



# Standard drinking water sampling technique – microbiological

To determine the microbiological quality of drinking water it must be sampled and tested in accordance with:

- the Australian Drinking Water Guidelines 2004 as published by the National Health and Medical Research Council
- the Guidelines for the Microbiological Assessment of Drinking Water<sup>1</sup>
- this document.

## General rules of sampling

Take extreme care to avoid contaminating the sample container and the water sample.

### Do Not:

- touch the inside of the bottle
- rinse the bottle
- put caps on the ground while sampling
- transport drinking water samples with other water samples, (eg: sewage or environmental samples)
- sampling from taps that permit water to flow over their outer surfaces.

### Always:

- label the bottle before sampling
- take bacteriological water samples first
- discard the sample and take another in a fresh bottle if there is any reason to suspect that contamination has occurred during sampling
- only remove bottle from plastic bag to complete label details or when it's time to sample.

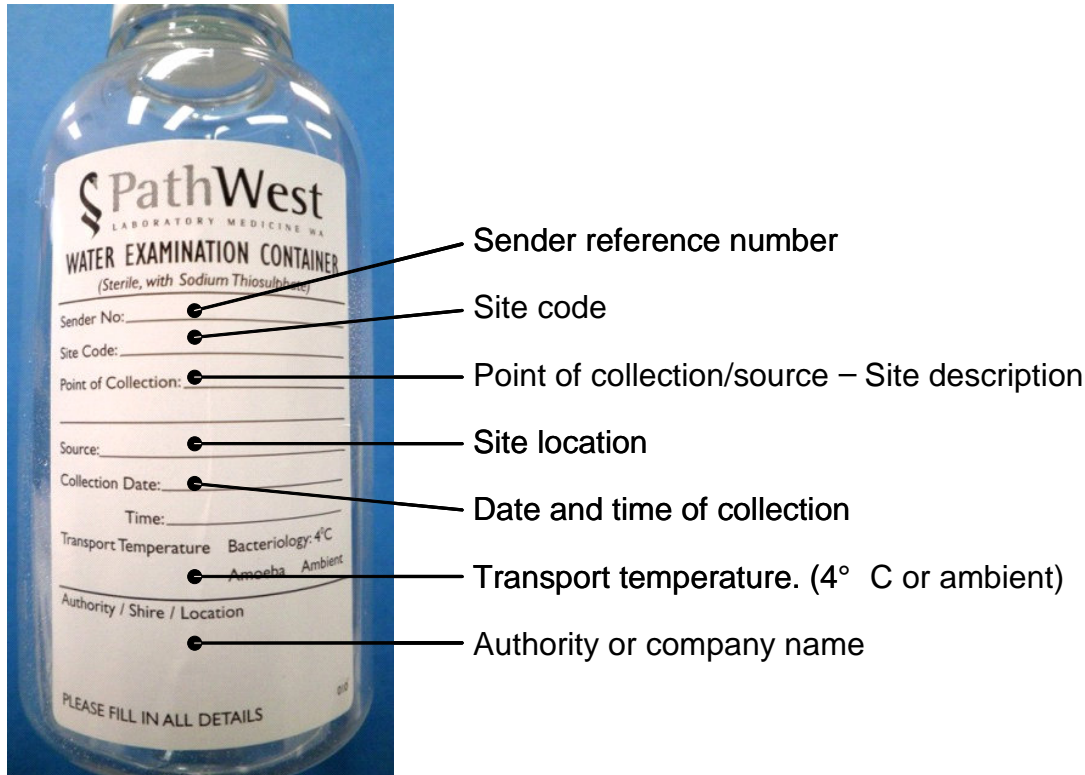
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<sup>1</sup> [www.public.health.wa.gov.au/3/972/2/information\\_for\\_laboratory\\_managers.pm](http://www.public.health.wa.gov.au/3/972/2/information_for_laboratory_managers.pm)



## Sample bottle labelling

The following information should be provided on all sample bottles:



## Microbiological water sample collection – technique

### Tap samples

1. Turn the tap full on and allow the water to run to waste for 2 minutes. This flushes the interior of the nozzle and discharges stagnant water from the pipe.
2. Turn off the tap and sterilise the spout by heating it with a blow lamp, gas torch or by igniting a piece of cotton wool soaked methylated spirits until any water in the tap boils.
3. Cool the tap by allowing the water to run to waste for a few seconds.
4. Adjust the tap to deliver a gentle stream of water.
5. Clearly label the bottle. (See sample bottle labelling for further details)
6. Hold the bottle in one hand. Remove the screw cap with the other. Hold the cap open side down and keep it close to the bottle.
7. Fill the bottle to within 5mm from the top by holding it under the tap taking care to avoid splashing.
8. Carefully replace the cap.
9. Place the bottle into a biohazard bag and seal.

## Dip samples

1. Clearly label the bottle. (See sample bottle labelling for further details)
2. Hold the bottle in one hand near the base; remove the screw cap with the other.
3. Collect the sample from approximately 300mm below the water surface. Take care to avoid any surface film entering the bottle by plunging it, neck downwards as it enters the water.
4. Turn the bottle until the neck points slightly upwards while moving it in the direction of the mouth during filling. Create an artificial current by pushing the bottle horizontally forwards and away from the hand. Care should be taken to ensure that the bottle fills before the forward motion is completed. This prevents contamination from the samplers hand from entering the bottle.
5. After filling tip enough of the sample from the bottle to leave an air space of about 5mm.
6. Carefully replace the cap.
7. Place the bottle into a biohazard bag and seal.

## Sample transportation

### Temperature

#### Bacteriological

Bacteriological samples should be collected into pre-chilled bottles and be transported in a chilled, not frozen, state between 1°C and 4°C. Fre ezer blocks should be used, not loose ice.

#### Amoeba

Water samples for amoebae testing should be transported in a non-chilled insulated container at ambient temperature.

### Time

Samples should arrive in the laboratory no later than 24 hours after collection. Whenever possible, samples should arrive at the laboratory on the day of collection, preferably before 2pm.



## Submitting samples

It is essential that all samples be given a site code number before they are submitted for testing. For more information regarding site code allocation refer to 'Site Code Identification System for Water Samples', published by the Department of Health.

All sample bottles and accompanying sample request forms should be completed in full with the following information:

- company name
- company address
- sample collection date
- site code
- site description
- time of sample collection
- treatment.

## More information

### Water Unit

Environmental Health Directorate  
Department of Health  
PO Box 8172  
PERTH BUSINESS CENTRE WA 6849  
Telephone: (08) 9388 4999  
Fax: (08) 9388 4910

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