

## SAMPLING GUIDELINE FOR LOW LEVEL VOC ANALYSIS OF SOIL

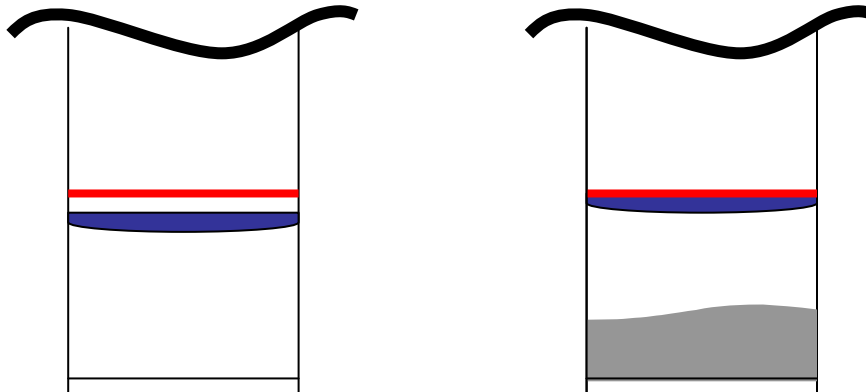
The method requirement for field preserved soil sampling is a 1:1 ratio of soil weight to preservative volume, (1g of soil to 1mL of preservative). For low level analysis this is 5 grams of soil to 5 mL of preserved fluid. EPA method 5035 specifies a tolerance on the 5 g target of +/-1/2g. The soil collected in each vial should not exceed this guidance as this may necessitate re-sampling or invalidate the data.

EPA specifies that a balance be used to weigh samples; or as an alternate weighing 5 g into a preserved vial to establish a "reference" collection vial that is representative of the soil characteristics and density in the area being sampled.

### LOW LEVEL COLLECTION:

- Each vial has a tare weight and a red reference line to aid in the collection process.
- Weigh 5 g of soil and add to a preserved vial, note the displaced fluid level relative to the reference line. Replicate this fluid level when collecting additional soil samples of the same density and characteristics.
- **Insure that the sample contains no extraneous matter such as pebbles, roots or wood that are non-representative or could inhibit stir bar action.**
- **The soil must be completely covered by the preservative.**
- After adding the soil to the vial, **remove all soil or debris from the threads of the vial and cap to obtain a tight seal and prevent analyte loss during transportation and storage.**

The drawing below shows the lower portion of preserved 40 mL low level VOA vials (the stir bars which will be included, are not shown). The vial on the left illustrates the preserved vial as received from the lab. The vial on the right shows the vial after the addition of 5 g of medium density soil with the top of the meniscus near the reference line. - **High density soils at 5 g will bring the liquid to a point below the reference line.** - **Low density soils at 5 g will bring the liquid level above the reference line.** **Replicate the fluid level for additional samples of the same soil density and characteristics.** When soil characteristics and density change a new reference vial must be established following these guidelines or by weighing each vial.



**This information is not intended as a substitute for the complete method or SOP; and is provided as a courtesy. It does not supersede any applicable Federal or State methods, guidance, or project specific parameters.**