



Orono Spectral Solutions, Inc.
A Full Spectrum Innovator.

ClearShot™ Extraction Technology

Pretreatment Oil & Grease in Water Analysis

Solventless | Portable | ASTM Validated



To protect POTWs, sewer system workers and the general public, the National Industrial Pretreatment Program was established under the Clean Water Act to prevent the introduction of pollutants to POTWs that can cause pass-through or interference problems. As a result, POTWs are required to establish pretreatment standards and local industrial discharge limits on a range of pollutants that they receive from indirect dischargers. Oil and grease is one of the

primary pollutants of concern since, if left unchecked, will lead to costly repairs associated with collection systems, sewer line cleaning and maintenance, and NPDES permit compliance.

The ClearShot Extraction Technology represents the next-generation solution to solventless oil and grease analyses in wastewater and pretreatment programs. The ClearShot system is based on an environmentally friendly, optical-based solid phase extraction membrane technology that replaces liquid-liquid solvent-based extraction techniques. It advances the state of the art in oil and grease measurements and eliminates shortfalls associated with other solvent-based methods.

ClearShot Advantages



- Solventless
- Portable
- ASTM Validated (D7575)
- Economical
- High Sample Throughput
- Calibration with Solid State Standards
- Easy to Adopt
- Adheres to EPA Green Principles
- Equivalent Results to EPA 1664

ClearShot Field Testing - Pretreatment

August, 2014 | Lewiston-Auburn, Maine



The Entire System

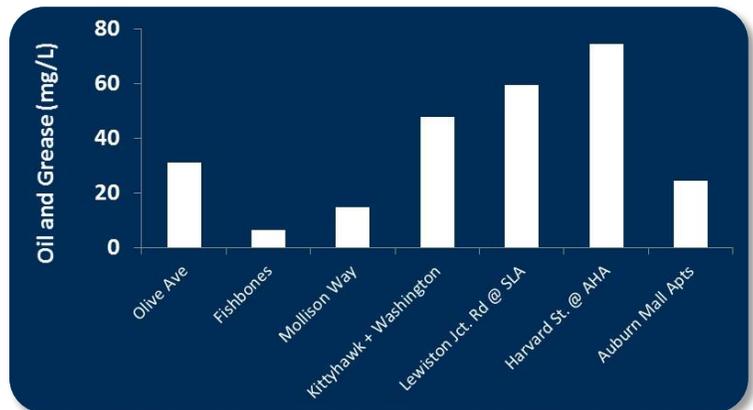


Easy Sampling



Field Processing

- Sampled 7 Industrial Sites
- Triplicate Measurements for Each Site
- Results Obtained in 1 Day
- Samples Processed in the Field and Lab



EPA Summary

EPA Methods Update Rule Notice of Data Availability

“EPA’s analysis demonstrates ASTM D7575 is an acceptable stand-alone method for the measurement of oil in grease in wastewater for the application reporting range (5-200 mg/L) and it produces results that are generally very close to those obtained using EPA Method 1664A for the matrices tested. Second, this method has certain advantages over the currently approved method. EPA supports pollution prevention, and is particularly persuaded by the substantial advantages associated with the green aspects of this membrane technology (e.g., it uses a solventless extraction, there is no solvent waste, and no analyst exposure to solvent). Finally, ASTM D7575 may offer other advantages such as ease of analysis, reduced analysis time, and lower analytical costs.”

Federal Register, Volume 76, No. 240, December 2011, pg. 77742-77747



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