

ELECTRONIC LABS

Model SCL-12 · Code 1985-05 · LQ [37]
Reagent Refill · Code R-1985-04 · LQ

Model SCL-15 w/out pH & Dissolved Salts Meters
Code 1988-03 · LQ [33]

See back page for
Shipping Codes &
Weights chart.



Code 1985-05

The LaMotte Model SCL-12 is designed to provide the landowner, consultant, or fertilizer specialist with a method for achieving immediate and economical soil analyses in the field without sacrificing accuracy. The Model SCL-12 is a self-contained, electronic soil analysis laboratory that provides accurate answers anywhere for 15 soil factors, including available forms of macronutrients and critical micronutrients. The SMART® 3 Colorimeter instantly analyzes color reactions developed in nutrient tests. Display readings are multiplied by a conversion factor specific to each test to provide a result in parts per million (ppm) or pounds per acre (lb/acre)—no further calculations are necessary. The simplified test procedures provide at least 20 tests for each soil nutrient. Each accurately standardized system is furnished in an individual plastic module for quick distinction. All tests are performed in minutes on easy-to-prepare soil extracts, based on **Mehlich I extraction**. Critical soil pH measurements are performed quickly and reliably with a battery-powered pH 5 meter. The meter measures the pH of a one-to-one solution of soil and distilled water over the range of 0-14 pH units to a sensitivity of ± 0.01 pH. Soluble Salt levels in soils and irrigation waters are monitored accurately with a TDS 6 meter, measuring Dissolved Salts from 0-999+ ppm.

All of the LaMotte soil test kits measure the portion of the soil nutrient that is available for the plant to use. Pounds per acre represent the number of pounds of soil in an acre to the plow depth of 6-7 inches, or 2,000,000 lbs.

Colorimeter Tests	Method	Range*	# Tests
Nitrate Nitrogen*	Cadmium Reduction	0-300 lb/acre	20
Nitrite Nitrogen	Diazotization	0-40 lb/acre	20
Ammonia Nitrogen*	Nesslerization	0-200 lb/acre	50
Phosphorus*	Ascorbic Acid Reduction	0-99 lb/acre	50
Potassium*	Tetraphenylboron	0-500 lb/acre	100
Sulfur	Barium Chloride	3-94 ppm	50
Copper	Diethyldithiocarbamate	0-30 ppm	100
Iron	Bipyridyl	0-30 ppm	50
Manganese	Periodate	0-75 ppm	50
Zinc	Zincon	0-15 ppm	50

Direct Reading Titrator Tests:	Range*	# Tests
Calcium	0-4000 lb/acre	50
Magnesium	0-2400 lb/acre	50
Chloride	0-1000 lb/acre	50

Battery-Powered Meters:	Range*
pH 5	pH 0-14
TDS 6	0-10.00, 100.0, 1,000 ppm; 1.00-10.00, 100, 200 ppt

Unit Conversion Factors:

Results can be measured using a choice of units, explained here. Parts per million (ppm), pounds/acre and Kg/hectare units can be converted to each other using these values:

Area	Soil Depth	Soil Weight
1 acre	6-7 inches	2 million lb
1 hectare	15-18 cm	2.25 million Kg

ppm	lb/acre	Kg/hectare
0.5	1	1.12
1	2	2.24
0.89	1.78	1

A number of variables must be considered when interpreting soil test results in addition to the values obtained. These variables include the composition of the soil, drainage, climate, previous fertilizer programs and the type of plant to be grown. Samples must also be truly representative of the area being studied and must be carefully selected.