

What do the Results Mean?

The following is a general guide to interpreting your results for key characteristics. Contact your local Council or Public Health Unit for further advice.

Microbiological

Characteristic		Australian Drinking Water Guideline Value
<i>E. coli</i>	The presence of <i>E. coli</i> indicates faecal contamination of water and the possible presence of enteric disease-causing microorganisms.	Should not be detected in 100mL

Chemical

For each of these characteristics, results should be below or equal to the corresponding *Australian Drinking Water Guideline* value.

Health-based Characteristic		Australian Drinking Water Guideline Value
Antimony	Antimony is a metal that can be harmful in high concentrations. It is infrequently found in source waters, and is more common where lead or copper smelting is carried out. It may also leach from antimony-tin solder.	0.003 mg/L
Arsenic	Long-term consumption of water with a high arsenic level can be harmful. There is an increased risk of skin cancer and possibly of other organs and effects on the nervous system. Arsenic can enter water from minerals and ores, industrial effluent, pollution from burning of fossil fuels and wastes, drainage from old gold mines and some types of sheep dip.	0.007 mg/L
Cadmium	Long-term consumption of water with a high cadmium level can cause kidney problems. Cadmium may enter water supplies from impurities in the zinc of galvanised pipes, from solders, from fertilisers or waste from metallurgical industries.	0.002 mg/L
Chromium	Chromium can cause cancers. Chromium is found in soil and rocks, and industrial chromium and waste discharges.	0.05 mg/L
Copper	Copper consumption can cause nausea, abdominal pain and vomiting, cirrhosis of the liver and in severe cases, death. Copper can be found in rocks and soils, and in water pipes and fittings.	2 mg/L
Fluoride	At high levels fluoride can cause dental and skeletal fluorosis. It is found in rocks and waters, and may be present in fertilisers and industrial pollution.	1.5 mg/L
Lead	Lead is a toxic heavy metal. It can affect the central nervous system, cause diminished intelligence especially in children, kidney damage, and interfere with red blood cell production and calcium metabolism. It may enter a water supply from natural sources or from pipes, solder or roof flashings.	0.01 mg/L
Nickel	Long-term exposure to nickel can cause kidney problems. Nickel may enter water supplies from burning of fossil fuels or from nickel-plated tap and plumbing fittings.	0.02 mg/L
Nitrate	Excessive nitrate or nitrite in water can lead to occurrences of 'blue baby syndrome' in infants fed with formula made up using the water. The decomposition of organic wastes such as manure can introduce nitrate to water supplies.	50 mg/L
Nitrite	Nitrite is only likely to be present in water that is poorly oxygenated.	3 mg/L

Aesthetic Characteristic (These factors may cause taste or odour complaints in your water or may lead to corrosion or the formation of scale.)		Australian Drinking Water Guideline Value
Manganese	Manganese is harmful at high concentrations. At concentrations exceeding 0.1 mg/L manganese imparts an undesirable taste and stains laundry and plumbing fittings. Manganese is likely to enter water supplies from natural sources or from contaminated sites.	0.1 mg/L
Sulfate	Sulfate in water can lead to an undesirable taste and odour, and can increase corrosion in pipes. Sulfate at levels greater than 500 mg/L can have purgative effects. Sulfate enters water supplies by natural leaching from rocks. The highest concentrations are likely to be seen in groundwater.	250 mg/L

Physical

For each of these characteristics, values should be below or equal to the corresponding Australian Drinking Water Guideline value (or for pH, between 6.5 and 8.5).

Aesthetic Characteristic (These factors may cause taste or odour complaints in your water or may lead to corrosion or the formation of scale.)		Australian Drinking Water Guideline Value
pH	A pH of 7 is neutral, greater than 7 is alkaline, and less than 7 is acidic. When the pH is below 6.5 or above 11, the water can corrode plumbing fittings and pipes. This can release harmful metals such as lead or copper. If water has a pH above 8.5, there can be encrustation of pipes. A pH above 8.0 can decrease the efficiency of chlorine disinfection.	6.5 – 8.5
Total dissolved solids (TDS)	Dissolved material, usually salts, in the water supply can affect the taste of water. Water with high TDS may cause scale on the inside of plumbing fittings and pipes, or lead to excessive corrosion.	500 mg/L
Total Hardness	Hard water can contribute to the formation of scale in hot water pipes and fittings, and makes lathering of soap difficult. Hardness is the measure of calcium and magnesium in the water and comes from the dissolving of these materials from soil and rocks.	200 mg/L
Turbidity	Turbidity is caused by the presence of fine suspended matter in water. High turbidity may give a muddy or milky appearance to water. It can also reduce the efficiency of disinfection.	5 NTU (less than 1 NTU desirable)

As well as testing the characteristics recommended in the *Private Water Supply Guidelines*, NSW Forensic & Analytical Science Service (NSW FASS) also tests some additional parameters to provide a broader analysis of water quality. These additional characteristics are of less health concern but can influence water quality.

For more information:

- *Australian Drinking Water Guidelines, 2011*
www.nhmrc.gov.au/guidelines/publications/eh52
- *Private Water Supply Guidelines* (NSW Ministry of Health)
<http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx>
- Your local council
- Your local Public Health Unit.