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## **Sample Collection and Handling Guide**

Please use this guide as a quick reference to assist you in the collection, handling, and transportation of your drinking water samples. If you have any questions or concerns, please contact the laboratory at 705-722-5227 or email [aquaenvirolab@gmail.com](mailto:aquaenvirolab@gmail.com).

To view the Ministry of the Environment, Conservation and Parks (MECP) collection guidelines – Practices for the Collection and Handling of Drinking Water Samples, please visit:

<https://www.ontario.ca/page/practices-collection-and-handling-drinking-water-samples>

### **Sampling for Bacteriological Analysis**

1. Remove any aerators, tap screens, hoses, or filters. Wash hands or use disposable gloves and use bleach or alcohol swab to clean the mouth of the tap prior to collecting sample.
2. Let water run cold for at least two minutes prior to collecting sample.
3. Use a sterile plastic sample bottle from Aquatic and Environmental Laboratory. Do not rinse before sample collection.
4. Do not touch the lip or rim of the bottle or inside of the cap. If you must set the cap down, place it open-side up on the counter.
5. Collect at least 200 mL of sample, leaving air space. Do not allow water to overflow.
6. Submit Sample(s) and completed chain of custody form to Aquatic and Environmental Laboratory Inc. within 48 hours of collection.

### **Sampling for pH Analysis**

1. Use a preservative-free plastic (PET or HDPE) sample bottle from Aquatic and Environmental Laboratory Inc. to collect sample.
2. Collect at least 100 mL of sample.
3. Submit sample(s) and completed chain of custody form to Aquatic and Environmental Laboratory Inc. within 14 days of collection, however it is recommended analysis be completed as soon as possible after collection for best accuracy.

### **Sampling for Turbidity Analysis**

1. Use a preservative-free glass or plastic (PET or HDPE) sample bottle from Aquatic and Environmental Laboratory Inc. to collect sample.
2. Collect at least 100 mL of sample.
3. Submit sample(s) and completed chain of custody form to Aquatic and Environmental Laboratory Inc. within two days of collection, however it is recommended analysis be completed as soon as possible after collection for best accuracy.

### **Sampling for Microcystin Analysis**

1. Use a 1 L or 500 mL glass amber bottle with sodium thiosulphate from Aquatic and Environmental Laboratory Inc.
2. Collect at least 500 mL of sample.
3. Submit sample(s) and completed chain of custody form to Aquatic and Environmental Laboratory Inc. as soon as possible after collection. Samples must be analyzed within five days of collection.

Parameter/Test Group	Sample Container	Minimum Volume	Preservative	Maximum Holding Time	Storage/Transport Conditions
Total Coliform (TC), <i>Escherichia coli</i> ( <i>E.coli</i> , EC) Heterotrophic Plate Count (HPC), Background (BKG)	Plastic, Sterile	200 mL	30 mg Sodium Thiosulphate	48 Hours	4°C ± 3°C Transport chilled, not frozen
pH	Plastic (PET or HDPE)	100 mL	None	14 Days Analysis should be performed as soon as possible after collection	4°C ± 3°C Transport chilled, avoid freezing, dark
Turbidity	Glass or Plastic (PET or HDPE)	100 mL	None	2 Days Analysis should be performed as soon as possible after collection	4°C ± 3°C Transport chilled, avoid freezing, dark
Microcystin	Amber glass Bottle with Teflon lined screw caps or PET	500 mL	50 mg Sodium Thiosulphate	5 Days	4°C ± 3°C Transport chilled, avoid freezing, dark

**Tips for Transporting Samples**

- Transport sample(s) to Aquatic and Environmental Laboratory Inc. as soon as possible after collection
- Keep sample(s) cool, but not frozen, during transportation. Ideal storage is less than 10°C
- Do not pack sample(s) with loose ice as this may cause contamination. Package sample(s) with a frozen ice pack or labelled frozen water bottle
- Complete chain of custody form and enclose it in waterproof packaging (e.g. sealable plastic bag) to ensure it is not ruined by melting ice or condensation

**Subcontracting**

Subcontracting may be available for additional parameters not listed in this guide. Please contact the laboratory at 705-722-5227 or email [aquaenvirolab@gmail.com](mailto:aquaenvirolab@gmail.com) for more information regarding sample bottles and collection and handling information.