

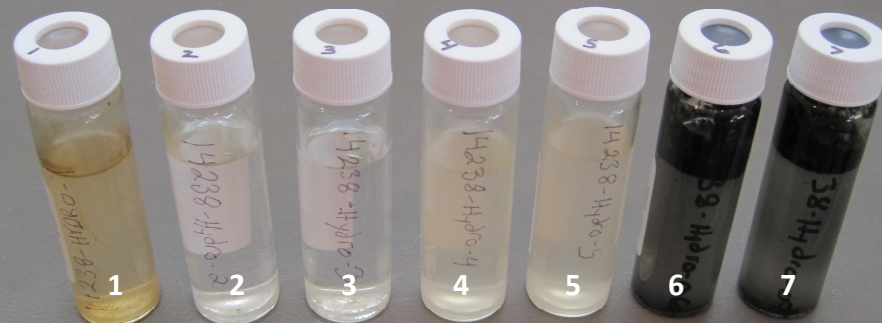


Sitelab Corporation  
Visit: site-lab.com  
USA: 978-363-2299

# Crude Oil in Water

**Produced Water Treatment Site:** A pilot study was performed to test water samples contaminated with produced water from several oil well production sites in Wyoming for a company that provides mobile water treatment systems that enable oil and gas companies to recycle and reuse flow back water more efficiently. The samples were tested for their gasoline range and extended diesel/oil range concentrations. Ratios exhibited in the results provides helpful information about the type of oil being treated at each site.

Photo of water samples tested by Sitelab UVF-3100 analyzer



Concentrations below in ppm (mg/L)

Oil ID #	TEST 1: EDRO C10-C36 Range Hydrocarbons	TEST 2: GRO C6-C10 Range Hydrocarbons	TPH Ratios Exhibited: Test 1÷Test 2	
1	1,646	70	24X	Higher ratios: Oil has lower proportions of GRO = <b>Heavier Crude</b>
2	110	15	7X	
3	48	6	8X	
4	74	20	4X	Lower ratios: Oil has higher proportions of GRO = <b>Lighter Crude</b>
5	88	19	5X	
6	38,750	4,000	10X	
7	18,400	2,000	9X	

**Quick Reference Guide**  
for Sitelab UVF-3100 Testing Oil in Water/Soil with **HEXANE**

Online: site-lab.com Call Toll Free 877-517-1148 or Dial (USA) 978-363-2299  
©2016 Sitelab Corporation. All Rights Reserved. UVF-3100 Standard Operating Procedures Version 8.0r

**Sample Preparation & Analysis...**

**Testing Water?**  
Shake sample and pour out 10 mL of water into test bottle. Add to extraction jar.

**Testing Soil?**  
Using a probe and spade, work 50g of soil into extraction jar. Add 100 mL of hexane.

**Products Used:**  
Sitelab test procedures here require the following:  
UVF-3100 Analyzer & Test Kit  
Product No. UVF-3100A or D  
Sitelab Calibration Kit  
Sitelab Extraction Kit  
Product No. EX-101 or 20

**Calibrate Instrument...**

**1. Calibration Kit**  
Choose a certified Sitelab Calibration Kit for your application.

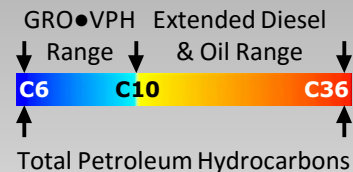
**2. Setup Analyzer**  
Turn on. Allow to warm up or press "M" to bypass. Rotate filter cylinder so that correct Emission Optics are aligned next to lower dot (to left). Press "ENT" then "2" and enter the proper Measurement Range setting (see Cal Kit certificate for details).

**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 bottle. Rest tube when finished. Test remaining calibrators.

**4. Clean Cuvette**  
Rinse with solvent into a waste jar between samples or calibrators. Place upside down until tissue wipes to drain. Fill with clean hexane 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 if they were samples, including the hexane as blank. To view curve and report test results, download data using Sitelab UVF-3100 software.

- Test procedures and equipment are easy to use.
- Solvent is used to extract water samples using test kits available.
- Results take less than 5 minutes.



Sitelab calibration kits are available in hexane solvent and are used for accurate oil in water analysis. The UVF analyzer contains optical filters sensitive to the same ranges of hydrocarbons reported by the certified laboratories using gas chromatography. Sitelab's GRO and EDRO results correlate well to EPA Method 8015 and other TPH-GC methods.