FACTSHEET 5

Chlorine explained

Scottish Water
Trusted to serve Scotland

Even after water leaves our treatment works Scottish Water must ensure that the water which reaches your home is of a high quality to meet The Public Water Supplies (Scotland) Regulations 2014.

One of the most common treatment processes for us to do this is to use chlorine.

This factsheet will provide you with information on:

- Units of measurement
- Where we sample
- Why chlorine is a safe way to disinfect water
- How we add chlorine
- Why you may be able to taste or smell chlorine in your water
- What you can do about it
- How it may affect pet fish
- How to contact us

1 Units of measurement

The units of measurement used in this sheet are milligram per litre (mg/l) which is one part per million.

2 Where we sample

Water is sampled regularly at our treatment works, service reservoirs and at our customers' taps to monitor the quality of the drinking water. In addition to this, water quality parameters are continuously monitored at major treatment works. Across Scotland, laboratory tests are carried out on water samples every day for regulatory purposes. Many more samples are taken for operational reasons (e.g. bursts, new mains, complaints). The percentage of all regulatory samples complying with the relevant standards in Scotland is over 99%.

3 Why chlorine is a safe way to disinfect water

For around a century, chlorine has been considered the most reliable way of treating water. It is harmless to humans at the concentrations we use in our supplies.

Proper disinfection is vital to ensure that water-borne disease is eliminated. To ensure that you receive potable* water as defined under The Public Water Supplies (Scotland) Regulations 2014, Scottish Water is required to meet strict microbiological standards laid down in these regulations.

As a general guidance regarding the safe use of chlorine for disinfection the World Health Organisation have suggested a Guideline Value for lifetime exposure to chlorine in drinking water of 5 mg/litre. Scottish Water supplies drinking water at a much lower concentration. Typically we dose at <1mg/L at our treatment works.

* Potable water is treated water fit for human consumption.

4 How we add chlorine

The most common way of disinfecting is to add controlled amounts of chlorine in gas or liquid form at our water treatment works. A small amount of chlorine remains in the water after treatment. This residual helps ensure that the water remains bacteriologically safe the water stays bacteriologically safe as it passes through long lengths of mains. In very long distribution networks we sometimes use secondary chlorination points to maintain an optimum residual to keep water disinfected. Residuals are also monitored at customers' properties by using chlorine monitors.

5 Why you may be able to taste or smell chlorine in your water

Some customers are more sensitive to the taste of chlorine than others. You may also be more aware of the taste and smell if:

- A water mains near you has been replaced. This is because the new main does not 'absorb' chlorine in the way the old mains did.
- You live close to the treatment works.
- You live close to a service reservoir/tank where secondary chlorination is used to increase the residuals in order to maintain water quality.

6 What you can do about it

If you smell or taste chlorine in the water from your tap, you can:

- Run some water from your kitchen tap into a clean jug. Cover the jug with clean cloth and leave it in the fridge for a couple of hours before you drink it.
- Cold water always tastes better and leaving the water to stand for some time helps the chlorine dissipate from it and thus reduce the residual level.

Don't keep the water in the jug longer than 24 hours, because once chlorine has dissipated, the water may be susceptible to bacterial growth.

7 How it may affect pet fish

Residual chlorine is harmless to domestic pets, but can affect other aquatic reptiles and amphibians such as frogs and turtles. Aquarium fish and fish in outside ponds are extremely sensitive to chlorine. So when you are filling and topping up aquariums you should make sure the chlorine is removed before the water comes into contact with the fish. **You can get suitable products and advice from your aquatic pet shop, local vet or specialist society.**

In some areas of Scotland drinking water is treated with a different process known as chloramination. This process uses chlorine combined with ammonia to form chloramines. Most fish and aquatic pet owners should already be aware that chlorine is harmful to their fish/amphibians. Similarly chloramines can also be harmful. Water conditioning agents and filtration systems are available to remove these, please contact your local pet shop or aquarium for further advice.

Your aquatic pet shop, local vet or specialist society should also be able to give you advice on how to condition chloraminated water, including suitable products for this treatment process.

If you want to know if your water is chloraminated or would like further details about chloramination please see **Scottish Water Factsheet 6 Chloramination explained.**

We want to make it easy to **contact us** – here's how:

We always have someone here to take your call, you can write to us or alternatively you can contact us through our website.

Alternative formats of this leaflet can be made available free of charge. For information on Braille, large print, audio and a variety of languages, please contact us.

If you have a disability, medical condition or other reason where you will need additional assistance from Scottish Water then please contact us and we can add your name, address and requirements to our confidential Priority Services Register.

We record all calls for quality and training purposes.

www.scottishwater.co.uk

help@scottishwater.co.uk

facebook.com/scottishwater

@scottish_water

Customer Helpline **0800 0778778**

Please quote this reference code when contacting us: **SWFact CE5 05/20**