



guardians of drinking water quality
DRINKING WATER INSPECTORATE

What are the drinking water standards?

Drinking water must be 'wholesome' and this is defined in law by standards for a wide range of substances, organisms and properties of water in regulations. The standards are set to be protective of public health and the definition of wholesome reflects the importance of ensuring that water quality is acceptable to consumers. There is good agreement amongst worldwide on the science behind the setting of health based standards for drinking water and this expert evidence is documented by the World Health Organisation in the Guidelines for Drinking Water Quality. You can look up all the background information to standards of water safety [here](#). The legal standards in the UK are those which are set in Europe in the Drinking Water Directive 1998 together with national standards set to maintain the high quality of water already achieved. The standards are strict and include wide safety margins. They cover:

- **micro-organisms**
- **chemicals such as nitrate and pesticides**
- **metals such as lead and copper**
- **the way water looks and how it tastes**

The full regulations can be found [here](#). An explanation of the organisms and substances tested for regularly can be found in the Chief Inspectors Report [here](#). This guide also explains how drinking water is regulated in England and Wales.

Terms Explained

Parameter	Substance or organism tested for routinely in drinking water
EU requirement	These are the standards and specifications set in the EU Drinking Water Directive and apply in all the member states of the European Union
National requirement	These are national standards and specifications in the regulations which apply only in the UK.
Concentration or value or specification	Maximum or minimum or range allowed in drinking water
Point of compliance	The point where the legal standards apply, normally this is the consumers tap but it may be at the water works.
µg/l	Micrograms per litre (parts per billion)
mg/l	Milligrams per litre (parts per million)

MICROBIOLOGICAL PARAMETERS

Part I: Directive requirements			
<i>Parameters</i>	<i>Concentration or Value maximum)</i>	<i>Units of Measurement</i>	<i>Point of compliance</i>
Enterococci	0	number/100ml	Consumers' taps
<i>Escherichia coli</i> (<i>E. coli</i>)	0	number/100ml	Consumers' taps

Part II: National requirements			
<i>Parameters</i>	<i>Concentration or Value maximum)</i>	<i>Units of Measurement</i>	<i>Point of compliance</i>
Coliform bacteria	0	number/100ml	Service reservoirs* and water treatment works
<i>Escherichia coli</i> (<i>E. coli</i>)	0	number/100ml	Service reservoirs and water treatment works

Note: *Compliance required as to 95% of samples from each service reservoir

CHEMICAL PARAMETERS

Part I: Directive requirements			
<i>Parameters</i>	<i>Concentration or Value maximum)</i>	<i>Units of Measurement</i>	<i>Point of compliance</i>
Acrylamide	0.10	µg/l	(i)
Antimony	5.0	µgSb/l	Consumers' taps
Arsenic	10	µgAs/l	Consumers' taps
Benzene	1.0	µg/l	Consumers' taps
Benzo(a)pyrene	0.010	µg/l	Consumers' taps
Boron	1.0	mgB/l	Consumers' taps
Bromate	10	µgBrO3/l	Consumers' taps
Cadmium	5.0	µgCd/l	Consumers' taps
Chromium	50	µgCr/l	Consumers' taps
Copper(ii)	2.0	mgCu/l	Consumers' taps
Cyanide	50	µgCN/l	Consumers' taps
1, 2 dichloroethane	3.0	µg/l	Consumers' taps
Epichlorohydrin	0.10	µg/l	(i)
Fluoride	1.5	mgF/l	Consumers' taps
Lead (ii)	25 (up to 25 th December 2013)	µgPb/l	Consumers' taps
	10 (on and after 25 th December 2013)	µgPb/l	Consumers' taps
Mercury	1.0	µgHg/l	Consumers' taps
Nickel (ii)	20	µgNi/l	Consumers' taps
Nitrate (iii)	50	mgNO3/l	Consumers' taps
Nitrite (iii)	0.50	mgNO2/l	Consumers' taps
	0.10		Treatment works
Pesticides (iv)(v)			
Aldrin	0.030	µg/l	Consumers' taps
Dieldrin	0.030	µg/l	Consumers' taps
Heptachlor	0.030	µg/l	Consumers' taps
Heptachlor epoxide	0.030	µg/l	Consumers' taps
other pesticides	0.10	µg/l	Consumers' taps
Pesticides: Total (vi)	0.50	µg/l	Consumers' taps
Polycyclic aromatic hydrocarbons (vii)	0.10	µg/l	Consumers' taps
Selenium	10	µgSe/l	Consumers' taps

Tetrachloroethene and Trichloroethene (viii)	10	µg/l	Consumers' taps
Trihalomethanes: Total (ix)	100	µg/l	Consumers' taps
Vinyl chloride	0.50	µg/l	(i)

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 also regulation 6(6)
- iii) See also regulation 4(2)(d)
- iv) See the definition of "pesticides and related products" in regulation 2
- v) The parametric value applies to each individual pesticide.
- vi) "Pesticides: Total" means the sum of the concentrations of the individual pesticides detected and quantified in the monitoring procedure.
- vii) The specified compounds are:
 - benzo(b)fluoranthene
 - benzo(k)fluoranthene
 - benzo(ghi)perylene
 - indeno(1,2,3-cd)pyrene.
- viii) The parametric value applies to the sum of the concentrations of the individual compounds detected and quantified in the monitoring process.

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- ix) 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

<i>Parameters</i>	<i>Concentration or Value (maximum unless otherwise stated)</i>	<i>Units of Measurement</i>	<i>Point of compliance</i>
Aluminium	200	µgAl/l	Consumers' taps
Colour	20	mg/l Pt/Co	Consumers' taps
Iron	200	µgFe/l	Consumers' taps
Manganese	50	µgMn/l	Consumers' taps
Odour	<1 at 25°C	Dilution number	Consumers' taps
Sodium	200	mgNa/l	Consumers' taps
Taste	<1 at 25°C	Dilution number	Consumers' taps
Tetrachloromethane	3	µg/l	Consumers' taps
Turbidity	4	NTU	Consumers' taps

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