# What chemicals are added in the drinking water treatment process?

United Utilities
Water for the North West

**Wherever the water comes from, it enters the water treatment works. Here it goes through a number of processes before being sent down our network of pipes to your drinking water tap.**

Part of the water treatment process involves the addition of a number of chemicals. Only chemicals which have been approved by the Drinking Water Inspectorate (DWI) are used in the water. A brief description of the chemicals used as listed below:

The following chemicals are used to make all the sediment in the water (made up mostly of organic matter) stick together in a process called coagulation.

- Aluminium sulphate
- Polyaluminium chloride
- Iron (ferric) sulphate
- Iron (ferric) aluminium sulphate
- Polydiallyldimethylammonium chloride
- Polyelectrolytes

The following chemical can also be added during the coagulation stage to remove unusually high levels of undesirable organic contaminants

- Powdered Activated Carbon (PAC)

The following are a group of chemicals used to change the pH of water. This is done to either condition the water before it is sent into our network of pipes or it is used to enhance a stage in the treatment process.

- Sodium hydroxide
- Calcium hydroxide
- Sulphuric acid

The following chemicals are forms of chlorine and are added to drinking water as the final stage of treatment. Chlorine is added in order to kill any harmful germs that may be present and a small amount of chlorine remains in the water right through to your tap.

- Chlorine (gas form)
- Sodium hypochlorite

Following the disinfection process known as super-chlorination it is necessary to reduce the levels of chlorine in the drinking water before the water is sent into our mains network. The following chemicals can be used for this purpose.

- Sulphur dioxide
- Sodium bisulphite

The following chemicals are forms of phosphorus which is added to the drinking water in the process of phosphate dosing. This is done in order to minimise the corrosive effect on lead pipework within the mains network.

- Sodium dihydrogenorthophosphate
- Phosphoric acid

The following chemical can be used in hard water areas especially in groundwater sources to soften the water.

- Sodium hexametaphosphate (Calgon)

The following chemicals are used in the process known as fluoridation which is defined as the addition of a fluoride compound to the drinking water to preserve the teeth of the population.

- Hexafluorosilicic acid

At every stage in the journey from its source to your home we sample, analyse, and continually monitor the effectiveness of water treatment in order to provide you with high quality drinking water and checking that it meets the standards laid down in law.

There are a number of regulatory standards for drinking water quality defined within UK legislation with which all water companies must comply.

We have a Drinking Water Register giving full details of the quality of all our water supplies. You can view the Register at: **unitedutilities.com/waterquality** and click on ‘view detailed report’ or we can send you a copy of the information by post, free of charge.

**For further information**

**unitedutilities.com/waterquality**

**0345 672 3723**
8am - 8pm Mon-Fri
8am - 6pm Sat
8am - 12 noon Sun

The Drinking Water Inspectorate is responsible for ensuring the quality of public water supplies.

Visit their website at:
**dwi.defra.gov.uk**