

## SCHEDULE 1

Regulation 2

## Prescribed concentrations and values

**Table A****Microbiological parameters**

## Part I: Directive requirements

<b>(1) Item</b>	<b>(2) Parameters</b>	<b>(3) Concentration or value (maximum)</b>	<b>(4) Units of measurement</b>	<b>(5) Point of compliance</b>
1.	<i>Enterococci</i>	0	number/100ml	Consumers' taps
2.	<i>Escherichia coli</i> ( <i>E. coli</i> )	0	number/100ml	Consumers' taps

## Part II: National requirements

<b>(1) Item</b>	<b>(2) Parameters</b>	<b>(3) Concentration or value (maximum)</b>	<b>(4) Units of measurement</b>	<b>(5) Point of compliance</b>
1.	Coliform bacteria	0	number/100ml	Service reservoirs <sup>1</sup> and water treatment works
2.	<i>Escherichia coli</i> ( <i>E. coli</i> )	0	number/100ml	Service reservoirs and water treatment works

<sup>1</sup> Compliance required as to 95% of samples from each service reservoir (regulation 4(6)).**Table B****Chemical parameters**

## Part I: Directive requirements

<b>(1) Item</b>	<b>(2) Parameters</b>	<b>(3) Concentration or value (maximum)</b>	<b>(4) Units of measurement</b>	<b>(5) Point of compliance</b>
1.	Acrylamide	0.10	µg/l	<sup>1</sup>
2.	Antimony	5.0	µgSb/l	Consumers' taps
3.	Arsenic	10	µgAs/l	Consumers' taps
4.	Benzene	1.0	µg/l	Consumers' taps
5.	Benzo(a)pyrene	0.010	µg/l	Consumers' taps
6.	Boron	1.0	mgB/l	Consumers' taps
7.	Bromate	10	µgBrO <sub>3</sub> /l	Consumers' taps
8.	Cadmium	5.0	µgCd/l	Consumers' taps

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

9.	Chromium	50	µgCr/1	Consumers' taps
10.	Copper	2.0	mgCu/1	Consumers' taps
11.	Cyanide	50	µgCN/1	Consumers' taps
12.	1, 2 dichloroethane	3.0	µg/1	Consumers' taps
13.	Epichlorohydrin	0.10	µg/1	<sup>1</sup>
14.	Fluoride	1.5	mgF/1	Consumers' taps
15.	Lead	10	µgPb/1	Consumers' taps
16.	Mercury	1.0	µgHg/1	Consumers' taps
17.	Nickel	20	µgNi/1	Consumers' taps
18.	Nitrate <sup>2</sup>	50	mgNO <sub>3</sub> /1	Consumers' taps
19.	Nitrite <sup>2</sup>	0.50	mgNO <sub>2</sub> /1	Consumers' taps
		0.10		Treatment works
20.	Pesticides <sup>34</sup>	0.030	µg/1	Consumers' taps
	Aldrin			
	Dieldrin	0.030	µg/l	Consumer's taps
	Heptachlor			
	Heptachlor epoxide			
	Other pesticides	0.10	µg/1	Consumers' taps
21.	Pesticides: total <sup>5</sup>	0.50	µg/1	Consumers' taps
22.	Polycyclic aromatic hydrocarbon <sup>6</sup>	0.10	µg/1	Consumers' taps
23.	Selenium	10	µgSe/1	Consumers' taps
24.	Tetrachloroethene and Trichloroethene <sup>7</sup>	10	µg/1	Consumers' taps
25.	Trihalomethanes: Total <sup>8</sup>	100	µg/1	Consumers' taps
26.	Vinyl chloride	0.50	µg/1	<sup>1</sup>

<sup>1</sup> 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.

<sup>2</sup> See also regulation 4(2)(d).

<sup>3</sup> See the definition of "pesticides and related products" in regulation 2.

<sup>4</sup> The parametric value applies to each individual pesticide.

<sup>5</sup> "Pesticides: total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.

<sup>6</sup> The specified compounds are—  
The specified compounds are—  
— benzo(b)fluoranthene;  
— benzo(k)fluoranthene;

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

— 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.

<sup>7</sup> The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

<sup>8</sup> The specified compounds are—  
 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.

Part II: National requirements

(1) Item	(2) Parameters	(3) Concentration or value (maximum)	(4) Units of measurement	(5) Point of compliance
1.	Aluminium	200	µgAl/1	Consumers' taps
2.	Colour	20	mg/1 Pt/Co	Consumers' taps
3.	Iron	200	µgFe/1	Consumers' taps
4.	Manganese	50	µgMn/1	Consumers' taps
5.	Odour	Acceptable to consumers and no abnormal change		Consumers' taps
6.	Sodium	200	mgNa/1	Consumers' taps
7.	Taste	Acceptable to consumers and no abnormal change		Consumers' taps
8.	Tetrachloromethane	3	µg/1	Consumers' taps
9.	Turbidity	4	NTU	Consumers' taps

SCHEDULE 2

Regulation 2

Indicator parameters

(1)	(2)	(3)	(4)	(5)
				<sup>1</sup> The water should not be aggressive.
				<sup>2</sup> Where treatment to reduce the level of radionuclides in water intended for human consumption has been taken, monitoring must be carried out to ensure the continued efficacy of the treatment.
				<sup>3</sup> Remedial action may be taken by the Secretary of State on radiological protection grounds without further consideration and deemed to be justified where radon concentrates exceed 1,000 Bq/l.
				<sup>4</sup> If tritium concentration exceeds its parametric value, an investigation (which may include analysis) of the presence of artificial radionuclides is required.
				<sup>5</sup> May be monitored from samples of water leaving treatment works or other supply point, as no significant change during distribution.

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

Item	Parameters	Specification concentration or value (maximum unless otherwise stated) or state	Units of measurement	Point of compliance
1.	Ammonium	0.50	mgNH <sub>4</sub> /l	Consumers' taps
2.	Chloride <sup>1</sup>	250	mgCl/	Supply point <sup>5</sup>
3.	<i>Clostridium Perfringens</i> (including spores)	0	Number/100ml	Supply point <sup>5</sup>
4.	Coliform bacteria	0	Number/100ml	Consumers' taps
5.	Colony counts	No abnormal change	Number/1ml at 22°C	Consumers' taps, service reservoirs and treatment works
6.	Conductivity <sup>1</sup>	2500	µS/cm at 20°C	Supply point <sup>5</sup>
7.	Hydrogen ion	9.5 (maximum) 6.5 (minimum)	pH value	Consumers' taps
8.	Indicative dose <sup>2</sup>	0.10	mSv	Supply point <sup>5</sup>
	(a) gross alpha	0.1	Bq/l	Supply point <sup>5</sup>
	(b) gross beta	1	Bq/l	Supply point <sup>5</sup>
9.	Radon <sup>3</sup>	100	Bq/l	Supply point
10.	Sulphate <sup>1</sup>	250	mgSO <sub>4</sub> /l	Supply point <sup>5</sup>
11.	Total organic carbon (TOC)	No abnormal change	mgC/l	Supply point
12.	Tritium radioactivity <sup>4</sup>	(for 100	Bq/l	Supply point <sup>5</sup>
13.	Turbidity	1	NTU	Treatment works

<sup>1</sup> The water should not be aggressive.

<sup>2</sup> Where treatment to reduce the level of radionuclides in water intended for human consumption has been taken, monitoring must be carried out to ensure the continued efficacy of the treatment.

<sup>3</sup> Remedial action may be taken by the Secretary of State on radiological protection grounds without further consideration and deemed to be justified where radon concentrates exceed 1,000 Bq/l.

<sup>4</sup> If tritium concentration exceeds its parametric value, an investigation (which may include analysis) of the presence of artificial radionuclides is required.

<sup>5</sup> May be monitored from samples of water leaving treatment works or other supply point, as no significant change during distribution.

[<sup>F1</sup>SCHEDULE 3

Regulation 6

## Monitoring

**Textual Amendments**

- F1** Sch. 3 substituted (11.7.2018) by [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(13)**

## PART 1

## Group A and Group B parameters

Table 1

**Group A parameters and circumstances for monitoring**

<i>(1) Item number</i>	<i>(2) Parameter</i>	<i>(3) Circumstances</i>
1	Aluminium	Where used as a water treatment chemical or where the water originates from, or is influenced by, surface waters
2	Ammonium	Where chloramination is practised
3	Coliform bacteria	In all circumstances
4	Colony counts 22°C	In all circumstances
5	Colour	In all circumstances
6	Conductivity	In all circumstances
7	<i>E. coli</i>	In all circumstances
8	Hydrogen ion	In all circumstances
9	Iron	Where used as a water treatment chemical or where the water originates from, or is influenced by, surface waters
10	Manganese	Where the water originates from, or is influenced by, surface waters
11	Nitrate	Where chloramination is practised
12	Nitrite	Where chloramination is practised
13	Odour	In all circumstances
14	Residual disinfectant	In all circumstances
15	Taste	In all circumstances
16	Turbidity	In all circumstances

(1) Sampling for this parameter in water supply zones may be substituted by sampling at supply points.

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

Table 2

**Group B1 parameters and circumstances for monitoring to be used for sampling in water supply zones (or supply points)**

(1) Item number	(2) Parameter	(3) Circumstances
1	Aluminium	Where not used as a water treatment chemical or where the water neither originates from, nor is influenced by, surface waters
2	Ammonium	Where chloramination is not practised
3	Antimony	In all circumstances
4	Arsenic	In all circumstances
5	Benzene	In all circumstances
6	Benzo(a)pyrene	In all circumstances
7	Boron	In all circumstances
8	Bromate	In all circumstances
9	Cadmium	In all circumstances
10	Chloride	In all circumstances
11	Chromium	In all circumstances
12	<i>Clostridium perfringens</i> (including spores)	In all circumstances
13	Copper	In all circumstances
14	Cyanide	In all circumstances
15	1, 2 dichloroethane	In all circumstances
16	Enterococci	In all circumstances
17	Fluoride	In all circumstances
18	Gross alpha	In all circumstances
19	Gross beta	In all circumstances
20	Iron	Where not used as a water treatment chemical or where the water neither originates from, nor is influenced by, surface waters
21	Lead	In all circumstances

(1) Sampling for these parameters may be within water supply zones (Group B1) or at supply points (Group B2).

(2) Monitoring of this parameter in water supply zones is required only where sodium hypochlorite is added after water has left the treatment works. In other circumstances, monitoring is required at supply points (see Group B2).

(3) To monitor for indicative dose.

(4) In the event that a single sample is taken in a year, a further sample must be taken if there is any change in relation to that supply that could affect the concentration of radionuclides in the water supply.

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

(1) Item number	(2) Parameter	(3) Circumstances
22	Manganese	Where the water neither originates from, nor is influenced by, surface waters.
23	Mercury	In all circumstances
24	Nickel	In all circumstances
25	Nitrate	Where chloramination is not practised
26	Nitrite	Where chloramination is not practised
27	Pesticides and related products	In all circumstances
28	Polycyclic aromatic hydrocarbon	In all circumstances
29	Radon	In all circumstances
30	Selenium	In all circumstances
31	Sodium	In all circumstances
32	Sulphate	In all circumstances
33	Tetrachloroethene	In all circumstances
34	Tetrachloromethane	In all circumstances
35	Total organic carbon	In all circumstances
36	Trichloroethene	In all circumstances
37	Trihalomethanes: Total	In all circumstances
38	Tritium	In all circumstances

- (1) Sampling for these parameters may be within water supply zones (Group B1) or at supply points (Group B2).
- (2) Monitoring of this parameter in water supply zones is required only where sodium hypochlorite is added after water has left the treatment works. In other circumstances, monitoring is required at supply points (see Group B2).
- (3) To monitor for indicative dose.
- (4) In the event that a single sample is taken in a year, a further sample must be taken if there is any change in relation to that supply that could affect the concentration of radionuclides in the water supply.

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

**Table 3**

**Group B2 parameters and circumstances for monitoring to be used for sampling at works or [<sup>F2</sup>in water supply zones (or supply points)]**

<i>(1) Item number</i>	<i>(2) Parameter</i>	<i>(3) Circumstances</i>
1	Benzene	In all circumstances
2	Boron	In all circumstances
3	Bromate	In all circumstances
4	Chloride	In all circumstances
5	[ <sup>F3</sup> Clostridium perfringens (including spores) <sup>(1)</sup>	In all circumstances
6	Cyanide	In all circumstances
7	1, 2 dichloroethane	In all circumstances
8	Fluoride	In all circumstances
9	Gross alpha	In all circumstances
10	Gross beta	In all circumstances
11	[ <sup>F4</sup> Indicative dose <sup>(1)</sup>	In all circumstances
12	Mercury	In all circumstances
13	Nitrite	When chloramination is not practised
14	Pesticides and related products	In all circumstances
15	Radon	In all circumstances
16	Sulphate	In all circumstances
17	[ <sup>F5</sup> Tetrachloroethene/Trichloroethene <sup>(1)</sup>	In all circumstances
18	Tetrachloromethane	In all circumstances
19	Total organic carbon	In all circumstances
F6	F6	F6
...	...	...
21	Tritium	In all circumstances

- (1) Sampling for these parameters may be within water supply zones (Group B1) or at supply points (Group B2).
- (2) Monitoring is required at supply points where sodium hypochlorite is not added after water has left the treatment works. In other circumstances, see Group B1.
- (3) To monitor for indicative dose.
- (4) In the event that a single sample is taken in a year, a further sample must be taken if there is any change in relation to that supply that could affect the concentration of radionuclides in the water supply.



**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

**Textual Amendments**

- F2** Words in Sch. 3 Pt. 1 substituted (29.3.2019) by [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), regs. 1(2), **6(3)(a)(i)**
- F3** Words in Sch. 3 Pt. 1 substituted (29.3.2019) by [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), regs. 1(2), **6(3)(a)(ii)**
- F4** Words in Sch. 3 Pt. 1 substituted (29.3.2019) by [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), regs. 1(2), **6(3)(a)(iii)**
- F5** Words in Sch. 3 Pt. 1 substituted (29.3.2019) by virtue of [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), regs. 1(2), **6(3)(a)(iv)**
- F6** Word in Sch. 3 Pt. 1 omitted (29.3.2019) by [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), regs. 1(2), **6(3)(a)(v)**

**Table 4**

**Group A1 parameters**

<i>(1) Item number</i>	<i>(2) Parameter</i>
1	Coliform bacteria
2	E. coli
3	Residual disinfectant

**Table 5**

**Group A2 parameters**

<i>(1) Item number</i>	<i>(2) Parameter</i>
1	Coliform bacteria
2	Colony counts 22°C
3	<i>E. coli</i>
4	Nitrite
5	Residual disinfectant
6	Turbidity

**Table 6**

**Group A3 parameters**

<i>(1) Item number</i>	<i>(2) Parameter</i>
1	Conductivity

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

**Table 7**

**Group A4 parameters**

<i>(1) Item number</i>	<i>(2) Parameter</i>
1	Aluminium
2	Ammonium
3	Colony counts 22°C
4	Colour
5	Conductivity
6	Hydrogen ion
7	Iron
8	Manganese
9	Nitrate
10	Nitrite
11	Odour
12	Taste
13	Turbidity

**PART 2**

**Annual sampling frequencies: water supply zones**

**Annual sampling frequencies for Group A4 parameters: water supply zones**

This table and each table which follows it in this Part set out the annual sampling frequencies for all the substances and parameters comprising each of the groups to which they correspond, those groups having been outlined in Part 1 of this Schedule. These are determined for each water supply zone according to its estimated population (as specified in column 1 of each table in this Part). The number of samples to be taken is the standard number specified in column 2, unless a notice varying this number has been given under regulation 9.

For the purposes of this table, where the population is not an exact multiple of 5,000, the population figure must be rounded up to the nearest multiple of 5,000.

**Table 8**

**Annual sampling frequencies for Group A4 parameters: water supply zones**

<i>(1) Estimated population of water supply zone</i>	<i>(2) Standard sampling frequency per year</i>
<100	2
100-4,999	4
5,000-9,999	12
10,000-29,999	24

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

<i>(1) Estimated population of water supply zone</i>	<i>(2) Standard sampling frequency per year</i>
30,000-49,999	36
50,000-79,999	52
80,000-100,000	76

**Table 9**

**Annual sampling frequencies for Group B1 parameters: water supply zones**

<i>(1) Estimated population of water supply zone</i>	<i>(2) Standard sampling frequency per year</i>
<100	1
100-4,999	4
5000-100,000	8

**Table 10**

**Annual sampling frequencies for Group A1: water supply zones**

<i>(1) Estimated population of water supply zone</i>	<i>(2) Standard sampling frequency per year</i>
<100	4
≥100	12 per 5,000 population

For the purposes of this table, where the population is not an exact multiple of 5,000, the population figure must be rounded up to the nearest multiple of 5,000.

## PART 3

### Annual sampling frequencies: treatment works and supply points

**Annual sampling frequencies for Group A2 parameters: treatment works or supply points**

This table and each table which follows it in this Part set out the annual sampling frequencies for all the substances and parameters comprising each of the groups to which they correspond at treatment works or supply points, those groups having been outlined in Part 1 of this Schedule. The frequencies are determined according to the volume of water supplied at each treatment works or supply point. The number of samples to be taken is the standard number specified in column 2, unless a notice varying this number has been given under regulation 9.

**Table 11**

<i>(1) Volume of water supplied m<sup>3</sup>/day</i>	<i>(2) Standard sampling frequency per year</i>
<20	4
20-1,999	[ <sup>F7</sup> 52]

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

<i>(1) Volume of water supplied m<sup>3</sup>/day</i>	<i>(2) Standard sampling frequency per year</i>
2,000-5,999	104
6,000-11,999	208
≥12,000	365

#### Textual Amendments

**F7** Word in Sch. 3 Pt. 3 substituted (29.3.2019) by [The Environment, Food and Rural Affairs \(Miscellaneous Amendments etc.\) Regulations 2019 \(S.I. 2019/526\)](#), **regs. 1(2)**, 6(3)(b)

**Table 12**

#### Annual sampling frequencies for Group A3 parameters: supply points

<i>(1) Volume of water supplied m<sup>3</sup>/day</i>	<i>(2) Standard sampling frequency per year</i>
<20	2
20-999	4
1,000-1999	12
2,000-5,999	24
6,000-9,999	36
10,000-15,999	52
16,000-32,999	104
33,000-49,999	156
50,000-67,999	208
68,000-84,999	260
85,000-101,999	312
102,000-119,999	365
120,000-241,999	730
242,000-484,999	1,460
485,000-728,999	2,190

**Table 13**

#### Annual sampling frequencies for Group B2 parameters: treatment works or supply points

<i>(1) Volume of water supplied m<sup>3</sup>/day</i>	<i>(2) Standard sampling frequency per year</i>
<20	1
20-999	4
1,000-49,999	8
50,000-89,999	12

<i>(1) Volume of water supplied m<sup>3</sup>/day</i>	<i>(2) Standard sampling frequency per year</i>
90,000-299,999	24
300,000-649,999	36
≥650,000	48]

## SCHEDULE 4

Regulation 6

### Monitoring for indicative dose and analytical performance characteristics

#### Monitoring for compliance with the ID

1.—(1) A water undertaker may use various reliable screening strategies to indicate the presence of radioactivity in water intended for human consumption.

(2) These strategies may include screening for—

- (a) certain radionuclides, or screening for an individual radionuclide,
- (b) gross alpha activity or gross beta activity screening.

#### Screening for certain radionuclides or for an individual radionuclide

2.—(1) If one of the activity concentrations exceeds 20% of the corresponding derived value or the tritium concentration exceeds its parametric value listed in Schedule 2, an analysis of additional radionuclides is required.

(2) In deciding which radionuclides are required to be measured for each supply, a water undertaker must take into account all relevant information about likely sources of radioactivity.

#### Screening strategies for gross alpha activity and gross beta activity

3.—(1) A water undertaker may use a screening strategy for gross alpha and gross beta to monitor for the parametric indicator value for indicative dose.

(2) Subject to paragraph (3), the recommended screening values are—

- (a) 0.1Bq/l for gross alpha activity;
- (b) 1.0Bq/l for gross beta activity <sup>M1</sup>.

(3) If the gross alpha activity exceeds 0.1Bq/l or the gross beta activity exceeds 1.0Bq/l, analysis for specific radionuclides is required.

(4) The Secretary of State may set alternative screening levels for gross alpha activity and gross beta activity where it can be demonstrated by the water undertaker that the alternative levels are in compliance with an ID of 0.1 mSv.

(5) The radionuclides to be measured must be based on all relevant information about likely sources of radioactivity.

#### Marginal Citations

**M1** Where appropriate gross beta activity may be replaced by residual beta activity after subtraction of the K-40 activity concentration.

## Calculation of the ID

4.—(1) The ID must be calculated from—

[<sup>F8</sup>(a) the measured radionuclide concentrations and the dose coefficients referred to as “standard values and relationships” in Article 13, and recommended for the estimation of doses from internal exposure in the definition of “standard values and relationships” in Article 4(96), of Council Directive 2013/59/Euratom laying down basic safety standards for protection against the dangers arising from exposure to ionising radiation, or]

(b) more recent information recognised by the Secretary of State, on the basis of the annual intake of water (730 litres for adults).

(2) Where the following formula is satisfied, it can be assumed that the ID is less than the parametric value of 0.1 mSv and no further investigation is required—

$$\sum_{i=1}^n \frac{C_i(\text{obs})}{C_i(\text{der})} \leq 1$$

where—

“ $C_i(\text{obs})$ ” means observed concentration of radionuclide  $i$ ;

“ $C_i(\text{der})$ ” means derived concentration of radionuclide  $i$ ;

“ $n$ ” means number of radionuclides detected.

**Table 1**

### Derived concentrations for radioactivity in water intended for human consumption

This table includes values for the most common natural and artificial radionuclides: these are precise values, calculated for a dose of 0.1 mSv, an annual intake of 730 litres and using the dose coefficients [<sup>F9</sup>referred to as “standard values and relationships” in Article 13, and recommended for the estimation of doses from internal exposure in the definition of “standard values and relationships” in Article 4(96), of Council Directive 2013/59/Euratom]. Derived concentrations for other radionuclides can be calculated on the same basis, and values can be updated on the basis of more recent information recognised by the Secretary of State

(1) Origin	(2) Nuclide	(3) Derived concentration
Natural:	U-238 <sup>1</sup>	3.0 Bq/l
	U-234 <sup>1</sup>	2.8 Bq/l
	Ra-226	0.5 Bq/l
	Ra-228	0.2 Bq/l
	Pb-210	0.2 Bq/l
	Po-210	0.1 Bq/l
Artificial:	C-14	240 Bq/l
	Sr-90	4.9 Bq/l
	Pu-239/Pu-240	0.6 Bq/l

<sup>1</sup> This Table allows only for the radiological properties of uranium, not for its chemical toxicity.

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

Am-241	0.7 Bq/l
Co-60	40 Bq/l
Cs-134	7.2 Bq/l
Cs-137	11 Bq/l
I-131	6.2 Bq/l

<sup>1</sup> This Table allows only for the radiological properties of uranium, not for its chemical toxicity.

**Table 2**

**Performance characteristics and methods of analysis**

For the following parameters and radionuclides, the method of analysis used must, as a minimum, be capable of measuring activity concentrations with a limit of detection specified below.

<b>(1)</b> <b>Parameters and radionuclides</b>	<b>(2)</b> <b>and Limit of detection (Notes 1, 2)</b>	<b>(3)</b> <b>Notes</b>
Tritium	10 Bq/l	Note 3
Radon	10 Bq/l	Note 3
gross alpha activity	0.04 Bq/l	Note 4
gross beta activity	0.4 Bq/l	Note 4
U-238	0.02 Bq/l	
U-234	0.02 Bq/l	
Ra-226	0.04 Bq/l	
Ra-228	0.02 Bq/l	Note 5
Pb-210	0.02 Bq/l	
Po-210	0.01 Bq/l	
C-14	20 Bq/l	
Sr-90	0.4 Bq/l	
Pu-239/Pu-240	0.04 Bq/l	
Am-241	0.06 Bq/l	
Co-60	0.5 Bq/l	
Cs-134	0.5 Bq/l	
Cs-137	0.5 Bq/l	
I-131	0.5 Bq/l	

<sup>M2</sup>Note 1: The limit of detection must be calculated according to the ISO standard 11929: Determination of the characteristic limits (decision threshold, detection limit, and limits of confidence interval) for measurements of ionising radiation – Fundamentals and application, with probabilities of errors of 1st and 2nd kind of 0.05 each .

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

<sup>M3</sup>Note 2: Measurement uncertainties must be calculated and reported as complete standard uncertainties, or as expanded uncertainties with an expansion factor of 1.96 according to the ISO Guide for the Expression of Uncertainty in Measurement .

Note 3: The limit of detection for tritium and for radon is 10% of its parametric value of 100 Bq/l.

Note 4: The limit of detection for gross alpha activity and gross beta activities are 40% of the screening values of 0.1 and 1.0 Bq/l respectively.

Note 5: This limit of detection applies only to initial screening for ID for a new water source; if initial checking indicates that it is not plausible that Ra-228 exceeds 20% of the derived concentration, the limit of detection may be increased to 0.08 Bq/l for routine Ra-228 nuclide specific measurements, until a subsequent re-check is required.

#### Textual Amendments

- F8** Sch. 4 para. 4(1)(a) substituted (11.7.2018) by [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(14)(a)**
- F9** Words in Sch. 4 substituted (11.7.2018) by [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(14)(b)**

#### Marginal Citations

- M2** See sections 17A and 219(1) of the Act for the meaning of “licensed water supplier”. This definition is prospectively repealed by paragraph 120 of Schedule 7 to the Water Act 2014 from a date to be appointed.
- M3** [S.I. 2000/3184](#), as amended by [S.I. 2001/2885](#), 2002/2469, 2005/2035, 2007/2734, 2010/991, 2013/235, 1387.

## SCHEDULE 5

Regulation 16

### Analytical methodology

#### [<sup>F10</sup>Table A1

#### Microbiological parameters for which, subject to regulation 16(6), methods of analysis are specified

<i>(1) Parameter</i>	<i>(2) Method of analysis</i>
<i>E. coli</i> and coliform bacteria	EN ISO 9308-1 or EN ISO 9308-2
<i>Enterococci</i>	EN ISO 7899-2
<i>Pseudomonas aeruginosa</i>	EN ISO 16266
Enumeration of culturable microorganisms – colony count 22°C	EN ISO 6222
Enumeration of culturable microorganisms – colony count 36°C	EN ISO 6222
<i>Clostridium perfringens</i> (including spores)	EN ISO 14189]



**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

**Textual Amendments**

**F10** Sch. 5 Table A1 substituted (11.7.2018) by [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(15)(a)** (with reg. 3)

**Table A2**

**F11** .....

**Textual Amendments**

**F11** Sch. 5 Table A2 omitted (11.7.2018) by virtue of [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(15)(b)** (with reg. 3)

**[<sup>F12</sup>Table A3**

**Minimum performance characteristic uncertainty of measurement**

The uncertainty of measurement laid down in this table must not be used as an additional tolerance to the parametric value set out in Schedules 1 and 2.

<i>(1) Parameters</i>	<i>(2) Uncertainty of measurement % of the parametric value (except for pH)</i>
Aluminium	25
Ammonium	40
Antimony	40
Arsenic	30
Benzene	40
Benzo(a)pyrene	50
Boron	25
Bromate	40
Cadmium	25
Chloride	15
Chromium	30
Colour	20
Conductivity	20
Copper	25
Cyanide	30
1,2-dichloroethane	40
Fluoride	20
Hydrogen ion concentration pH (expressed in pH units)	0.2

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

<i>(1) Parameters</i>	<i>(2) Uncertainty of measurement % of the parametric value (except for pH)</i>
Iron	30
Lead	25
Manganese	30
Mercury	30
Nickel	25
Nitrate	15
Nitrite	20
Oxidisability	50
Pesticides	30
Polycyclic aromatic hydrocarbons	50
Selenium	40
Sodium	15
Sulphate	15
Tetrachloroethene	30
Tetrachloromethane	30
Trichloroethene	40
Trihalomethanes: total	40
Total organic carbon	30
Turbidity	30

- (1) "Uncertainty of measurement" is a non-negative parameter characterising the dispersion of the quantity values being attributed to a measurement, based on the information used. The performance criterion for measurement uncertainty ( $k = 2$ ) is at least the percentage of the parametric value stated in the table.
- (2) If the value of uncertainty of measurement cannot be met, the best available technique must be selected (up to 60% of the parametric value).
- (3) The method determines total cyanide in all forms.
- (4) Reference method: European standard EN ISO 8467 entitled "Water quality – Determination of permanganate index (ISO 8467)".
- (5) The performance characteristics for individual pesticides are given as an indication. Values for the uncertainty of measurement as low as 30% can be achieved for several pesticides, higher values up to 80 % may be allowed for a number of pesticides.
- (6) The performance characteristics apply to individual substances, specified at 25% of the parametric value in Part I of Table B in Schedule 1.
- (7) The performance characteristics apply to individual substances, specified at 50% of the parametric value in Part I of Table B in Schedule 1.
- (8) The uncertainty of measurement must be estimated at the level of 3 mg/l of the total organic carbon (TOC) in accordance with European standard EN 1484 entitled "Water analysis – Guidelines for the determination of total organic carbon and dissolved organic carbon".
- (9) The uncertainty of measurement must be estimated at the level of 1.0 nephelometric turbidity units) in accordance with European standard EN ISO 7027-1 entitled "Water quality – Determination of turbidity – Part 1: Quantitative methods (ISO 7027-1".]

**Textual Amendments**

**F12** Sch. 5 Table A3 and footnotes inserted (11.7.2018) by [The Water Supply \(Water Quality\) \(Amendment\) Regulations 2018 \(S.I. 2018/706\)](#), regs. 1(1), **2(15)(c)** (with reg. 3)

SCHEDULE 6

Regulation 40(1)

Amendments

<b>(1)</b> <b>Regulations to be amended</b>	<b>(2)</b> <b>References</b>	<b>(3)</b> <b>Provisions to be amended</b>	<b>(4)</b> <b>Amendments to be made</b>
The Legislative and Regulatory Reform (Regulatory Functions) Order 2007 M4	S.I. 2007/3544	Part 2 of the Schedule, under the heading “Water”	For “Water Supply (Water Quality) Regulations 2000” substitute “ Water Supply (Water Quality) Regulations 2016 ”
The Water Quality and Supply (Fees) Order 2016	S.I. 2016/303	The Schedule	For “Water Supply (Water Quality) Regulations 2000” substitute “ Water Supply (Water Quality) Regulations 2016 ”

**Marginal Citations**

**M4** There are amendments not relevant to these Regulations.

SCHEDULE 7

Regulation 40(2)

Revocations

<b>(1)</b> <b>Regulations revoked</b>	<b>(2)</b> <b>References</b>	<b>(3)</b> <b>Extent of revocation</b>
The 2000 Regulations	S.I. 2000/3184	The whole Regulations
The Water Supply (Water Quality) Regulations 2001 M5	S.I. 2001/2885	The whole Regulations
The National Health Service Reform and Health Care Professions Act 2002 (Supplementary, Consequential	S.I. 2002/2469	Schedule 1 Part 2 paragraph 91

**Changes to legislation:** There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016. (See end of Document for details)

etc. Provisions) Regulations 2002 M6		
The Water Act 2003 (Consequential and Supplementary Provisions) Regulations 2005 M7	S.I. 2005/2035	Regulations 3, 10 and 20
The Water Supply (Water Quality) (Amendment) Regulations 2007 M8	S.I. 2007/2734	The whole Regulations
The Legislative and Regulatory Reform (Regulatory Functions) Order 2007	S.I. 2007/3544	The references in Part 2 of the Schedule, under the heading “Water”, to—  (a) the Water Supply (Water Quality) Regulations 2001; and  (b) the Water Supply (Water Quality) (Amendment) Regulations 2001
The Water Supply Regulations 2010 M9	S.I. 2010/991	The whole Regulations
The National Treatment Agency (Abolition) and the Health and Social Care Act 2012 (Consequential, Transitional and Savings Provisions) Order 2013 M10	S.I. 2013/235	Paragraph 43 of Schedule 2
The Construction Products Regulations 2013	S.I. 2013/1387	Paragraph 3 of Schedule 5

<b>Marginal Citations</b>	
<b>M5</b>	Amended by <a href="#">S.I. 2007/2734</a> .
<b>M6</b>	There are amendments not relevant to these Regulations.
<b>M7</b>	Amended by <a href="#">S.I. 2007/2734</a> .
<b>M8</b>	Amended by <a href="#">S.I. 2013/1387</a> .
<b>M9</b>	Amended by <a href="#">S.I. 2016/573</a> .
<b>M10</b>	There are amendments not relevant to these Regulations.

**Changes to legislation:**

There are currently no known outstanding effects for the The Water Supply (Water Quality) Regulations 2016.