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Safe Handling of Sample Preservatives

1. Overview:

Horizons Regional Council (HRC) Staff may encounter sample preservatives whilst carrying out Discrete Water Quality Sampling on behalf of HRC (or affiliated external parties) Sampling Program's. Generally the Sampler will be expected to handle preservatives in 2 scenarios:

- Sample containers that already have a pre-determined quantity of preservative added prior to delivery to HRC.
- The requirement to manually add preservative to a sample container post-sampling.

Safety Data Sheets (SDS's) should be filed and stored for any preservatives the sampler is to encounter as per section [15.8](#) of the Hydro operations Manual It is expected that the sampler has read these and as a bare minimum be aware of their location.

2. Pre-Prepared Sample Preservatives:

Certain analytical tests require the use of a preservative. In these instances external partner/contracted laboratory will provide sample containers already containing a known quantity of preservative

At the time of writing, the only instance where pre-preserved sample bottles are provided for the Discrete Water Quality Programme by Eurofins-ELS is for the collection and analysis of Totals and Ultra trace metals:

Nitric Acid

Totals Metals and Ultra Trace Metals require metals digitube pre-prepared with 0.25ml of 50% Nitric Acid.

These tests are a standard requirement for HRC's Groundwater SoE program and when required by consent conditions (i.e. Norsewood STP). They may also be required for short-term project work.





Safe Handling of Pre-Prepared Sample Containers:

- Be trained and comfortable in carrying out the task.
- Be aware of the preservatives composition via reference of the appropriate SDS.
- Follow any additional instructions on the Sample container.
- Use appropriate PPE (as per SDS).
- Have a 1st Aid Kit (including Eyewash) in the vicinity (i.e. in the vehicle).
- Consult the Discrete Water Quality Portfolio Holder for instruction.

NOTE: when sampling, sample using containers containing preservative last to avoid contaminating other sample containers.

3. Manually Adding Preservatives to Sample Containers:

When Sampling on behalf of other Government bodies or Crown Research Institutes staff may be required to manually add a measure of preservative to the sample prior to couriering the samples.

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For example when sampling for Isotope Analysis on behalf of GNS, 1mL of 10% Hydrochloric Acid solution may need to be added in order to preserve the sample. In these instances, this addition of preservative is to be carried out in the more controlled surroundings of the Water Quality Lab immediately after the sampling run.

In these situations the Discrete Water Quality Portfolio holder should have been made aware of the procedure and its requirements and subsequently be able to provide training. Safety Equipment and documentation should be provided for the sampling staff and be made available.

Safe Handling When Manually Handling Sample Preservatives:

- Be trained and comfortable in carrying out the task.
- Be aware of the preservatives composition via the SDS.
- Follow any instructions on the sample container and any additional instruction that has been provided.
- Clear and clean an appropriate sized work area in the Water Quality Lab centred around the sink to work in. Avoid placing samples and preservative in places where it can be knocked over.
- Ensure the area is well ventilated.
- Wear appropriate PPE
- Have a 1st Aid Kit (including Eyewash) in the vicinity (i.e. in the Water Quality Lab).