

Collecting a water sample for mercury verification

NSW Health Drinking Water Monitoring Program

When to Use this Procedure

- When a notification for verification of mercury concentration is received from the Forensic & Analytical Science Service (FASS) chemistry laboratory.

Sample Container

- Use one 250 mL capped container with added acid preservative (5 mL of mixed acid: Nitric Acid 39.6% w/w and Hydrochloric Acid 0.17% w/w), as supplied by FASS.
- Caution: Acid Preservative for Metals in Water**

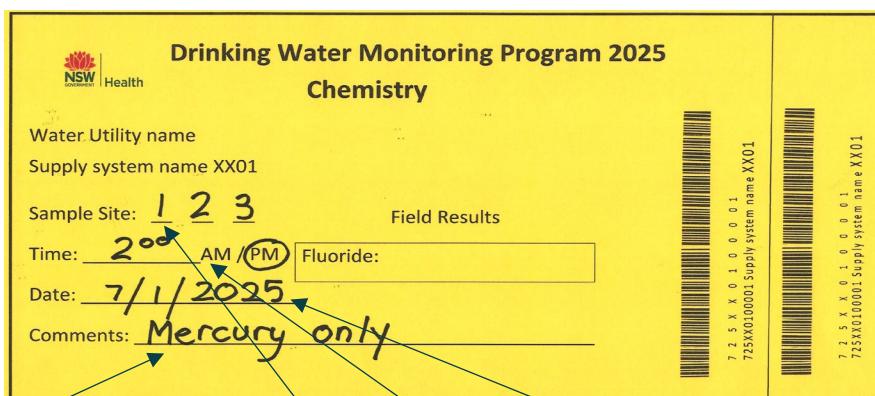
The acid preservative is corrosive. It can cause severe burns and eye damage and may cause respiratory irritation.

A Safety Data Sheet (SDS) is supplied with the acidified bottles. Read this SDS before using the bottles.

A Safe Work Practice (SWP) for handling the acidified bottles and collecting the sample is attached to these sampling instructions. Read the SWP before sampling.

Label

- Use a yellow NSW Health Allocated Chemistry label with a barcode beginning with 7.
- Select a label for the correct supply system and current year.



- Using a waterproof pen record the site code, time and date of collection on the label. Write "Mercury only" in the Comments section. Tear off and discard the small barcoded label attached on the right hand side of the label.
- Ensuring the outside surface of the container is dry, place the label evenly around the acidified sample bottle (not on the lid) so that the entire barcode can be scanned at the laboratory.

Note: A fluoride field result is not required.

- Contact the NSW Health Water Unit if you require replacement Allocated labels. Email HSSG-WaterQual@health.nsw.gov.au or telephone 02 9391 9939.

Collecting the Sample

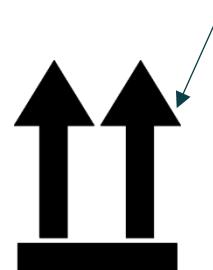
- Flush the lines for at least 3 minutes before collecting the sample.
- Do not rinse the bottle prior to taking the sample.
- Fill the bottle to the brim, taking care not to overfill. Avoid splashing.

Packaging the Samples as Dangerous Goods

- Place a non-reactive absorbent mat/material into an insulated cooler.
- Place the samples into the cooler with sufficient freezer bricks to keep the samples cool ($\leq 6^{\circ}\text{C}$) during transport. Ensure the acidified samples are packed so that they remain upright in the cooler and are prevented from moving during transportation.
- Include a copy of the Safety Data Sheet in the cooler.
- Pack the cooler into a box strong enough to withstand conditions normally encountered during transport.
- Attach a copy of the FASS Address label to the outside of the box.



- Attach a "Dangerous Goods" (orange) sticker, a "Corrosive" sticker and a "This Way Up" sticker to the outside of the box.



- Complete a Dangerous Goods consignment form.
- Complete a Sender's Declaration form for Dangerous Goods. The following information must be included:
 - Shipping name -Corrosive liquid, Acidic, Inorganic, NOS
 - Technical Name -Mixture of nitric acid and hydrochloric acid
 - UN Number -3264
 - DG Class -8
 - Packing Group -II
 - Sender's full name, address and telephone number
 - FASS address: 480 Weeroona Road, Lidcombe NSW 2141
 - Dispatch the samples to FASS as soon as possible.

Safe Work Practice

Form

NSWHP_F_041



Health
Pathology

Task: Handling of Pre-Acidified Sample Containers (250mL) for Water Sample Collection	SWP No: WHS-SWP-TIL-16												
Department: Trace Inorganics Laboratory	Equipment Used (if applicable): N/A												
Facility: NSW FASS - Lidcombe	Model Identification: N/A												
Reference Documents <ul style="list-style-type: none">• Managing Risks of Hazardous Chemicals in the Workplace• Labelling of Workplace Hazardous Chemicals -													
<table border="1"><thead><tr><th>POTENTIAL HAZARDS</th><th>HAZARD CONTROLS</th></tr></thead><tbody><tr><td>1 Skin burns and irritation</td><td>1 Wearing PPE (rubber gloves, coveralls/ lab coat)</td></tr><tr><td>2 Eye irritation and damage</td><td>2 Wearing PPE (goggles or safety glasses)</td></tr><tr><td>3 Respiratory irritation</td><td>3 Avoid inhalation. Use in well-ventilated areas</td></tr><tr><td>4</td><td>4</td></tr><tr><td>5</td><td>5</td></tr></tbody></table>		POTENTIAL HAZARDS	HAZARD CONTROLS	1 Skin burns and irritation	1 Wearing PPE (rubber gloves, coveralls/ lab coat)	2 Eye irritation and damage	2 Wearing PPE (goggles or safety glasses)	3 Respiratory irritation	3 Avoid inhalation. Use in well-ventilated areas	4	4	5	5
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SAFETY RULES <ul style="list-style-type: none">• Avoid contact with skin and eyes.• Avoid inhalation.• Wear PPE.													
BASIC STEPS <ol style="list-style-type: none">1. Prior to sample collection read safety data sheet (SDS)2. Store the bottles in a cool, dry and well-ventilated area, away from heat or ignition sources and foodstuffs.3. Put on relevant PPE.4. Carefully open screw top of acidified sampling container.5. Fill container with approximately 250mL water (up to the neck of the bottle).6. Ensure bottle is not overfilled and avoid splashing.7. Close bottle tightly.8. Ensure bottles are transported back to the Laboratory in an upright position.													
Analysis Conducted by: Irini Roumeliotis, Kathleen Thompson	In Consultation with: Cheryle Brown, TIL staff.												
Date Created: 19/05/2016.	Last Reviewed: 29/02/2024												

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