



NEW: TD-500D No-Solvent Oil-in-Water Analysis Method

Turner Designs Hydrocarbon Instruments has developed a revolutionary Bench-top method to measure oil-in-water that uses *NO-SOLVENT!!!* The advantages are significant in that we have eliminated the health and safety hazards of transporting, handling and disposing of solvents commonly used in the field for oil-in-water analysis. Along with safety, the method eliminates operator error associated with precision liquid measurements during the analysis process. This new method is designed to be compatible with our TD-500D hand held oil-in-water analyzer. It is a robust method using a simple surfactant instead of solvent, with unprecedented accuracy and repeatability.

Features:

- Measures all oils including the heaviest of crudes to condensates up to 50°API and refined diesel range oil, lube oils, and heavy fuel oils in water
- Measurement range from below 1ppm to over 10,000ppm without dilution
- Measures dispersed (free) oil independent of WSO (Water Soluble Organics)
- Measures WSO independent of dispersed oil
- Accuracy is independent of salinity and hardness
- Unaffected by suspended solids
- Performance independent of process temperature
- Independent of lag time between sample gathering and analysis
- Precision sample volume not required
- No acid required
- No solvents required, non-flammable, transport on any air carrier
- Simple procedure
- Complete analysis in less than 10 min

Turner Designs Hydrocarbon Instruments is the worldwide leader in oil-in-water measurement technology with both continuous on-line monitors and bench top oil-in-water analyzer solutions for all markets from explosion proof for offshore oil platforms to precision contamination prevention in ultra-pure water.

Worldwide Sales and Service

Email: sales@oilinwatermonitors.com



“NEW: NO-SOLVENT OIL-IN- WATER ANALYSIS Kits for the TD-500D hand held oil in water analyzer!!”

Now you can perform oil-in-water analysis without extraction solvents!!

Complete TD-500D *No-Solvent* Oil-in-Water Analysis Kit P/N 102872

Includes all necessary items for up to 100 *No-Solvent* Analyses (TD-500D not included):

- Prescription bottles (180ml) with Teflon lined caps
- Syringes and Syringe Filters for preparing calibration standards or running process samples
- Two 8mm cuvette holders (one with SMALL APERTURE and one with LARGE APERTURE) for analyzing a wide range of crude oils and concentrations
- 8mm cuvettes - package of 400
- TD-500D *Special OIW Surfactant* (500ml) w/ Quick Reference Guide.

P/N 102872

TD-500D *No-Solvent* Oil-in-Water Analysis Refill Kit P/N 102875

TD-500D Oil in Water Analysis Kit replacement items for minimum of 100 samples (with spares) includes:

- Syringes and Syringe Filters (Includes Spares)
- 8mm Cuvettes - package of 400 (Includes Spares)
- TD-500D *Special OIW Surfactant* (500ml) w/ Quick Reference Guide.

P/N 102875

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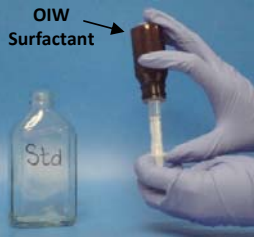
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World Wide Sales and Service







No-Solvent Oil-In-Water Analysis

Quick Reference Guide

Calibration

1. Prepare a 100 ppm Standard	2. Prepare a 100 ppm Standard	3. Prepare a 100 ppm Standard	4. Prepare a 100 ppm Standard	5. Prepare a Blank	6. Prepare a Blank	7. Calibrate the TD-500D
 <p>1. Add 3 mL of OIW Surfactant to a 180 mL graduated bottle.</p>	 <p>Tilt bottle to add oil directly to surfactant.</p> <p>1. Add 10µL of oil to the OIW Surfactant. 2. Swirl to mix. 3. Add distilled water to the 100 mL mark. 4. Shake to mix.</p>	 <p>1. Heat the solution until it becomes cloudy. 2. Shake to mix. 3. Cool the solution to room temperature or until it becomes clear.</p>	 <p>1. Fill a 3 mL syringe with the Standard. 2. Attach a filter to the syringe. 3. Filter the Standard into an 8 mm cuvette.</p>	 <p>1. Place 3 mL of OIW Surfactant into a 180 mL graduated bottle. 2. Dilute to the 100 mL mark with distilled water. 3. Shake vigorously until the OIW Surfactant is completely dissolved.</p>	 <p>Note: No filter on syringe.</p> <p>1. Fill a syringe with the Blank. 2. Fill an 8 mm cuvette with the Blank.</p>	 <p>1. Use the Blank and Standard cuvettes to calibrate the TD-500D. 2. Press the <STD VAL> button and set the on-screen value to 100.0. 3. Press <CAL> to start the calibration. Follow the on-screen instructions.</p>

Analysis

1. Collect the OIW Sample	2. Prepare the OIW Sample	3. Prepare the OIW Sample	4. Collect the Background Sample	5. Prepare the Background Sample	6. Measure the Samples	7. Calculate the Oil Concentration
 <p>1. Fill a bottle containing 3 mL of OIW Surfactant to the 100 mL mark with process water. 2. Label the bottle <i>OIW</i>.</p>	 <p>1. Heat the <i>OIW</i> bottle until the contents are cloudy. 2. Shake the bottle to mix. 3. Cool the <i>OIW</i> bottle until the contents are clear.</p>	 <p>1. Fill a syringe with the <i>OIW</i> sample. 2. Attach a filter to the syringe. 3. Filter the sample into a cuvette labeled <i>OIW</i>.</p>	 <p>1. Fill an empty bottle up to the neck with process water. 2. Label the bottle <i>BKG</i>.</p>	 <p>1. Fill a syringe with water from the <i>BKG</i> bottle. 2. Attach a filter to the syringe. 3. Filter the sample into a cuvette labeled <i>BKG</i>.</p>	 <p>1. Turn on the calibrated TD-500D. 2. Insert the <i>BKG</i> cuvette and press <READ>. 3. Record the <i>BKG</i> reading. 4. Insert the <i>OIW</i> cuvette and press <READ>. 5. Record the <i>OIW</i> reading.</p>	<p style="text-align: center;"> $\frac{\text{OIW Reading} - \text{BKG Reading}}{\text{Oil Concentration}}$ </p> <p>Example:</p> <p>OIW Reading = 35.5 BKG Reading = 10.0 Oil Concentration = 25.5 ppm</p>