

Water Quality Standards

Parameter	Description	Standard
1,2-dichloroethane	1, 2-dichloroethane is found in industrial solvents. Occasionally it is detected in water source in trace amounts. Solvents are removed using specialist water treatment.	3 µg/l
Acrylamide	Acrylamide does not occur naturally in water. Trace amounts may be found in polyacrylamides, which are used in water treatment to help remove impurities. The use of polyacrylamide in drinking water treatment is strictly controlled by product and dose specification.	0.1 µg/l
Aluminium	Aluminium occurs naturally in most water sources and is removed effectively during treatment. Aluminium compounds are used in water treatment to help remove impurities from the source water and are removed during the treatment process.	200 µg/l
Ammonium	Ammonium ions are present naturally in most water sources and are usually broken down during disinfection.	0.5 mg/l
Antimony	Antimony is not found naturally in water sources. Traces found in water supplies are likely to be due to contact with brass fittings or solders used in domestic plumbing systems.	5 µg/l
Arsenic	Very low concentrations of arsenic can occur naturally in some groundwater sources. Where present, arsenic is removed using specialist treatment.	10 µg/l
Benzene	Benzene is used in industry for making plastics, rubber, resins and synthetic fabrics like nylon and polyester. Benzene can occasionally be detected at trace concentrations in water sources. Where present, benzene is removed in water treatment.	1 µg/l
Benzo(a)pyrene	Benzo(a)pyrene may be found in bitumen linings which were used in the past to protect water mains from corrosion. Traces may occasionally be found in water supplies where bitumen linings are still present.	0.01 µg/l
Boron	Boron can be found occasionally at trace concentrations in some water sources. Boron is found in detergents and can enter water sources which receive treated wastewater. In the North West very few water sources receive treated wastewater.	1 mg/l
Bromate	Bromate may be detected in water supplies at very low concentrations. It can be caused by the presence of bromide in compounds used during the disinfection of water supplies.	10 µg/l
Cadmium	Very low levels of cadmium can occur naturally in some groundwater sources. Where present, cadmium is removed using specialist treatment.	5 µg/l
Chloride	Chloride occurs naturally in all water sources and is not removed during treatment. The concentrations present in water do not present any risk to health.	250 mg/l
Chromium	Chromium is rarely found in water sources but may be present at low concentrations if the water has passed through rocks containing naturally occurring chromium.	50 µg/l
Coliform bacteria	Coliform bacteria are found widely in the environment and are normally removed during water treatment. They are not necessarily harmful. Their presence in treated water may indicate a possible source of contamination, which may be the customer's tap. A prompt investigation is always conducted following any detection of coliforms in treated water.	0 per 100 ml
Colony counts after 3 days/Colony counts after 2 days	This is a measure of the naturally occurring harmless bacteria found in water.	No abnormal change
Colour	Water occasionally has a slight tinge which may be caused by naturally occurring substances.	20 mg/l Pt/Co scale
Conductivity	Conductivity is a measure of the amount of naturally occurring dissolved inorganic substances in water.	2500 µS/cm at 20°C
Copper	The presence of copper in water supplies is usually due to contact with domestic plumbing.	2 mg/l
Cyanide	Cyanide is rarely found in water sources, but may be present at low concentrations if the water source has passed through rocks containing naturally occurring cyanide compounds.	50 µg/l
<i>E.coli</i> / <i>Enterococci</i> / <i>Clostridium perfringens</i> (including spores)	These organisms are present in the gut of warm-blooded animals. On rare occasions, low numbers of these organisms are detected in treated water. Their presence in treated water indicates possible faecal contamination. Detection of these organisms does not indicate an immediate risk to health. United Utilities always carries out prompt investigations following any detection in treated water supplies.	0 per 100 ml
Epichlorohydrin	Epichlorohydrin does not occur naturally in water. It may be found in trace amounts in polyamine water treatment chemicals, which help remove impurities from the source water. The use of polyamines in the treatment of drinking water is strictly controlled by product and dose specification.	0.1 µg/l
Fluoride	Fluoride can occur naturally in water sources and can be added to water supplies in some areas as a protection against tooth decay.	1.5 mg/l
Hydrogen ion (pH)	pH measurement gives an indication of the acidity of the water. pH 7 is neutral. pH values below 7 indicate acidic characteristics and pH above 7 indicates alkaline characteristics.	6.5 – 9.5 at consumers' taps
Iron	Iron is found naturally in most water sources and is removed effectively during treatment. Iron in water supplies can occur due to corrosion of iron pipes. The concentrations present in water are not harmful to health. Iron compounds are used in water treatment to help remove impurities from the source water and are removed during the treatment process.	200 µg/l
Lead	Lead is not normally found in water sources. Any lead found in drinking water is usually due to contact with lead pipes that may be in some customers' properties. United Utilities treats water supplies in order to minimise pick-up of lead from lead pipes.	25 µg/l 10 µg/l from 25 December 2013
Manganese	Manganese occurs naturally in most water supplies and is removed during treatment.	50 µg/l
Mercury	Mercury is rarely found in water sources but may be present at extremely low concentrations if the water has passed through rocks containing naturally occurring mercury.	1 µg/l

Parameter	Description	Standard
Nickel	Nickel is not found naturally in water sources. Traces of nickel found in water supplies are likely due to contact with protective coatings on taps and fittings within customers' properties.	20 µg/l
Nitrate	Nitrate occurs naturally in water. Increased concentrations in water sources can occur as a result of fertiliser use. Nitrate concentrations are reduced during water treatment.	50 mg/l
[Nitrate] / 50 plus [Nitrite] / 3	This is a measure of the ratio of the concentrations of nitrate and nitrite in water supplies.	≤1
Nitrite	Nitrite in water may be associated with use of ammonia and chlorine for disinfection. United Utilities does not use ammonia during disinfection of water supplies.	0.5 mg/l at consumers' taps 0.1 mg/l at WTW
Pesticides - aldrin, dieldrin, heptachlor and heptachlor epoxide	Traces of pesticides can occasionally be found in water sources as a result of agricultural and non-agricultural use of pesticides in the environment. However, these pesticides are persistent in the environment and so are no longer used in the UK. United Utilities has installed water treatment processes to remove pesticide residues where present.	0.03 µg/l
Other pesticides	Traces of pesticides can occasionally be found in water sources as a result of agricultural and non-agricultural use of pesticides in the environment. United Utilities has installed water treatment processes to remove pesticide residues where present.	0.1 µg/l
Pesticides - total	This is the sum of the concentrations of the individual pesticides detected.	0.5 µg/l
Polycyclic aromatic hydrocarbons (sum of 4 PAHs)	The 4 PAHs include benzo(k)fluoranthene, benzo(b)fluoranthene, benzo(ghi)perylene and indeno(1,2,3-cd)pyrene. These compounds are present in bitumen linings which were used in the past to protect water mains from corrosion. Traces may occasionally be found in water supplies where bitumen linings are still present.	0.1 µg/l
Quantitative taste and odour	Odour and taste occur naturally. A formal method is undertaken in the laboratory to assess the taste and odour of water.	Acceptable to consumers and no abnormal change.
Radioactivity - gross alpha	Radiation exposure through water is typically very small. Where present, it is due to naturally occurring radioactive species, at levels that are not harmful. Gross alpha activity is monitored for the calculation of Total Indicative Dose.	0.1 Bq/l (screening value)
Radioactivity - gross beta	Radiation exposure through water is typically very small. Where present, it is due to naturally occurring radioactive species, at levels that are not harmful. Gross beta activity is monitored for the calculation of Total Indicative Dose.	1 Bq/l (screening value)
Total and free chlorine residual	Small amounts of chlorine are added to water to kill any harmful bacteria.	No standard
Selenium	Selenium is rarely found in water sources but may be present at extremely low concentrations if the water has passed through rocks containing naturally occurring selenium.	10 µg/l
Sodium	Sodium occurs naturally in all water sources. The concentrations normally found in water do not present any risk to health.	200 mg/l
Sulphate	Sulphate occurs naturally in all water sources. The concentrations normally found in water do not present any risk to health.	250 mg/l
Tetrachloroethene and trichloroethene	This standard applies to the sum of the concentrations of tetrachloroethene and trichloroethene. These are solvents which can occasionally be detected at trace concentrations in water sources. Where necessary, solvents are removed using specialist water treatment.	10 µg/l
Tetrachloromethane	Tetrachloromethane is a solvent which can occasionally be detected at trace concentrations in water sources. Where necessary, solvents are removed using specialist water treatment.	3 µg/l
Total organic carbon	The total organic carbon content of water represents the amount of naturally occurring organic material present in the water.	No abnormal change
Total Indicative Dose (for radioactivity)	Total Indicative Dose is the effective dose of radiation exposure through water. It is required to be measured if the gross alpha or gross beta activities exceed the screening values.	0.10 mSv/year
Trihalomethanes - total	Trihalomethanes can be formed during disinfection of water supplies if chlorine reacts with naturally occurring organic substances. Water treatment is carefully controlled to minimise any formation of trihalomethanes.	100 µg/l
Tritium (for radioactivity)	Tritium is a radioactive isotope of the element hydrogen that occurs naturally in the environment in very low concentrations. It is not normally present in water sources. Tritium is produced in the upper atmosphere when cosmic rays strike air molecules or as a by-product in reactors producing electricity. The Environment Agency carries out regular monitoring for radioactivity in water sources used for the supply of drinking water.	100 Bq/l
Turbidity	This is a measure of the clarity of the water.	4 NTU at consumers' taps 1 NTU at WTW
Vinyl chloride	Vinyl chloride does not occur naturally in water. It may be present in polyvinyl chloride (PVC) pipes in trace amounts, as a residual of the manufacturing process. Vinyl chloride is strictly controlled by product specification.	0.5 µg/l

Note

mg/l = milligrammes per litre or one part in a million

µg/l = microgrammes per litre or one part in a thousand million

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