

VOLATILE ORGANIC COMPOUNDS in SOIL
SAMPLING WITH METHANOL PRESERVATION
EPA SW-846 Method 5035

Sampler should notify the laboratory approximately 1 week before sampling date.

The laboratory will prepare 40-ml vials for each site. Exactly 10.0 ml of a high purity P&T grade Methanol (MeOH) is added to a 40-ml vial. A vial identification code and the date prepared are noted on the vial. A pen mark is made on the label to note the meniscus of the solvent at the time of preparation.

The sampler will check the meniscus and pen mark before collecting sample. If they do not match, the sampler must reject that vial.

The sampler will add approximately 20 g of soil in the field to each vial. This is roughly equivalent to 2 rounded tablespoons or 1.0 inch in the vial. There should be approximately one centimeter of MeOH as a supernatant.

The sampler must mark on the bottle the level of the meniscus after sample addition, this will allow the laboratory to confirm that there was no solvent loss at the time of analysis. **Do Not Add Any Additional Labels to the vial.**

The sampler will also include a 40-ml vial of soil sampled the standard way. This vial will be used to determine percent solids as well as a backup in case of quality control problems with the MeOH vial.

Advantages:

-More accurate and generally higher analyte recoveries.

Disadvantages:

-Poor sampling/handling procedure can result in a higher degree of error in results.

Hints:

- It is very important to not splash any of the MeOH out of the vial when collecting the sample.
- Keep vials refrigerated, even before sampling.
- Do not leave caps open for very long since MeOH evaporates very quickly.
- After sampling, be sure to wipe the threads of the vial & cap with a clean tissue. Even the slightest amount of dirt can prevent a good seal.
- Unused sample vials are stable for several weeks when refrigerated. Always confirm that no methanol has evaporated from the vial by checking the meniscus line. Shelf life of methanol vials is highly dependant on storage conditions.
- MeOH vials are especially susceptible to contamination from ambient volatiles in the air. **It is strongly recommended that an unopened MeOH vial from the set be submitted as a Trip Blank.**