21)	Nitrate	<ul style="list-style-type: none"> Nitrate is used mainly in inorganic fertilisers. The nitrate concentration in groundwater and surface water is normally low but can reach high levels as a result of leaching or runoff from agricultural land or contamination from human or animal wastes as a consequence of oxidation of ammonia or similar sources. 	<ul style="list-style-type: none"> If the supply is in an area where agricultural fertilisers are used then the supply should be sampled as specified in Schedule 2; if the supply is in an area where agricultural fertilisers are not used, and if the monitoring local authority is satisfied that nitrate is not present at or above 75% of PCV, then an exemption under regulation 26 may be granted, otherwise it should be sampled for at the frequency

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(22)	Nitrite	<ul style="list-style-type: none"> Nitrite is formed during the decomposition of organic matter but high concentrations are usually associated with poor control of chloramination or chlorine disinfection of water containing significant amounts of ammonium ions. 	<p>specified in Schedule 2.</p> <ul style="list-style-type: none"> If the monitoring local authority is satisfied that Nitrite is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(24)	Pesticides	<ul style="list-style-type: none"> See definition of “pesticides and related products” in regulation 2(1). The range of pesticides and related products that may be being used in any one area should be assessed on an individual supply basis. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Pesticides are not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise they should be sampled for at the frequency specified in Schedule 2.
(25)	Pesticides – Total	<ul style="list-style-type: none"> “Pesticides – Total” means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure. 	<ul style="list-style-type: none"> See Pesticides.

(1) <i>Item No.</i>	(2) <i>Parameter</i>	(3) <i>Circumstances in which parameter is likely to be present</i>	(4) <i>Conditions to be satisfied before a decision may be made</i>
(26)	Polycyclic Aromatic Hydrocarbons (PAH)	<ul style="list-style-type: none"> The main source of PAH contamination in drinking water is usually the coal-tar coating of drinking water distribution pipes used to protect the pipes from corrosion. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that PAH are not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise they should be sampled for at the frequency specified in Schedule 2.
(27)	Selenium	<ul style="list-style-type: none"> Selenium is present in the Earth's crust, often in association with sulphur-containing minerals and hence the concentration in drinking water will vary with local geology and geography. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Selenium is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(28)	Silver	<ul style="list-style-type: none"> Silver may be used in some water treatment devices where it is used for disinfection purposes. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Silver is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at

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(29)	Sodium	<ul style="list-style-type: none"> Concentrations in potable water are typically low but some water softeners can add significantly to the sodium content of drinking water. 	<p>the frequency specified in Schedule 2.</p> <ul style="list-style-type: none"> If the monitoring local authority is satisfied that Sodium is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(30)	Sulphate	<ul style="list-style-type: none"> Sulphates occur naturally in numerous minerals and are used commercially but the highest levels found in groundwaters are from natural sources. Sulphates may occur in surface waters that have received industrial discharges. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Sulphate is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(31)	Tetrachloroethene and Trichloroethene	<ul style="list-style-type: none"> These chemicals are used primarily as solvents in dry cleaning industries and as degreasing solvents. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Tetrachloroethene and Trichloroethene are not present at or above 75% of PCV, then an

(1) <i>Item No.</i>	(2) <i>Parameter</i>	(3) <i>Circumstances in which parameter is likely to be present</i>	(4) <i>Conditions to be satisfied before a decision may be made</i>
			<p>exemption may be granted under regulation 26, otherwise they should be sampled for at the frequency specified in Schedule 2.</p>
(32)	Tetrachloromethane	<ul style="list-style-type: none"> Chlorinated organic compound (also known as carbon tetrachloride) that is a very efficient solvent for fats and greases, and was at one time the main constituent of household dry-cleaning fluids and of fire extinguishers used with electrical and petrol fires. 	<ul style="list-style-type: none"> If the monitoring local authority is satisfied that Tetrachloromethane is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(33)	Total indicative dose	<ul style="list-style-type: none"> Routine monitoring for Total indicative dose is achieved through screening for gross alpha and gross beta. 	<ul style="list-style-type: none"> If a monitoring local authority is satisfied that on the basis of other monitoring carried out, the Total indicative dose in a supply is well below the prescribed value, the authority may seek a regulation 24 notice from the Scottish Ministers confirming that the supply need not be monitored

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(34)	Trihalomethanes – Total	<ul style="list-style-type: none"> These compounds are generated principally as by-products of the chlorination of drinking water, being formed from naturally occurring organic compounds. 	<p>in respect of Total indicative dose.</p> <ul style="list-style-type: none"> No chlorination is undertaken on the supply.
(35)	Tritium	<ul style="list-style-type: none"> Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotope Lithium-6 is bombarded to produce Tritium. 	<ul style="list-style-type: none"> If a monitoring local authority is satisfied that on the basis of other monitoring carried out, the level of Tritium in a supply is well below the prescribed value, the authority may seek a regulation 24 notice from the Scottish Ministers confirming that the supply need not be monitored for Tritium.
(36)	Vinyl chloride	<ul style="list-style-type: none"> Vinyl chloride is used primarily for the production of PVC. When unplasticised 	<ul style="list-style-type: none"> Unplasticised PVC pipes not present. If the monitoring local authority is satisfied that Vinyl chloride

<i>(1)</i> <i>Item No.</i>	<i>(2)</i> <i>Parameter</i>	<i>(3)</i> <i>Circumstances in which parameter is likely to be present</i>	<i>(4)</i> <i>Conditions to be satisfied before a decision may be made</i>
		PVC is in contact with water it is possible for the vinyl chloride monomer to be released into the water. <ul style="list-style-type: none"> • Unplasticised PVC pipes should not be used for drinking water supplies. This is controlled by product specification. 	is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.
(37)	Zinc	<ul style="list-style-type: none"> • Traces of zinc occur naturally in many water sources but significant concentrations may occur as a consequence of the use of brass fittings and galvanised iron pipes. 	<ul style="list-style-type: none"> • If the monitoring local authority is satisfied that Zinc is not present at or above 75% of PCV, then an exemption may be granted under regulation 26, otherwise it should be sampled for at the frequency specified in Schedule 2.

SCHEDULE 4

Regulations 16 and 26 and 27

REQUIREMENTS FOR RISK ASSESSMENT

(1) When undertaking or reviewing and updating a risk assessment for the purposes of regulations 16 and 27, a monitoring local authority shall do so in accordance with the provisions of this Schedule.

(2) A risk assessment shall comprise the following—

- (a) documentation on and a description of the private water supply, including the catchment from which the supply draws water;
- (b) a hazard assessment and risk characterisation;

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- (c) an identification of the measures by which risks may be controlled; and
- (d) establishment of verification procedures,

and for the purposes of this paragraph, “hazard” means a biological, chemical, physical or radiological agent that has the potential to cause harm or danger to human health; and “risk” means the likelihood of identified hazards causing harm in exposed populations in a specified time, including the magnitude of that harm and/or the consequences of such harm.

(3) In respect of a private water supply which comprises, either alone or in any combination thereof, catchments, surface water or ground water, the risk assessment shall include provision in relation to the relevant matters specified in Table A of this Schedule.

(4) In respect of a private water supply which receives treatment, including treatment at source and at any point thereafter, the risk assessment shall make provision in relation to the relevant matters specified in Table B of this Schedule.

(5) In respect of a private water supply which comprises intermediate tanks and distribution, the risk assessment shall include provision in relation to the relevant matters specified in Table C of this Schedule.

Table A
Hazard Information and Risk Characterisation

<i>(1)</i>	<i>(2)</i>
<i>Source of private water supply</i>	<i>Information to be considered in the risk assessment</i>
(1) Catchments	<ul style="list-style-type: none"> (i) geology and hydrology (ii) meteorology and weather patterns (iii) general catchment and river health (iv) wildlife (v) competing water uses (vi) nature and intensity of development and land use (vii) other activities in the catchment that potentially release contaminants into source water (viii) planned future activities
(2) Surface water	<ul style="list-style-type: none"> (i) description of water body type (e.g. river, reservoir, dam) (ii) flow and reliability of source water (iii) retention times (iv) water constituents (physical, chemical, microbial) (v) protection (e.g. enclosures, access) (vi) recreational and other human activity (vii) bulk water transport
(3) Groundwater	<ul style="list-style-type: none"> (i) confined or unconfined aquifer (ii) aquifer hydrogeology (iii) flow rate and direction (iv) dilution characteristics (v) recharge area (vi) wellhead protection

(1)	(2)
<i>Source of private water supply</i>	<i>Information to be considered in the risk assessment</i>
	(vii) depth of casing
	(viii) bulk water transport

Table B

Treatment: Hazard Identification and Risk Characterisation

-
- (i) treatment processes
 - (ii) equipment design
 - (iii) monitoring equipment and automation
 - (iv) water treatment chemicals used
 - (v) treatment efficiencies
 - (vi) disinfection removals of pathogens
 - (vii) disinfection residuals/contact time
 - (viii)
-

Table C

Intermediate Tanks and Distribution: Hazard Identification and Risk Characterisation

-
- (i) reservoir/tank design
 - (ii) retention times
 - (iii) seasonal variations
 - (iv) protection (e.g. covers, enclosures, access)
 - (v) distribution system design
 - (vi) hydraulic conditions (e.g. water age, pressures, flows)
 - (vii) backflow protection
 - (viii) disinfectant residuals
-

SCHEDULE 5

Regulations 22, 29 and 31

ANALYTICAL METHODOLOGY

Table A**Parameters for which, subject to regulation 31(4), methods of analysis are prescribed**

(1)	(2)
<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(i) at $44 \pm 1^\circ\text{C}$ 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	ISO 9308-1
Colony count 22°C – enumeration of culturable micro-organisms	prEN ISO 6222
Enterococci	ISO 7899-2
<i>Escherichia coli</i> (<i>E.coli</i>)	ISO 9308-1
(i) The composition of m-CP agar is: Basal medium	
Tryptose	30g
Yeast extract	20g
Sucrose	5g
L-cysteine	1g
MgSO ₄ . 7H ₂ O	0.1g
Bromocresol purple	40mg
Agar	15g
Water	1,000ml
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 and add:	
D-cycloserine	400mg
Polymyxine-B-sulphate	25mg
Indoxyl- β -D-glucoside	60mg
to be dissolved in 8ml sterile water before addition	
Filter – sterilised 0.5% phenolphthalein disphosphate solution	20ml
Filter – sterilised 4.5% FeC13 . 6H ₂ O	2ml

Table B**Parameters in relation to which methods of analysis must satisfy prescribed characteristics**

<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>
<i>Item No.</i>	<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>
1.	Aluminium	10	10	10
2.	Ammonium	10	10	10
3.	Antimony	25	25	25
4.	Arsenic	10	10	10
5.	Benzene	25	25	25
6.	Benzo(a)pyrene	25	25	25
7.	Boron	10	10	10
8.	Bromate	25	25	25
9.	Cadmium	10	10	10
10.	Chloride	10	10	10
11.	Chromium	10	10	10
12.	Colour	10	10	10
13.	Conductivity	10	10	10
14.	Copper	10	10	10
15.	Cyanide(i)	10	10	10
16.	1,2- dichloroethane	25	25	25
17.	Fluoride	10	10	10
18.	Iron	10	10	10
19.	Lead	10	10	10
20.	Manganese	10	10	10
21.	Mercury	20	10	20

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 Table B in Schedule 1.
- (iv) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Table B in Schedule 1.
- (v) The performance characteristics apply to the prescribed value of 4NTU.

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(1)	(2)	(3)	(4)	(5)
Item No.	Parameters	Trueness % of prescribed concentration or value or specification	Precision % of prescribed concentration or value or specification	Limit of detection % of prescribed concentration or value or specification
22.	Nickel	10	10	10
23.	Nitrate	10	10	10
24.	Nitrite	10	10	10
25.	Pesticides and related products(ii)	25	25	25
26.	Polycyclic aromatic hydrocarbons(iii)	25	25	25
27.	Selenium	10	10	10
28.	Sodium	10	10	10
29.	Sulphate	10	10	10
30.	Tetrachloroethene(i)(v)	25	25	10
31.	Tetrachloromethane	20	20	20
32.	Trichloroethene(iv)	25	25	10
33.	Trihalomethanes: Total	25(iii)	25	10
34.	Turbidity(v)	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 Table B in Schedule 1.
- (iv) The performance characteristics apply to the individual substances specified at 50% of the parametric value in Table B in Schedule 1.
- (v) The performance characteristics apply to the prescribed value of 4NTU.