

White Water

Customers sometimes report that their drinking water has a white, milky or cloudy appearance. This may be the result of dissolved air being released in the form of tiny bubbles. In areas where supplies are naturally hard (chalky water), white particles may form when water is boiled. A simple visual check, described below, can confirm whether the white appearance is due to air or hardness salts.

Air in water

A white or milky appearance is caused by tiny air bubbles similar to the gas bubbles in carbonated, fizzy drinks but much smaller. If left to stand, the bubbles rise extremely slowly from the bottom of the glass and disappear. While this may affect the water's appearance, it is safe to use and will not harm household plumbing systems. The air in the water may result in the chlorine, which is added to the water to disinfect it and ensure it is safe to drink, being more noticeable than usual.

How does air get into the water?

Air can get into the water in two ways. It can be drawn into the system when water is pumped or more usually when water mains have been drained to carry out repairs. Either way the result is that air becomes trapped in the water. When this happens you may notice that the water is 'frothy' or splutters when the tap is opened. Occasionally frothy water may dislodge deposits that have collected on the inside of pipes. This should clear as more water is drawn through the tap. If it continues, customers can contact us by calling the customer operational helpline, at the number shown below.

White or milky water is usually caused by naturally dissolved air being released as a result of changes in pressure and temperature. Because water pipes are pressurised, the dissolved air remains in the water until the pressure is released when you open your tap. The amount of air that can be held in solution depends on the temperature - the colder the water the more air it will hold. This is why white water happens most often during the winter when the water is very cold and some of the air comes out of solution in the form of tiny air bubbles as the water warms up. These bubbles are so small they are almost invisible to the naked eye and the water appears white or milky.

How do I know if cloudiness is really because of air?

There is a really simple way to check whether milky white water is due to the release of dissolved air. Fill a clean glass with tap water and place it on the worktop. You will notice that the water clears from the bottom of the glass as the bubbles rise slowly to the surface.

Chalky water

Water supplies drawn from underground sources contain relatively large amounts of dissolved mineral salts of calcium and magnesium, principally as bicarbonates, chlorides, and sulphates. Heating, particularly boiling, converts the bicarbonates to insoluble carbonate that appears as white, flaky particles. The 'glass test' described as hardness salts. The 'glass test' described above will show whether the cloudiness is due to air (water clears from the bottom) or hardness salts (water clears from the top as the particles settle to leave a fine deposit at the bottom of the glass). Most water supplied by Dŵr Cymru Welsh Water is soft so does not produce hardness salts.

Is the water safe to use?

Yes. The quality of drinking water is not affected by the presence of air or hardness salts. In fact, tap water always contains some dissolved air. Water that contains no air has an unpleasant flat or stale taste.

Where can I get further information?

Please call us first on our operational helpline **0800 052 0130**.

One of our regulators, the Drinking Water Inspectorate, is responsible for ensuring the high quality of public water supplies. You can visit their website at: www.dwi.gov.uk