

# manganese explained

## What is manganese?

Manganese is a natural element and is one of the most abundant metals in the Earth's crust where it is present in the form of oxide, sulphide, carbonate or silicate. Manganese is routinely detected in drinking water supplies.

## This factsheet provides you with information on:

- where the manganese in your tap water comes from
- where we sample
- why your water may sometimes appear coloured
- are there any health implications of manganese in water?
- what you should do if you experience discoloured water
- washing machines and discoloured water
- what we are doing to reduce the levels of manganese in water
- how to contact us

## where the manganese in your tap water comes from

We treat water from three different sources for drinking purposes: ground water, upland catchment water and lowland river water. Waters from some sources contain significant concentrations of manganese which can give a black/brown tint to the water.

## 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, some water quality parameters are continuously monitored at major treatment works. Across Scotland laboratory tests are carried out on water samples each year for regulatory purposes. Many more samples are taken by staff 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%.

## why your water may sometimes appear coloured

All our water is treated at our water treatment works where every effort is made to reduce the natural colour of the raw water. Some of the treatment processes we use are not as efficient as others at reducing colour in the water.

If you suddenly experience discoloured tap water this may result from a seasonal increase in manganese in the raw water source, or simply from the disturbance of manganese that has settled in the pipes following a burst main, a change in demand for water usage, or from a change in the flow within the pipe itself.



## are there any health implications of manganese in water?

Discoloured water caused by manganese is unlikely to be harmful to health from short-term or long-term exposure. The W.H.O (World Health Organisation) has established a provisional health-based guideline value of 400 µg/l\* for lifetime exposure.

Discolouration and dirty water problems are likely to occur above a concentration of 50 µg/l, which is the limit set in the Drinking Water Regulations for Scotland.

Drinking water contributes to only a small proportion of your dietary intake of manganese. The major source of manganese intake is from food.

\* 1 microgram per litre (µg/l) is one part per billion

## what you should do if you experience discoloured water

Discoloured water can often be cleared by allowing your tap to run for several minutes. If this does not clear the discolouration, please check with your neighbours to determine if their water is also discoloured and contact our **Customer Helpline** on **0845 601 8855** for more information.

## washing machines and discoloured water

If your washing has been discoloured because of the water, repeat the wash without adding fabric softener. If it is still discoloured then please contact our **Customer Helpline** on **0845 601 8855** for more information.

## what we are doing to reduce the levels of manganese in water

We know from our regular sampling of drinking water supplies and from our customers, that there are certain areas within Scotland where the presence of manganese can cause inconvenience to our customers.

In these known areas we are working hard to reduce manganese by the introduction of manganese removal stages at our water treatment works. We are also undertaking controlled flushing of the distribution system to reduce the build up of any manganese deposits in the pipes.

After we have been working in these areas and have flushed the water mains, you may experience a slight discolouration to your tap water. We would advise that you run your kitchen tap for a couple of minutes until the water is running clear.

## how to contact us

Details of water quality testing in your area can be obtained by contacting us and asking to speak to one of our specialists in the Public Health team. If you require more information on our services, please contact us:

By phone on our Customer Helpline **0845 601 8855**

On the web at **www.scottishwater.co.uk**

Or in writing at **Scottish Water, PO Box 8855, Edinburgh, EH10 6YQ**

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 call our Customer Helpline.

Please quote this reference code when contacting us: **SWFact ME4 04/11**

We record all calls for quality and training purposes.