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Reverse Phase Extraction Kit

Part No. # 165-65

Instruction Manual

Updated 9/21/2015

Ver. 2.0

OFI Testing Equipment, Inc.

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Introduction

The OFITE Reverse Phase Extraction Test Kit is used for the determination of crude or formation oil, or other petroleum oil contamination, in non-aqueous fluids used in oil and gas exploration. The test method is intended to be used as a positive / negative test to determine the presence of crude oil in NAF prior to discharging drill cuttings from offshore drilling and production platforms.

The test method provided is a simplified version from the one listed in the EPA, "Effluent Limitations Guidelines and New Source Performance Standards of the Oil and Gas Extraction Point Source". The simplified version does not require an oven, vortex mixer, gas tight syringes, SPE vacuum manifold, and auto pipettors in various sizes.

Components

| Part Number | Description | Qty. |
|-------------|--------------------------------|------|
| 153-29-2 | Glass Tip Syringe; 10 cc | 1 |
| 153-51-4 | Beaker, Glass, 100 mL | 1 |
| 153-60-1 | Syringe, Disposable, 1 mL | 60 |
| 153-64 | Syringe, Disposable, 5 cc | 30 |
| 165-60-1 | Lamp, UV, 4W, 365NM, 115 Volts | 1 |
| 165-60-2 | UV Viewing Cabinet | 1 |
| 165-61 | Sep-Pak Plus C-18 Cartridges | 3 |
| 165-62 | Puradisc Syringe Filter, PTFE | 30 |
| 165-63 | Plastic Carrying Case | 1 |
| 165-66 | Cartridge "Standard" 1% Crude | 1 |
| 165-67 | Glass Vials, 20 mL, Cleaned | 60 |
| 165-68 | *Isopropyl Alcohol, 32 Oz Can | 1 |
| 297-14 | 16 Fl. Oz Natural Boston Round | 1 |

Procedure

1. Collect a mud sample with a 20 mL vial. Label this vial as "Mud." Shake the vial for 1 minute.
2. Pour approximately 50 mL of isopropyl alcohol (IPA) into a 100 mL glass beaker and label as "IPA."
3. Transfer 0.2 mL of mud with a 1.0 mL syringe by first drawing in 0.8 mL then expel out 0.2 mL into an empty 20 mL vial.

Add 20 mL of IPA into this vial by using a clean 10 mL glass syringe.

Label this vial as "Extract". Cap and shake it vigorously for 1 minute.

4. Precondition the SEP-PAK C-18 cartridge by injecting 10 mL of IPA with the 10 mL syringe.

Slowly depress the syringe plunger so that the eluent discharges a rate of 1 drop per second.

Collect eluent in a 16 oz plastic (HDPE) bottle and label as "Waste." Stop the plunger when no IPA remains in the syringe barrel. Do not force air through the cartridge.

Detach the syringe from the cartridge and label as "Mud Sample #" with a black marker.

5. Use a new 5 mL syringe to draw 4 mL of solution from the "Extract" vial. Attach a PTFE syringe filter onto the syringe.

Filter the solution into an empty 20 mL vial. Label this vial as "Filtrate".

6. Use a new 1 mL syringe to draw up 0.5 mL of the extract from the "Filtrate" vial as described in Step 5. Attach the preconditioned SEP-PAK C-18 cartridge.

Again, depress the plunger slowly at a rate of approximately 1 drop per second.

Stop the plunger when no extract remains in the syringe barrel. Do not force air through the cartridge.

Allow the eluent to be discharged into the "Waste" bottle.

7. Rinse the SEP-PAK C-18 cartridge by injecting approximately 3 mL of "IPA." Depress slowly!

Allow the exiting "IPA" to go into the "Waste" bottle.

8. Prepare a "Reagent Blank." Reagent blanks are analyzed to demonstrate freedom from contamination.

Obtain a 10 mL glass syringe and pass 4 mL of "IPA" through a PTFE syringe filter. The eluent should be discharged into a 100 mL Glass Beaker. Precondition a SEP-PAK C-18 cartridge with 3.0 mL of "IPA."

To the preconditioned SEP-PAK C-18 cartridge add 0.5 mL of the filtered "IPA" and rinse with 3.0 mL of "IPA."

Detach the syringe from cartridge and label as "Reagent Blank" with a black marker.

9. Place the sample cartridge labeled "Reagent Blank" into the black light viewing cabinet and turn on the black light.

If fluorescence is detected in the reagent blank cartridge, analysis of the samples is halted until the source of the contamination is eliminated and a prepared reagent blank shows no fluorescence under the black light.

If no fluorescence is observed, proceed to Step #10.

10. Place the sample cartridge alongside the cartridge standard in the black light viewing box.

Turn on the black light.

Illuminate the 2 cartridges and compare brightness.

Warranty and Return Policy

Warranty:

OFI Testing Equipment, Inc. (OFITE) warrants that the products shall be free from liens and defects in title, and shall conform in all respects to the terms of the sales order and the specifications applicable to the products. All products shall be furnished subject to OFITE's standard manufacturing variations and practices. Unless the warranty period is otherwise extended in writing, the following warranty shall apply: if, at any time prior to twelve (12) months from the date of invoice, the products, or any part thereof, do not conform to these warranties or to the specifications applicable thereto, and OFITE is so notified in writing upon discovery, OFITE shall promptly repair or replace the defective products. Notwithstanding the foregoing, OFITE's warranty obligations shall not extend to any use by the buyer of the products in conditions more severe than OFITE's recommendations, nor to any defects which were visually observable by the buyer but which are not promptly brought to OFITE's attention.

In the event that the buyer has purchased installation and commissioning services on applicable products, the above warranty shall extend for an additional period of twelve (12) months from the date of the original warranty expiration for such products.

In the event that OFITE is requested to provide customized research and development for the buyer, OFITE shall use its best efforts but makes no guarantees to the buyer that any products will be provided.

OFITE makes no other warranties or guarantees to the buyer, either express or implied, and the warranties provided in this clause shall be exclusive of any other warranties including ANY IMPLIED OR STATUTORY WARRANTIES OF FITNESS FOR PURPOSE, MERCHANTABILITY, AND OTHER STATUTORY REMEDIES WHICH ARE WAIVED.

This limited warranty does not cover any losses or damages that occur as a result of:

- Improper installation or maintenance of the products
- Misuse
- Neglect
- Adjustment by non-authorized sources
- Improper environment
- Excessive or inadequate heating or air conditioning or electrical power failures, surges, or other irregularities
- Equipment, products, or material not manufactured by OFITE
- Firmware or hardware that have been modified or altered by a third party
- Consumable parts (bearings, accessories, etc.)

Returns and Repairs:

Items being returned must be carefully packaged to prevent damage in shipment and insured against possible damage or loss. OFITE will not be responsible for equipment damaged due to insufficient packaging.

Any non-defective items returned to OFITE within ninety (90) days of invoice are subject to a 15% restocking fee. Items returned must be received by OFITE in original condition for it to be accepted. Reagents and special order items will not be accepted for return or refund.

OFITE employs experienced personnel to service and repair equipment manufactured by us, as well as other companies. To help expedite the repair process, please include a repair form with all equipment sent to OFITE for repair. Be sure to include your name, company name, phone number, email address, detailed description of work to be done, purchase order number, and a shipping address for returning the equipment. All repairs performed as "repair as needed" are subject to the ninety (90) day limited warranty. All "Certified Repairs" are subject to the twelve (12) month limited warranty.

Returns and potential warranty repairs require a Return Material Authorization (RMA) number. An RMA form is available from your sales or service representative.

Please ship all equipment (with the RMA number for returns or warranty repairs) to the following address:

OFI Testing Equipment, Inc.
Attn: Repair Department
11302 Steeplecrest Dr.
Houston, TX 77065
USA

OFITE also offers competitive service contracts for repairing and/or maintaining your lab equipment, including equipment from other manufacturers. For more information about our technical support and repair services, please contact techservice@ofite.com.