

# SAMPLE COLLECTION TECHNIQUES FOR VOC SOILS

## SAMPLING TIP

The ratio of solvent to soil should be 1ml:1g. **In all cases, the soil in the vial must be completely covered by the solvent.** The most accurate way to achieve this criteria would be through the use of a field analytical balance.

When this option is not practical, Spectrum recommends the following procedure:

- Mark the bottom of the solvent meniscus on VOA vial with a permanent marker.
- Add sample to the VOA vial just **below** this meniscus mark.

## - WARNING -

### USE CAUTION TO AVOID THE NEED TO RESAMPLE

#### • **Don't collect too much soil.**

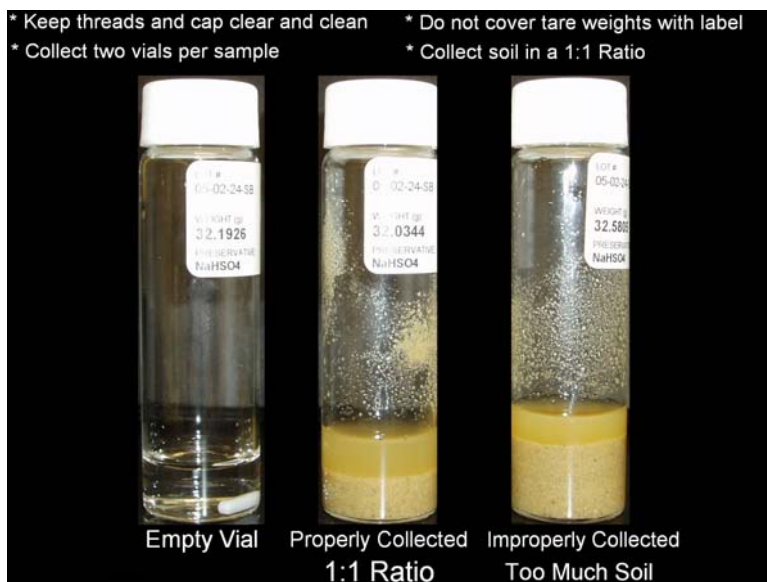
Too much soil may interfere with the solvents ability to extract the VOCs from the soil and may also impede the laboratories ability to analyze the sample. Excessive soil can be drawn up into the needle of the auto sampler used for analysis thereby clogging and damaging the instrument.

#### • **Do clean soil/sediment from the glass threads on the vial.**

When collecting the sample it is important to insure that there is no soil or grit on the thread or in the cap.

#### • **Don't over tighten the cap.**

Over tightening may prevent the vial from sealing correctly. If there is not an airtight seal, the sample, internal standard, and surrogate recoveries will be compromised thereby invalidating the data.



Collect all samples in a manner that minimizes sample handling and agitation.

### Low concentration soil samples (< 200 µg/Kg or < .2 mg/Kg)

1. Samples should be collected in **duplicate** 40ml VOA vials containing 5ml of deionized water and a stir bar provided by Spectrum Analytical.
2. During collection approximately 5 grams of soil must be added to the pre-measured, pre-weighed water vial. All sediment must be removed from the glass threads of the vial to ensure an adequate seal.

*Samples collected in water must be analyzed or frozen between -7° to -15° C within 48 hours of collection. All samples collected in water will be frozen upon receipt at the laboratory until the time of analysis.*

### High concentration soil samples (> 200 µg/Kg or > .2 mg/Kg)

1. Samples should be collected in 40ml VOA vials containing 15ml of purge and trap grade methanol provided by Spectrum Analytical.
  2. During collection approximately 15 grams of soil must be added to the pre-measured, pre-weighed methanol vial. All sediment must be removed from the glass threads of the vial to ensure an adequate seal.
- Please do not cover the tare weight with your sample identification label.
  - Store samples on ice at 4°C until transport to the laboratory facility.
  - An additional VOA vial (40ml) must be collected for screening and dry weight determination. This vial must not contain any sample preservation solution.

*In order to alleviate uncertainties regarding which sample collection technique to use, Spectrum Analytical recommends the collection of all soil samples in accordance with both low and high concentration techniques.*