

## Soil Probe Instructions: Passive Sampling

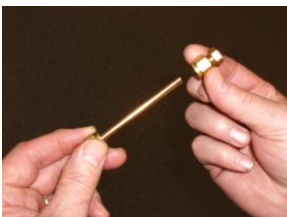
**VOC Tube shelf life:** This tube has a shelf life of 6 weeks. Tubes must be exposed and returned for analysis within this period. If tubes are not used they must be returned within 5 weeks and marked clearly that analysis is not required. Soil Probes must also be returned within 5 weeks.

**VOC Tube storage and preparation:** Tubes should be stored in a dark place away from a heat source before exposure. A desk drawer is ideal. Tubes should always be stored and handled in clean environments, for example a well-ventilated office, well away from laboratory solvents or major emission sources like photocopiers or laser printers. Brief exposure of the tubes to moderately contaminated air (such as would be typical of laboratory, factory or clinical environments) is inevitable when preparing for sample collection and analysis. However, contamination accumulated during these brief periods should not be significant and can be corrected with the appropriate use of blanks. Once sampling or analysis is completed, tubes should be recapped with the brass storage end caps as soon as possible and returned to the clean environment for storage. If using a blank tube, do not remove the end caps from the tube. Store in the same conditions as the sampling tubes.

### Exposure:

**IMPORTANT: CHECK THERE ARE NOT ANY UTILITY PIPES OR CABLES NEAR THE SOIL SURFACE IN THE SAMPLING LOCATION**

1. Remove the Soil Probe cap unit
2. Using an impactor, drive the Soil Probe into the ground until approximately 5cm is protruding above the ground.



3. Remove the brass end cap from the NON-GROOVED end of the VOC Tube using the Tubelock tool.



4. Using Tubelock tool, unscrew the lower brass nut cap from the Soil Probe cap unit, until it is loose enough to slide the VOC Tube into.



5. Slide the VOC Tube into the Soil Probe cap unit and tighten using Tubelock tools. Caps should be finger-tight and then turned ¼ turn ONLY with the Tubelock tool. **DO NOT OVER TIGHTEN, DO NOT USE SPANNERS.** Tightness of the tube can be checked by gently pulling it to ensure that it does not slide out.



6. Remove the remaining brass end cap from the GROOVED end of the VOC Tube. Fit the diffuser cap to the open end of the tube.



7. Push the assembled Soil Probe cap unit into the Soil Probe. The unit is now ready for sampling (sampling period of 1-4 weeks). Mark or record the location of the Soil Probe for easy identification at the end of sampling.
8. At the end of the sampling period remove the Soil Probe cap unit from the Soil Probe. Remove the diffuser cap from the Soil Probe and refit the brass cap with the coloured spot. Caps should be finger-tight and then turned  $\frac{1}{4}$  turn ONLY with the Tubelock tool. **DO NOT OVER TIGHTEN, DO NOT USE SPANNERS.**
9. Loosen the lower brass nut from the Soil Probe cap unit and remove the VOC Tube. Tighten the brass nut.
10. Replace the remaining brass end cap on to the VOC Tube. Caps should be finger-tight and then turned  $\frac{1}{4}$  turn ONLY with the Tubelock tool. **DO NOT OVER TIGHTEN, DO NOT USE SPANNERS.**
11. Test the tightness of the caps by gently pulling them.
12. **Label the tube with the labels provided, stick the smallest area to the tube as possible, do not cover the whole tube with a label. Do not cover tubes with sticky tape. If you want to provide additional protection to the tube, please wrap in tin foil – this is optional.**

**Returning tubes:** Tubes should be returned as soon as possible after exposure. Fill in exposure sheet including **exposure time**. Indicate on the exposure sheet that **moisture is expected** on the tube. Tubes should be returned in a sealed container, such as the plastic bag that they are received in. Remember to return all Soil Probe components with the VOC Tubes.

**Return address:**

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