



Quick Reference Guide

for Sitalab TD-500D Testing Soil or Water with **METHANOL**

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Sample Preparation & Analysis...

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TD-500D Standard Operating Procedures Version 4.0



Testing Soil?

Using the digital scale and spatulas, weigh 5 grams of soil into an extraction jar (within +/- 0.1 gram)

Testing Water?

Shake sample and pour out 10 mL of water into test tube. Add to extraction jar.

Note: for crude oil in water, use hexane solvent instead



2. Add Solvent

Add Methanol to solvent dispenser bottle. Using a test tube, dispense solvent to the 10 mL line. Empty/pour solvent into extraction jar containing the sample. This creates a 2-to-1 or "2X" Extract. Tighten the lid and shake sample extraction jars by hand for several minutes.



3. Filter Extract

Let extract jars settle for a few minutes before removing lid. Suck up 3 to 4 mL of extract from the jar's surface using a syringe. Attach/screw a filter to the syringe and dispense contents into test tube. Label extract tube with sample ID and 2X Dilution – keep track!



4. Dilute Extract

Adjust the setting on pipette, attach a tip and use a 2nd test tube to prepare a dilution for analysis – in order for the sample to be detected within calibration range. Examples:

Pipette	Add Solvent	Dilution
"100" uL	into 5 mL	= 100X
"050" uL	into 5 mL	= 200X
"020" uL	into 10 mL	= 1,000X

Testing water? Test the extract first



5. Add to Cuvette

Pour dilution into a glass cuvette from test tube or use the adjustable pipette to transfer sample to glass cuvette about half full. Place cuvette into the plastic cuvette holder. Use tissue wipes to keep cuvette clean. Save the test tube to make new dilutions, if necessary.



6. Test Sample

Lower the sample into the test chamber and press "Read." Concentration units are displayed as ppm for TPH-Oil or ppb for PAHs. Next, calculate final result by multiplying the reading by the dilution tested. Avoid readings near zero or below detection limit.

Products Used...

Sitalab test procedures listed here require the following...

TD-500D Analyzer & Lab Tools:



- Cuvette Holder
- Scale & Spatulas
- Adjustable Pipette
- Solvent Dispenser
- Test Tube Rack
- Tissues & Markers

20 Sample Extraction Kit: Product #EXTR010-20-TD500



Disposable test kits contain all the supplies needed to prepare and test soil and water samples.



WARNING! Product uses flammable alcohols – Methanol, HPLC grade. Dispose solvent waste properly.

Calibrate Instrument...



1. Calibration Kit

Choose a certified Sitalab Calibration Kit for your application. Examples:

Calibrator Concentration

TPH-Oil: CAL-056 100 ppm
PAHs: CAL-061 500 ppb

Only use on Channel A!
Press "A/B" key to select A.



2. Setup Analyzer

Turn on instrument. Press "Std Val" and use arrow keys to adjust value to calibrator's concentration. Press Enter when finished

Analyzer will memorize value until you manually change it (if calibrating to something else).



3. Calibrate

Press "Cal" and place the cuvette into analyzer with clean solvent. Press Enter to read blank and empty out cuvette. Next, fill cuvette with calibrator using pipette and press Enter. Press Enter again when asked to accept.

Quality Controls...



4. Diagnostic Data

At any time, press the "Diag" key to check the fluorescence sensitivity of the calibration curve. Blank should be close to zero and %FS Std should be within the range listed with the PAH or TPH-Oil Certificate of Analysis.



5. Check Curve

Periodically check how linear the calibration curve is by testing the calibration standards provided with your calibration kit. Check the detection limit standard and methanol (blank). Press "Read" to test.