

Remediation, Assessment & Industrial Testing



EnviroGard DDT in Soil Test Kit

Features

- rapid and simple field testing procedures
- semi-quantitative results at set calibrator (action) levels
- test up to 17 samples at one time
- results in less than 30 minutes
- training recommended
- coated tube immunoassay
- EPA SW-846 Method # 4042



EnviroGard®

Test Result Type

- Semi-quantitative or qualitative

Samples per Kit

- Up to 17 soil sample test results can be obtained per kit, depending upon the number of runs and action levels used. (Kit includes 20 antibody coated tubes)
- Typical applications use two or three calibrators and one negative control.

Assay Range

- Semi-quantitative results (greater or less than) at calibrator (action) levels of 0.2, 1.0 and 10.0 ppm DDT.
- Minimum detection level (MDL) is 0.2 ppm DDT.
- No maximum screening level as extracts can be diluted into test range.

Sample Preparation

- Soil samples require prior extraction using the SDI Sample Extraction Kit (sold separately).
- The Sample Extraction Kit provides material for 12 soil sample extractions with methanol.

Sampling Time

- Soil extraction time is typically 2 minutes per sample plus assay run time of approximately 30 minutes.



Remediation, Assessment & Industrial Testing

EnviroGard[®]

Basic Test Procedures

- Extract the soil sample using the SDI Sample Extraction Kit.
- Pipet DDT assay diluent into the antibody coated tubes, then add either DDT calibrator or sample extract to the tubes along with DDT enzyme conjugate.
- Wait for 15 minutes, then decant and wash the tubes.
- Add substrate.
- Wait for 10 minutes, add stop solution.
- Read the absorbance using a photometer, and interpret the results. (Refer to DDT Soil Test Kit Instruction Guide procedures.)

Specificity

The EnviroGard DDT immunoassay test does not differentiate between DDT and other organochlorines. The table below shows compounds at the minimum detection limit (MDL) - an approximate concentration required to yield a positive result at the lowest standard. The IC50 is the concentration required to inhibit one-half of the color produced by the negative control. It is also used to calculate cross-reactivity values to similar compounds.

Contaminant	DDT in Soil (ppm)	
	MDL	IC50
<i>p,p'</i> -DDT (kit calibrator)	0.2	1.25
<i>p,p'</i> -DDD	0.05	0.3
<i>p,p'</i> -DDE	0.6	3.6
<i>o,p'</i> -DDT	14.9	93
<i>o,p'</i> -DDD	1.76	11
<i>o,p'</i> -DDE	14.9	93
DDA	0.01	0.04
Chloropropylate	0.01	0.08
Chlorobenzilate	0.06	0.35
Dicofol	0.3	2
Tetradifon	2.2	14

Test Kit Components

- 20 antibody coated tubes.
- Enzyme conjugate, color developing and color stop solution reagents.
- Calibrators for 0.2, 1.0 and 10.0 ppm DDT.
- Negative control calibrator.
- Test tube rack, reagent and calibrator holders, and pipet tips.
- Test kit instructions.

Storage & Precautions

- Shelf life typically one year from date of manufacture, with specific kit expiration date information provided on product packaging.
- Components must be stored at 39° to 46°F (4° to 8°C) when not in use.
- Storage at ambient temperature 64° to 81°F (18° to 27°C) is acceptable for day of use. Kits must be brought to 64° to 81°F (18° to 27°C) before use.
- Do not expose substrate to direct sunlight.
- Portable spectrophotometer battery should be charged prior to use.

Required Test Materials

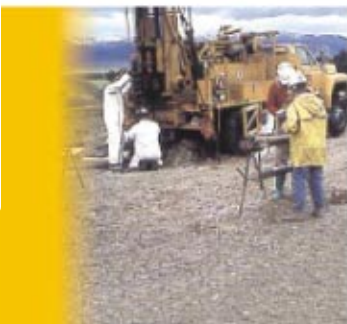
- | | |
|--------------------------------|------------------------------|
| ◦ EnviroGard DDT Soil Kit | <u>SDI Part #</u>
7310000 |
| ◦ Sample Extraction Kit (Soil) | 73100EB
or 73100EA |

Required Test Equipment

- | | |
|------------------------------------|---------|
| ◦ Field Soil Lab (Accessory Kit) | 6050400 |
| which includes: | |
| Repeating pipette* | |
| Adjustable pipette* | |
| Balance* | |
| Repeating Pipette tips* | |
| Timer* | |
| OR | |
| ◦ Differential Spectrophotometer*, | |
| 110V | 6000001 |
| 220V | 6000002 |
| ◦ Field Lab System Rental | 6997020 |
| (includes items marked "*" above) | |

Other Recommended Materials

- Latex gloves
- Absorbent paper for blotting test tubes
- Liquid and solid waste containers
- Calculator



Strategic Diagnostics Inc.

111 Pencader Drive
Newark, DE USA 19702

502.456.6789 *tele*
800.544.8881 *tele*
502.456.6782 *fax*

www.sdix.com