

AGAT Laboratories



Methanol Vial Field Stabilization

In accordance with Alberta Environment and Parks, and both the Saskatchewan and British Columbia Ministries of the Environment, all soil and sediment samples analyzed for volatile organic compounds (VOCs, BTEX), Light End Petroleum Hydrocarbons (PHCs F1), or Trihalomethanes (THMs) must be preserved in the field with methanol.

Methanol field preservation minimizes the volatilization and degradation of target volatile analytes and extends the traditional hold times from 7 days to 40 days.

Sampling Procedure for Soil Preservation with Methanol*

*If sampling for alcohols, collect all alcohol samples before opening any methanol vials.

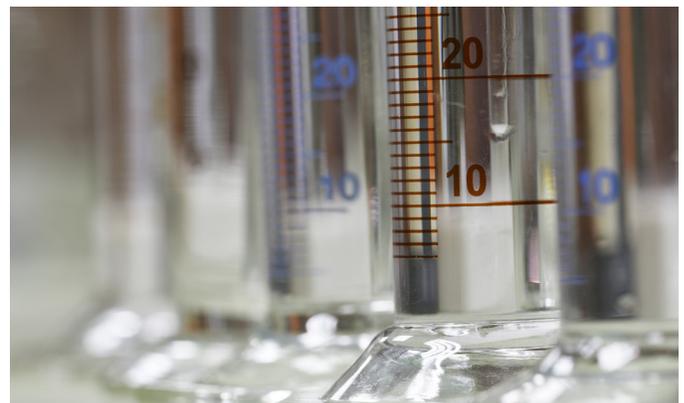
- 1. Moisture Analysis:** Fill the provided glass sampling jar to the top, ensuring no headspace.
- 2. Pre-Inspection:** Check the methanol vial to ensure the cap is secure and the methanol level is even with the meniscus.
- 3. Sample Collection:** Use the preferred sampling device to take a 5g core of soil. A new sampling device should be used for each unique sample ID.
- 4. Transfer Soil:** Open the methanol vial and carefully transfer the soil core into it. Avoid the creation of methanol splash.
- 5. Clean Vial Threads:** Wipe the threads of the glass vial to remove any residue that could prevent a proper seal.

- 6. Seal and Mix:** Cap the vial and gently swirl it to ensure the soil is covered with methanol.
- 7. Repeat:** Fill the second methanol vial.
- 8. Complete Sampling Information:** Fill out the sample label and place the vial on ice. Do not place in the same cooler as samples being analyzed for alcohols.
- 9. Labeling:** Do not add additional labels.

Shelf Life

The shelf life of a methanol vial can vary based on several factors including but not limited to storage conditions and environmental factors present in the storage area.

It is recommended that methanol vials are used within six months of production, provided the methanol in the vial maintains the 10mL volume (as indicated by the black meniscus line on the vial).



AGAT recommends that clients submit a solvent blank sample for all vials stored over 6 months in optimal storage conditions or over 3 months in non-optimal storage conditions. This precaution ensures that the vials used are free from any potential contaminants, thereby improving the accuracy of results.

To have your solvent blank analyzed, submit the extra vial and record it as a sample on the chain of custody. Select the applicable analysis.

Optimal storage conditions include:

- **Temperature:** Stable and cool, avoiding extreme temperature and humidity variation
- **Atmosphere:** Dry
- **Location:** Away from potential contamination sources including vehicle emissions and chemicals
- **Environment:** Free from vibrations to prevent loosening of vial caps

When stored under optimal conditions - where environmental fluctuations are minimal, and the vials are protected from potential contamination sources—methanol vials can maintain their integrity for extended periods.

AGAT has recently concluded a study on methanol vials stored under optimal conditions for five years. This study concluded that the vials remained free from contamination and retained the set methanol volume for the full five year time frame. An additional study exploring various storage conditions is scheduled for completion in 2025.

Shipping restrictions

The transport of dangerous goods regulations stipulate that a maximum of 1,000 mL of methanol can be transported via ground shipping per cooler to meet the limited volume criteria. Please affix the provided limited quantity shipping label to the cooler for shipment to avoid issues or delays in transportation.

Methanol vials may not be shipped by air unless shipped by an IATA trained individual. Additional volume restrictions per cooler will apply.

How can AGAT help?

AGAT Laboratories regularly hosts educational Lunch & Learn sessions to complement the dedicated service of our Client Service Representatives (CSRs) and technical experts—all of whom are available to answer your questions.

We encourage our clients to inform us if alcohols will be sampled alongside methanol vials. This allows us to pack the jars for the alcohols separately when shipping bottle orders, ensuring that the appropriate number of coolers are provided to return the samples in separate coolers.

**For more information please contact
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