

# L2000<sup>®</sup>DXT Analyzer

Screening Method for PCB and Chlorinated Organics



## U.S. EPA SW-846 Method 9078 for Soil

The L2000DXT Analyzer is a versatile field portable instrument incorporating an ion specific electrode that can quantify chlorinated compounds in four matrices; transformer oil, soil, water, and surface wipes. The instrument has conversion programs for all major Aroclors and most chlorinated solvents and pesticides, simply select the analysis program for the matrix and analyte of interest from the menu. For less common analytes or for custom measurement protocols, user defined methods can be easily built and stored using the method development menus.

The L2000DXT has a 7" backlit LCD touch screen with easy to follow prompts. The unit weighs less than 2 lbs., and with its small footprint, 8.5" x 5.5" x 2", is ideal for in-field use where work space may be limited. It is powered by 1.2V Ni-Mh rechargeable batteries, and comes with a charger available for 115V or 220V power. The unit is stored in a sturdy carrying case which includes the chloride ion electrode, 5 ml pipettor, electronic balance, timer, vial rack, and user's manual. The L2000DXT system comes complete with everything needed for testing, including one pack of reagents for the matrix being tested. Specify reagent choice when ordering.

<b>Analytes</b>	<b>PCB, Chlorinated Organics</b>
<b>Matrix</b>	<b>Transformer Oil, Soil, Water, Surface Wipes</b>
<b>Detection Method</b>	<b>Electrochemical</b>
<b>Action Levels</b>	<b>Oil: 3 to 2000 ppm</b> <b>Soil: 3 to 2000 ppm</b> <b>Water: 20 ppb to 2000 ppm</b> <b>Wipes: 3 to 2000 ug/100 cm2</b>
<b>Analysis Time</b>	<b>Oil: 5 minutes</b> <b>Soil, Water, Wipes: 10 minutes</b>

### L2000 PCB/Chloride Analyzer System

Complete system includes one pack of your choice of reagents. Choose from the list below:

**When ordering specify:**

<b>Option 1 - 40 Oil Reagents</b>	<b>LP-200-01</b>
<b>Option 2 - 20 Soil Reagents</b>	<b>LP-200-02</b>
<b>Option 3 - 20 Water Reagents</b>	<b>LP-200-03</b>
<b>Option 4 - 20 Wipe Reagents</b>	<b>LP-200-04</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Catalog #  
**LP-200**

# L2000<sup>®</sup> Reagents for Dielectric Fluid



When quantitative information is needed, dielectric fluid can be screened for PCB concentration on-site using the L2000DXT Analyzer. Preparing an oil sample for analysis is simple, and the L2000DXT provides quantitative results in ppm in less than 5 minutes. The L2000DXT test method involves reacting an oil sample with a sodium reagent to strip the covalently bonded chlorine from the PCB molecule converting it to inorganic chloride. The resulting chloride is then detected and quantified using a chloride ion specific electrode. The L2000DXT analyzer then mathematically converts the chloride reading to the equivalent concentration of the target analyte based on the percent chlorine associated with the analyte. Conversion programs are available for the most common Aroclors and Askarel A. Custom conversion programs can be built for less common analytes not included on the L2000DXT menu (instructions are included in the user manual).

Reagents are available by packs of 40 and bulk packs of 200 tests. Everything needed for analysis is included.

<b>Analytes</b>	<b>PCBs</b>
<b>Matrix</b>	<b>Transformer Oil</b>
<b>Detection Method</b>	<b>Electrochemical</b>
<b>Action Level</b>	<b>3 to 2000 ppm</b>
<b>MDL</b>	<b>3 ppm</b>
<b>MQL</b>	<b>9 ppm</b>
<b>Interferences</b>	<b>Non-analyte chlorine</b>
<b>Overall Accuracy</b>	<b>10% +/- MDL</b>
<b>Analysis Time</b>	<b>5 minutes</b>

<b>L2000 Oil Reagents</b>	Catalog #
<b>40 Pack Oil Reagents</b>	<b>LP-ORK</b>
<b>200 Bulk Pack Oil Reagents</b>	<b>LP-ORK-BP</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## L2000® Reagents for Soil



### U.S. EPA SW-846 Method 9078

Soils contaminated with PCBs and other chlorinated compounds such as solvents, pesticides/herbicides can be tested on-site in just 10 minutes. Screening with the L2000DXT system can greatly reduce the number of samples requiring expensive, time intensive laboratory analysis, allowing for faster decision making in the field regarding delineation, excavation, and remediation.

Collected soil samples are extracted and reacted with a sodium reagent to strip the covalently bonded chlorine from the analyte, converting it to inorganic chloride. The resulting chloride is then detected and quantified using a chloride ion specific electrode. The L2000DXT analyzer mathematically converts the chloride reading to the equivalent concentration of the target analyte based on the percent chlorine associated with the analyte. Inorganic chloride, e.g. road salt, will not interfere with the test. Conversion programs are available for all major Aroclors and most common chlorinated solvents and pesticides. Custom conversion programs can be built for less common analytes not included on the L2000DXT menu (instructions are included in the user's manual).

Note: Some soils, such as wet clays, can pose an extraction problem. For information on dealing with difficult to solvate soils, please see the L2000 Two-Step Soil Reagents.

<b>Analytes</b>	<b>PCBs, Chlorinated Organics</b>
<b>Matrix</b>	<b>Soil</b>
<b>Detection Method</b>	<b>Electrochemical</b>
<b>Action Level</b>	<b>3 to 2000 ppm</b>
<b>MDL</b>	<b>3 ppm</b>
<b>MQL</b>	<b>9 ppm</b>
<b>Interferences</b>	<b>Non-analyte organic chlorine</b>
<b>Overall Accuracy</b>	<b>10% +/- MDL</b>
<b>Analysis Time</b>	<b>10 minutes</b>

<b>L2000 Soil Reagents</b>	Catalog #
<b>20 PackSoil Reagents</b>	<b>LP-SRK</b>
<b>200 Bulk Pack Soil Reagents</b>	<b>LP-SRK-BP</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## L2000® Soil Two-Step Extraction



### Recommended for Hard to Extract Wet Clays

Soils, such as wet clays, pose an extraction problem with most extraction solvents on the market today. If the extraction solvent cannot thoroughly solvate the soil and remove the contaminant efficiently, an underestimation of the contaminant will occur. To contend with difficult to solvate soils, Dexsil has developed a "Two-Step Extraction Method" that allow clay soils to be solvated efficiently for accurate, reliable results. A study, using the the Two-Step method to extract PCB from lacustrine clay, achieved an extraction efficiency of >78% when compared with soxhlet extraction.

The Two-Step reagent option combines the specialized extraction system with the standard L2000 soil reagents. The total testing process takes about 10 minutes, and results are provided in a range from 3 (MDL) to 2000 ppm. Results are displayed on the L2000DXT screen and saved to the internal memory. Data can also be automatically saved to an external flash drive for uploading to an Excel file for later recall and reporting.

<b>Analytes</b>	<b>PCBs, Chlorinated Organics</b>
<b>Matrix</b>	<b>Soil</b>
<b>Detection Method</b>	<b>Electrochemical</b>
<b>Action Level</b>	<b>3 to 2000 ppm</b>
<b>MDL</b>	<b>3 ppm</b>
<b>MQL</b>	<b>9 ppm</b>
<b>Interferences</b>	<b>Non-analyte organic chlorine</b>
<b>Overall Accuracy</b>	<b>10% +/- MDL</b>
<b>Analysis Time</b>	<b>10 minutes</b>

<b>L2000 2-Step Soil Reagents</b>	Catalog #
<b>20 PackSoil Reagents</b>	<b>LP-SR2</b>
<b>200 Bulk Pack Soil Reagents</b>	<b>LP-SR2-BP</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## L2000® Reagents for Groundwater



The L2000DXT analyzer system is an efficient, accurate tool for determining chlorinated organic compound contamination in groundwater. The L2000DXT includes a variety of programmed methods specifically designed for water testing. Extraction efficiencies and conversion factors for over a dozen chlorinated compounds have been programmed into the instrument for accurate in-field results. In addition to the available programmed methods, customized methods can be designed by the user incorporating characteristics specific for site location and analyte.

Field trial and laboratory validation studies show that water analysis using the L2000DXT system compares very well with expensive laboratory methods. This data shows that the L2000DXT can accurately determine the true contaminate concentration in two ranges\*: The high range option, using 5 gm water sample, has a result range from (MDL) 5 ppm to 2000 ppm. The low range option requires a 1 litre sample and provides results from (MDL) 20 ppb to 5 ppm. Inorganic chloride will not interfere with the test.

\*Note: Result ranges are analyte dependent

<b>Analytes</b>	<b>PCBs, Chlorinated Organics</b>	
<b>Matrix</b>	<b>Groundwater</b>	
<b>Detection Method</b>	<b>Electrochemical</b>	
	<u>High Range</u>	<u>Low Range</u>
<b>Action Level</b>	<b>5 to 2000 ppm</b>	<b>20 ppb to 2000 ppm</b>
<b>MDL</b>	<b>5 ppm</b>	<b>20 ppb</b>
<b>MQL</b>	<b>9 ppm</b>	<b>60 ppb</b>
<b>Interferences</b>	<b>Non-analyte organic chlorine</b>	
<b>Overall Accuracy</b>	<b>10% +/- MDL</b>	
<b>Analysis Time</b>	<b>10 minutes</b>	

<b>L2000 Water Reagents</b>	Catalog #
<b>20 Pack Water Reagents</b>	<b>LP-WRK</b>
<b>200 Bulk Pack Water Reagents</b>	<b>LP-WRK-BP</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

## L2000® PCB Surface Wipes Option



If waiting for laboratory results for surface wipes is not an option, the L2000DXT system can provide on-the-spot screening in just a few easy steps with results in less than 10 minutes. This test method requires wiping an area 1000 cm<sup>2</sup>; results are provided in µg PCB/100 cm<sup>2</sup>.

The reagent packs include everything needed for analysis, plus the following items needed for sample collection:

- PCB Rated Gloves
- Safety Goggles
- Disposable Forceps
- Sample Vials
- Gauze Pads
- Chromatographic Hexane  
(sealed in individual glass ampules)

<b>Analytes</b>	<b>PCBs</b>
<b>Matrix</b>	<b>Surface Wipes</b>
<b>Detection Method</b>	<b>Electrochemical</b>
<b>Action Level</b>	<b>3 ug/100 cm<sup>2</sup> to 2000 ug/100 cm<sup>2</sup></b>
<b>Analysis Time</b>	<b>10 minutes</b>

<b>L2000 Wipe Reagents</b>	Catalog #
<b>20 Pack Water Reagents</b>	<b>LP-WIP</b>



**WARNING:** Cancer.  
For more information visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)