



Quick Reference Guide

for Sitelab UVF-3100 Testing Soil or Water with **METHANOL**

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UVF-3100 Standard Operating Procedures Version 8.0

Sample Preparation & Analysis...



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 the dilution made in Step 4 into the glass cuvette. Cuvette needs to be about 3/4 full. Use tissue wipes to clean outside glass to remove fingerprints and liquids. Next, carefully slide cuvette into the black cuvette holder. Be sure not to spill sample.



6. Test Sample

Lower into analyzer and close the lid. Be sure the cuvette holder's arrow shaped handle points to silver dot (to left of chamber). Wait a few seconds for concentration to stabilize. **Multiply** the reading by the dilution tested. Avoid readings below detection limit.

Products Used...

Sitelab test procedures listed here require the following...

UVF-3100 Analyzer & Tools:
Product No. UVF-3100A or D



- Optic Emission Filters
- Scale & Spatulas
- Adjustable Pipette
- Solvent Dispenser
- Tissues & Markers
- Software & Manual

20 Sample Extraction Kit:
Product No. EXTR010-20



Disposable test kits containing 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 Sitelab Calibration Kit for your application:

Cal Kit and Optical Filters:

GRO: CAL-025	Slot B
TPH-Oil: CAL-057	Slot A
EDRO: CAL-042	Slot A
Total PAHs: CAL-060	Slot A
Target PAHs: CAL-060	Slot D

Or ask about custom kits available



2. Setup Analyzer

Turn on. Allow to warm up or press "H" to bypass. Rotate filter cylinder so that correct Emission Optics are aligned next to silver dot (to left). Press "ENT" then "2" and enter the proper Maximum Range setting (see cal kit certificate for details).



3. Calibrate

Always start using the highest calibrator first. Pour calibrator into cuvette and lower into analyzer. Be sure to enter and/or change the correct concentration. Pour calibrator back into test tube when finished. Test remaining calibrators

Quality Controls...



4. Clean Cuvette

Rinse with solvent into a waste jar between samples or calibrators. Place upside down onto tissue wipes to drain. Fill with clean methanol and analyze when prompted at end of each calibration. Wait for value to stabilize before pressing zero.



5. Check Curve

Periodically check the calibration curve for drift and linearity by testing one or two standards as if they were samples, including the methanol (as blank). To view curve and report test results, download data using Sitelab UVF3100 software