



Soil test kits



This line of combination soil analysis outfits offers the finest visual color matching system available to today's agronomist. Technically advanced reagent systems and unique extraction procedures based on the Mehlich I extraction provide fast, simple and extremely accurate soil testing.

The Model STH Combination Soil Outfits have offered simplified methods for determination of available nutrients found in agricultural soils for over forty years.

Since the original introduction of the STH series, based on Morgan soil test methods, reagent systems have been updated constantly with new advancements in modern chemistry. A series of rapid, accurate chemical tests use standardized reagents to produce color reactions measured against laminated color charts.

All STH outfits are furnished in lightweight carrying cases with components securely mounted in removable foam trays. This format provides flexibility for the in-house specialist who also wants to make

quick problem determinations in the field.

Colorimetric test methods are used for most test factors. Tests for calcium, sulfate and chlorides are based on turbidity measurements. Potassium analysis also employs a turbidity measurement, using a unique reading device to read directly in pounds per acre. A single extraction procedure, using Morgan Universal Extraction Solution, provides the liquid soil extract for all the nutrient tests with the exception of chloride, which is extracted with demineralized water. The Humus Screening Test, performed on a soil sample-demineralized water suspension, employs five color standards for rapid measurement of humus content of the soil.

Soil pH is determined colorimetrically, using a series of pH indicators and color charts covering the range of pH 3.8 to 9.6. The STH outfits also include simplified procedures for screening nitrates, phosphorus, and potassium in plant tissues. Complete reagent refill packages are available for each STH outfit.

Each kit includes complete instructions, a soil management handbook and a pad of soil analysis report forms. The handbook contains general information on interpretation of test results for determination of lime and fertilizer requirements.

Available in four models. See Specification Charts below.

Art. No.: 18.02 Specifications		
Test Factor	Range*	# Tests
pH	pH 3.8-9.6	100
Nitrate Nitrogen	10-150 lbs/acre	50
Phosphorus**	10-200 lbs/acre	50
Potassium	100-400 lbs/acre	50

Art. No.: 18.04 Specifications		
Test Factor	Range*	# Tests
pH	pH 3.8-9.6	100
Nitrate Nitrogen	10-150 lbs/acre	50
Phosphorus**	10-200 lbs/acre	50
Potassium	100-400 lbs/acre	50
Humus (Organic Matter)	L-H 1-1/2 %-8%	50
Calcium	150-2800 ppm	50
Magnesium	L-H 5-150 ppm	50



Soil test kits

Art. No.: 18.06 Specifications		
Test Factor	Range*	# Tests
pH	pH 3.8-9.6	100
Nitrate Nitrogen	10-150 lbs/acre	50
Phosphorus**	10-200 lbs/acre	50
Potassium	100-400 lbs/acre	50
Humus (Organic Matter)	L-H 1-1/2%-8%	50
Calcium	150-2800 ppm	50
Magnesium	L-H 5-150 ppm	50
Ammonia Nitrogen	L-H 5-150 ppm	50
Manganese	L-H 4-40 ppm	50
Aluminum	L-H 5-125 ppm	50
Nitrite Nitrogen	1-50 ppm	50
Sulfate	50-2000 ppm	50
Chloride	25-500 ppm	50
Ferric Iron	5-125 lbs/acre	50

* See unit conversion factors below.

** For non-alkaline soils. Code 5090 Phosphorus auxilliary package recommended for alkaline soils.

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 mil lbs.
1 hectare	15-18 cm	2.25 mil Kg

ppm	lb/Acre	Kg/Hectare
1	2	1.13
0.5	1	0.565
0.88	1.77	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.

Item Description	Art. No.:
Macronutrients & pH • Model STH-4	18.02
Reagent Refill	18.02.02
Macronutrients, pH, Humus, Calcium, & Magnesium • Model STH-7	18.04
Reagent Refill	18.04.02
Macronutrients, Micronutrients, & pH • Model STH-14	18.06
Reagent Refill	18.06.02