



Instructions for Soil Sampling Using Methanol Field Extraction

1) Safety:

- a. Methanol is volatile, toxic and flammable. Store methanol away from sources of ignition, such as extreme heat or open flames. Use in a well-ventilated area.

2) Procedural precautions:

- a. Special care must be taken not to contaminate the sample. This includes storing container to minimize external contamination. Protect sample containers from exposure to vehicular emissions and dust.
- b. Keep the methanol kit refrigerated at all times.
- c. Clearly label each sample bottle with the proper identification, sample date, and time. This identification must match the identification on the chain of custody.
- d. Make sure not to add additional labels, which will add weight to the container.

3) Sampling:

- a. To prevent loss of volatile analytes, a core of sample should be taken without disturbing the sample.
- b. Use a 10g Terra core sampling device, scoop or trowel. Follow the device instruction sheet.
- c. When using a scoop or trowel, only fill scoop half full and transfer to the methanol. Clean between soil extractions.
- d. If taking the soil sample from a brass sleeve, discard one inch of the soil from the end of the sleeve remove sample from the interior of the sleeve.
- e. Before opening the container, have the sub-sample ready to transfer. Open and close the 40 ml pre-weighed container quickly. Minimize splashing of methanol by gently extruding the sample into the container at an angle.
- f. Wipe soil off the container threading, so it seals air tight. Soil on threading will cause leakage of methanol from the seal, thus invalidating the extraction.
- g. Due to the nature of biosolids, less sample is required; biosolids tend to absorb large amounts of methanol. If the sample absorbs all of the methanol, discard the sample extraction, obtain another container and use a smaller amount of sample.
- h. Cap, and then gently tap the container to ensure all soil is saturated with methanol. ***Do not shake the container.***

4) Storage:

- a. The sample must be stored and transported in a cooler of ice at 4°C +/- 2°C. Avoid storing the samples in standing water. Keep the bottles in an upright position during storage and transport.
- b. Samples with expectedly high contamination should be stored in a separate cooler from samples that have low contaminate levels.
- c. A trip blank must accompany the soil sampling, transporting, and storage process.

5) Holding time:

- a. Samples preserved in the field with methanol have a 14 day holding time.

6) Containers:

- a. Methanol kits have been assigned a laboratory tracking number that links the container to its initial weight. The label containing this tracking number must always be kept intact and visible.