

Aesthetic Values for Drinking Water Notice 2022

This notice issued pursuant to section 48(1) of the Water Services Act 2021 (“Act”) by the Chief Executive of Taumata Arowai—the Water Services Regulator (“Taumata Arowai”), acting under delegated authority, sets out aesthetic values that relate to drinking water.

This notice is secondary legislation as defined in the Legislation Act 2019.

Notice

1. Title

This notice is the Aesthetic Values for Drinking Water Notice 2022.

2. Interpretation

Within this notice:

determinand means a substance or characteristic that is determined or estimated in drinking water.

3. Commencement

This notice comes into force on **14 November 2022**.

4. Purpose

Aesthetic values specify or provide minimum or maximum values for substances and other characteristics that relate to the acceptability of drinking water to consumers (such as appearance, taste, or odour). A drinking water supplier must take all reasonably practicable steps to supply drinking water that complies with aesthetic values issued by Taumata Arowai under the Water Services Act 2021.

These Aesthetic Values replace the guideline values for aesthetic determinands specified in the *Drinking-water Standards for New Zealand 2005 (Revised 2018)*.

5. Aesthetic Values

The determinands and corresponding values listed in the Schedule are the aesthetic values that relate to drinking water.

Dated at Wellington this 14th day of June 2022.

RAYMOND McMILLAN, Chief Executive (Acting).

Schedule

Aesthetic Values for Drinking Water

Determinand	Value	Unit	Notes
Aluminium	≤ 0.1	mg/L	Above this value, complaints of depositions or discoloration may arise
Ammonia	≤ 1.5	mg/L	Odour threshold (alkaline conditions)
Calcium			See “Hardness”
Chloride	≤ 250	mg/L	Taste threshold (counter ion dependent: sodium, calcium or potassium)
Chlorine (contingent on the supply being chlorinated)	0.3 – 1.0	mg/L as Cl ₂	Free available chlorine Taste and odour threshold (pH dependant) Disinfection must not be compromised in trying to avoid taste and odour complaints
2-Chlorophenol	≤ 0.0001	mg/L	Taste threshold
	≤ 0.01		Odour threshold
Colour	≤ 15	TCU	Appearance
Copper	≤ 1	mg/L	Staining of laundry and sanitary ware
1,2-Dichlorobenzene	≤ 0.001	mg/L	Taste threshold
	≤ 0.002		Odour threshold
1,4-Dichlorobenzene	≤ 0.0003	mg/L	Odour threshold
	≤ 0.006		Taste threshold
2,4-Dichlorophenol	≤ 0.0003	mg/L	Taste threshold
	≤ 0.04		Odour threshold
Ethylbenzene	≤ 0.002	mg/L	Odour threshold
	≤ 0.08		Taste threshold
Hardness (total) (Ca + Mg) as CaCO ₃	≤ 200	mg/L	Scale deposition, scum formation (pH and alkalinity dependent) Low hardness (<100) may be more corrosive

NEW ZEALAND GAZETTE

	100-300		Taste threshold (Ca; counter ion dependent)
Hydrogen sulphide	≤ 0.05	mg/L	Taste and odour threshold
Iron	≤ 0.3	mg/L	Staining of laundry and sanitary ware
Magnesium			See "Hardness"
Manganese	≤ 0.04	mg/L	Staining of laundry
	≤ 0.10		Taste threshold
Monochlorobenzene	≤ 0.01	mg/L	Taste and odour threshold
pH	7.0-8.5		Ideally 7.4 - 8.0. Most water with a low pH has a high plumbosolvency. Water with a high pH has a soapy taste and feel. A pH less than 8 is preferable for effective disinfection with chlorine
Sodium	≤ 200	mg/L	Taste threshold (counter ion dependent)
Styrene	≤ 0.004	mg/L	Odour threshold
Sulphate	≤ 250	mg/L	Taste threshold
Taste and odour	Acceptable to most consumers		
Temperature	≤ 15°C		
Toluene	≤ 0.03	mg/L	Odour threshold
	≤ 0.04		Taste threshold
Total dissolved solids	≤ 1000	mg/L	Taste may become unacceptable from 600-1200 mg/L
Trichlorobenzenes (total)	See below		
1,2,3-Trichlorobenzene	≤ 0.01	mg/L	Odour threshold
1,2,4-Trichlorobenzene	≤ 0.005	mg/L	Odour threshold
1,3,5-Trichlorobenzene	≤ 0.05	mg/L	Odour threshold
2,4,6-Trichlorophenol	≤ 0.002	mg/L	Taste threshold
	≤ 0.3	mg/L	Odour threshold
Turbidity	≤ 5	NTU	Appearance
Xylene	≤ 0.02	mg/L	Odour threshold
Zinc	≤ 1.5	mg/L	Taste threshold