



TOI TE ORA
PUBLIC HEALTH
Bay of Plenty + Lakes Districts



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Monitoring the quality of your water supply

This information is for those who are responsible for their water supplies. The quality of these supplies is essential to help ensure safe drinking-water for the community.

Why should we monitor water quality?

It is important to know that drinking-water supplied to a household or community is safe to drink at all times.

New Zealand has one of the highest rates in the developed world of gastroenteritis, a diarrhoea and vomiting illness, which is caused by micro-organisms such as *Cryptosporidium* and *Giardia*. These micro-organisms (germs or bugs) can be present in water sources and if people drink this contaminated water they can become ill. This is why it is so important to ensure the drinking water supplied to a community is monitored to help prevent people getting sick.

It is also vital that the source of the water is protected and well managed, that the water is appropriately treated, and that the pipe work which distributes the treated water round the community is properly maintained.

What should we monitor?

Generally in New Zealand micro-organisms pose the greatest and most immediate risk of contamination to a water supply. Therefore we take water samples to test for *E.coli*, a common kind of bacteria that lives in the intestines of animals and people. *E.coli* is an indicator of water quality and is cheap to test for. If *E.coli* is present then it's likely that other disease-causing micro-organisms are also present.

How often should we monitor?

The frequency of this monitoring will vary from supply to supply, mostly based on risk – the higher the assessed risk, the more frequent the monitoring required. To meet the basic requirements of the Drinking Water Standards for New Zealand a monthly test is advised for small community supplies. Sampling may be reduced for small or household supplies when there is effective treatment in place and it is monitored and maintained.



Where to collect a sample?

Sampling at different parts of the pipe work offers the best representation of the water supply. However sampling the source water or the water in the reservoir may also be helpful.

How to organise water sampling?

Contact an accredited lab to organise a water sample. Accredited labs can be found on the Drinking Water for New Zealand website here: www.drinkingwater.esr.cri.nz/mohlabs/labmap.asp

How to collect microbiological samples correctly

Prior to sampling, wash your hands thoroughly with soap and water or use alcohol hand gel.

Choose a suitable tap; preferably an unpainted metal tap that is not leaking. It should also be one that is used regularly and is not subject to contamination, for example from greasy hands or animals rubbing against it. Avoid mixer taps.

Step 1: Remove any attachments and turn on the tap to maximum flow and allow water to run for 1-2 minutes. Sufficient water (at least 20 litres) should have passed through the tap. Turn tap off.

Step 2: Sterilise tap

For metal taps:

- check area immediately surrounding tap to ensure no danger of setting flammable material alight.
- light gas burner or gas torch.
- direct flame at area around and inside the outlet of the tap – continue to flame for 15 to 20 seconds.

For plastic taps:

- spray disinfectant solution on the area immediately around and inside the outlet of the tap.
- leave disinfectant solution on tap for 1 to 2 minutes.
- turn tap on and run for 3 to 4 minutes to flush residual disinfectant away.

Step 3: Fill sample bottle

- remove the lid and keep it in your hand to avoid contamination.
- fill the sample bottle carefully without touching the rim. Leave a 25mm space of air at the top of the bottle.
- firmly replace the lid on the bottle.



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- place the sample bottle directly into the chilly bin with chilly pads.
- if at any point during sample collection you believe the sample may have been exposed to potential contamination, another sample must be taken.

Step 4: Send sample to the lab

- all samples must reach the laboratory no later than the morning after sampling or within 24 hours of the first sample being taken. Otherwise the sample result is invalid and sampling must be repeated.
- if samples are rendered invalid, the sampling must be repeated.

What to do with a positive result?

If *E.coli* is present in the water then this means there has been some contamination from faecal matter. Contact Toi Te Ora Public Health on 0800 221 555 and ask to speak with the Health Protection Officer.

For more information on community water supplies, visit these websites:

Drinking Water New Zealand - www.drinkingwater.esr.cri.nz

Toi Te Ora Public Health - www.toiteora.govt.nz/drinking_water

Ministry of Health - www.health.govt.nz/our-work/environmental-health/drinking-water