

Remediation, Assessment & Industrial Testing



EnviroGard®

EnviroGard Chlordane 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 # 4041

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 20, 100 and 600 ppb Total Chlordane.
- Minimum Detection Limit (MDL) is 20 ppb Chlordane.
- 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.



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Basic Test Procedures

- Extract the soil sample using the SDI Sample Extraction Kit.
- Pipet Chlordane assay diluent into the antibody coated tubes, then add either calibrator or sample extract into the tubes.
- Wait for 15 minutes.
- Add Chlordane enzyme conjugate to the tubes.
- Wait for 5 minutes, decant and wash the tubes.
- Add substrate solution.
- Wait for 3 minutes, add stop solution.
- Read the absorbance using a photometer, and interpret the results. (Refer to Chlordane Soil Test Kit Instruction Guide procedures.)

Specificity

The EnviroGard Chlordane immunoassay test does not differentiate between Chlordane and other cyclodienes. 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	Chlordane Soil (ppb)	
	MDL	IC50
Chlordane	20	100
Endrin	4.4	22
Endosulfan	7.2	36
Endosulfan II	5.6	28
Dieldrin	8.4	42
Heptachlor	6.8	34
Aldrin	23.2	116
Toxaphene	560	2,800
Lindane	920	4,600
Alpha-BHC	3,800	19,000
Delta-BHC	8,000	40,000

Test Kit Components

- 20 antibody coated tubes.
- Enzyme conjugate, color developing and color stop solution reagents.
- Calibrators for 20, 100 and 600 ppb Chlordane.
- 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

	<i>SDI Part#</i>
◦ EnviroGard Chlordane in Soil Kit	7311000
◦ Sample Extraction Kit (Soil)	73100EA

Required Test Equipment

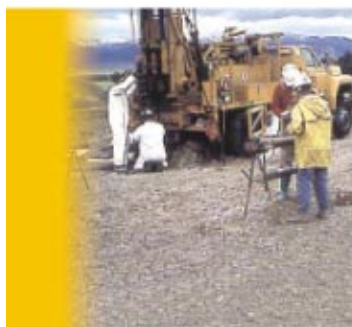
◦ Field Soil Lab (Accessory Kit) which includes: Repeating pipette* Adjustable pipette* Balance* Repeating Pipette tips* Timer*	6050400
◦ Differential Spectrophotometer*, 110V	6000001
220V	6000002

OR

◦ Field Lab System Rental (includes items marked "*" above)	6997020
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Other Recommended Materials

- Latex gloves
- Absorbent paper for blotting test tubes
- Liquid and solid waste containers
- Calculator
- Tap or laboratory grade water for tube rinsing
- Marking pen



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