



abc laboratories

Methods for Sampling

T02 – Water Quality Sampling and Measurement

Scope

This Standard provides general principles to be applied in sampling for the physical and chemical of drinking and recycled waters for the purposes of process control, quality characterization, identification of sources of pollution and the monitoring of background levels.

Referenced Documents

The following documents are referred to in this standard:

AS

- 2031 Selection of containers and preservation of water samples for chemical and microbiological analysis
- 5667.5 Part 5: Guidance on sampling of drinking water and water used for food and beverage processing

Equipment List

1. Sample containers
2. Non-powdered gloves
3. Chain of custody forms, data sheets, notebook or field computer
4. Water proof markers and pens
5. Sampling pole with attachment to hold sample container
6. Hanna Multimeter
7. Sample storage container

Sampling Collection with Extendable Sampling Pole

1. Label sample containers.
2. Inspect the internal surfaces of the water sampler, ensuring it is clean. If sampler has been washed prior to use, further rinsing of the water sampler is not necessary because this will occur as the device moves through the water body.
3. Extend the sampling pole to the required length and check that all surfaces have been cleaned.
4. Place the sample container into the adjustable bottle holder.
5. Lower the water sampler into the water to fill, and remove the device from the water.

6. To rinse the labelled sample container, pour water from the sampler into the labelled container until one third full. Replace the lid on the labelled sample container and shake gently. Remove the lid from the labelled sample container and pour the rinsate out downstream of the sample collection point.
7. Rinse the sample container three times (if appropriate).
8. Repeat step 6 to fill the sampler.
9. Fill the labelled sampler containers. Do this quickly to avoid sediment particles from settling to the bottom of the water sampler. Recap the sample containers.
10. Complete a final check that details on the sample container are correct.
11. Place the sample container in sample storage container for transport to laboratory.
12. Test for pH, conductivity, temperature and record on worksheet

Sample Collection - Tap Method

Procedure

1. Clearly label the sample bottle with your name, time, date and location.
2. Remove external tap fittings such as rubber tubes or hose attachments.
3. Turn tap on full and allow to flow for 2-3 minutes to clear service lines.
4. Adjust flow-rate to gentle stream of water.
5. Open sample bottle just before it is required for filling.
6. When removing cap, hold it at the top making sure that fingers do not come into contact with the neck or the inner surface of the cap. Do not lay the cap down or allow it to touch anything.
7. Do not adjust flow rate during sampling.
8. Immediately fill with water, leaving 2.5cm head space.
9. Replace the cap tightly.
10. Stow for transport
11. Test for pH, conductivity, temperature and record on worksheet

Record Measurements

1. Time and date
2. Sampler name
3. Location
4. Weather conditions
5. Observations
6. pH
7. Conductivity
8. Temperature

Sampling From A Water Tank (Recycled Water)

Procedure

1. Clearly label the sample bottle with your name, time, date and location.
2. If tank top safely accessible, use sampling pole method.
3. Extend the sampling pole to the required length and check that all surfaces have been cleaned.
4. Place the sample container into the adjustable bottle holder.
5. Lower the water sampler into the water to fill, and remove the device from the water.
6. Fill the labelled sampler containers. Do this quickly to avoid sediment particles from settling to the bottom of the water sampler. Recap the sample containers.
7. Complete a final check that details on the sample container are correct.
8. Place the sample container in sample storage container for transport to laboratory.
9. If tank top not accessible use tap method
10. Remove external tap fittings such as rubber tubes or hose attachments.
11. Turn tap on full and allow to flow for 2-3 minutes to clear service lines.
12. Adjust flow-rate to gentle stream of water.
13. Open sample bottle just before it is required for filling.
14. When removing cap, hold it at the top making sure that fingers do not come into contact with the neck or the inner surface of the cap. Do not lay the cap down or allow it to touch anything.
15. Do not adjust flow rate during sampling.
16. Immediately fill with water, leaving 2.5cm head space.
17. Replace the cap tightly.
18. Stow for transport
19. Test for pH, conductivity, temperature and record on worksheet

Record Measurements

1. Time and date
2. Sampler name
3. Location
4. Weather conditions
5. Observations
6. pH
7. Conductivity
8. Temperature