



FACT SHEET

DRINKING WATER TESTING

Issue September 2022

Is your rainwater safe to drink?

Many gastrointestinal illnesses are caused by bacteria in drinking water. Whatever the age or size of your tank, the Australian Drinking Water Guidelines (ADWG) recommend regular testing to ensure it does not contain harmful levels of bacteria.

Water from your roof can be a very valuable resource and in recent times more emphasis has been placed on capturing it. Rainwater is safe to drink as long as it is captured and stored in a suitably maintained system. The ADWG state that 'regular sampling and testing of stored rainwater is essential to maintaining healthy drinking water'.

Regular water testing is recommended due to seasonal changes such as more rain in winter, more dust and debris in spring/summer plus varying degrees of bird and animal activity. This can result in a build-up of micro-organisms as well as organic and inorganic particulates in your storage tank. Most micro-organisms are harmless and do not pose a health risk, however some that are commonly found in rainwater tanks can cause significant health problems.

The Winechek Drinking Water Test Bundle (for Rainwater) tests for:

- *E. coli*
- Thermotolerant Coliforms
- Heterotrophic bacteria

Thermotolerant coliforms (or alternatively, *E.coli*) should NOT be found in drinking water. Heterotrophic bacterial counts may indicate any degradation in water treatment efficacy.

Does your drinking water come from another source?

If the water you drink comes from a bore, creek, dam, or source other than a rainwater tank, it is extremely important that you perform both microbiological and chemical testing regularly, to ensure that there are no harmful microbes or chemicals in the water. The Winechek Drinking Water Test Bundle Extra will test your water for Calcium, Conductivity, Copper, Hardness, Iron, Magnesium, PAR, pH, Potassium, Salinity, SAR, Sodium as well as *E. coli* or other harmful microbes, indicating its suitability for use as drinking water.

Drinking Water Guidelines

The ADWG are the recommended source for tests for drinking water in Australia. They have been developed by the National Health and Medical Research Council (NHMRC) as the reference for the safe supply of drinking water. They state: 'The ADWG is designed to provide an authoritative reference to the Australian community and the water supply industry on what defines safe, good quality water, how it can be achieved and how it can be assured. The guidelines have been developed after consideration of the best available scientific evidence and provide a framework for good management of drinking water supplies to ensure safety at point of use.

'Routine monitoring for specific pathogens is not recommended. Monitoring for microbial indicator organisms, which is relatively simple and inexpensive, is used for this purpose. *E.coli* (or thermotolerant coliforms) is the recommended indicator for faecal contamination while total coliforms and heterotrophic plate counts can be used for operational monitoring. Monitoring drinking water for *E. coli* (or thermotolerant coliforms) as a verification measure is a useful tool within a risk management approach to water quality.'





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The Winechek Drinking Water Test Bundle consists of tests that the ADWG recommend, rather than testing for particular organisms. As the ADWG state, it can be a very expensive and time-consuming exercise to test for every possible organism, so indicator organisms are used to give a good idea of whether or not the water is fit for drinking.

Testing

- The ADWG state that monitoring “microbial indicator organisms” is the preferred method to determine day-to-day water quality
- Thermotolerant Coliforms and Heterotrophic Plate Count are the main tests recommended by the ADWG.
- *E. coli* is the most common Thermotolerant Coliform present in faeces (typically greater than 90 per cent) and is regarded as the most specific indicator of recent faecal contamination.
- The report you receive from us will express the quantity of bacteria found in Colony Forming Units (CFU) and the levels of these bacteria considered safe by ADWG.

How to take your Drinking Water sample

- A FREE EasyTest Sampling Pack including sterile bottle is available from Winechek Laboratories.

Please label the bottle, including date and time of sampling.

- Fill the bottle leaving only a small air pocket at the top.
- Take the sample from a kitchen tap or from where the water is likely to be consumed.
- Deliver your sample to your nearest Winechek laboratory as soon as possible, as analysis must commence within 24 hours of sampling. If you are sending your sample by courier, take the sample as close to the dispatch time as possible.
- Do not freeze or allow the sample to become warm, as this may affect bacteria numbers.

Maintaining your rainwater tank

Proper maintenance of the tank, catchment system, roof, gutters and tank inlet is essential to ensure a safe supply of drinking water. Make sure you:

- Do not allow the first rainwater to enter the tank.
- Clean the gutters and tank inlet every 3 – 4 months.
- Remove the sludge at the bottom of the tank every 2 – 3 years.
- Cover and seal the tank to prevent the entry of sunlight, dust and animals.
- Ensure a tight-fitting inspection hatch is installed for cleaning and inspection purposes.

Contact your nearest Winechek Laboratory on the details below for your FREE EasyTest Sampling Pack.

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