

Drinking Water Parameters:

This one-page reference sheet provides commonly accepted allowable limits for key drinking water quality parameters in Australia and New Zealand. It is intended to support users of portable water purification systems, remote communities, and emergency responders with guidance on what to test for and what levels are considered safe for consumption. The values listed align with the Australian Drinking Water Guidelines (ADWG) and the Drinking-water Standards for New Zealand (DWSNZ), current as of 2024.

Water Quality Testing Parameters & Allowable Limits

Parameter	Category	Allowable Limit	Notes
E. coli	Microbiological	0 CFU/100 mL	Must be absent in all drinking water
Total coliforms	Microbiological	Not specified	Should not be present in treated water
Turbidity	Physical	<5 NTU (ideally <1 NTU)	High turbidity can interfere with disinfection
pH	Physical	6.5–8.5	Outside this range may cause corrosion or taste issues
TDS (Total Dissolved Solids)	Physical	<500 mg/L (aesthetic guideline)	High TDS may indicate minerals or contamination
Free Chlorine	Chemical	0.2–5.0 mg/L	Residual disinfectant for microbial control
Nitrate (as NO₃)	Chemical	<50 mg/L	High levels dangerous to infants
Nitrite (as NO₂)	Chemical	<1 mg/L (AU), <3 mg/L (NZ)	Can cause health problems at elevated levels
Fluoride	Chemical	<1.5 mg/L	For dental health; excess can cause fluorosis
Lead	Heavy Metal	<0.01 mg/L	Toxic, especially for children

Arsenic	Heavy Metal	<0.01 mg/L	Naturally occurring carcinogen
Copper	Heavy Metal	<1.0 mg/L	High levels may cause staining or taste issues
Iron	Heavy Metal	<0.3 mg/L (aesthetic guideline)	May affect colour, taste, and plumbing
Zinc	Heavy Metal	<3.0 mg/L	Can cause a metallic taste
Manganese	Heavy Metal	<0.4 mg/L (health); <0.1 mg/L (aesthetic)	High levels cause staining and taste issues
Aluminium	Additive/Residue	<0.2 mg/L (aesthetic), <0.1 mg/L (health)	Common in treated water; avoid excess
Hardness (as CaCO₃)	Physical/Chemical	60–200 mg/L	Affects scaling and soap performance
Sodium (salinity)	Chemical	<180 mg/L	May affect taste and blood pressure

Disclaimer

This guide is intended for general reference only and does not replace laboratory analysis, government regulation, or expert advice. Users should always consult the latest national standards and, where necessary, accredited testing laboratories for formal assessments. Values shown reflect national guidelines for safety and aesthetics but may vary depending on local context and specific health risks.

For detailed guidance, refer to:

- Australian Drinking Water Guidelines (NHMRC, 2023)
- Drinking-water Standards for New Zealand (Taumata Arowai, 2022)