

SOIL ANALYSIS

A number of analysis of the soil can be executed immediately in the field.

The determination of the pH and the nitrate content are soil analysis that frequently occur.

08.10 Hellige pH-indicator

The Hellige pH-indicator is a very simple apparatus to estimate the pH (acidity) of a soil for the purpose of a soil suitability indication and straight forward fertilizing advise.

The pH is determined on the basis of colour comparison.

18.40 Nitratech reflectometer

The Nitratech reflectometer is a pocket size digital measuring instrument for a simple and quick determination in the field of the nitrate content in water or in a watery extract of soil or crop. The method is based on read-out of nitrate test strips.

After a test strip is held in the solution it is placed in the optical read-out apparatus.

The instrument has a memory for up to 20

measuring sets with date/ time indication.

The measuring range is 5 - 500 ppm (mg/l) nitrate.

The reading accuracy is 1 mg/l.

The instrument is supplied including case, test strips, calibration solution and accessories.

18.42 Nitrasol, set for determination of nitrate content in soil

The set, stored in a case, contains: a Nitratech reflectometer, thermometer, test strips, KCl, nitrate solution, filters and sample buckets.

For the determination of the nitrate content of the soil first a watery extract must be made of the soil sample in a KCl solution (if preferred just distilled water or a CaCl₂-solution). Subsequently the extract is filtered. The nitrate determination is executed on the filtrate.

An accurate and representative sampling is an important condition for accurate and reliable test results. The method is not a replacement of the laboratory method but does provide an indication for a fertilizing plan.



P1.67

Parts List
Pg 341-342

The indicator fluid is added before estimating the pH of a soil by colour comparison.



Hellige pH-indicator

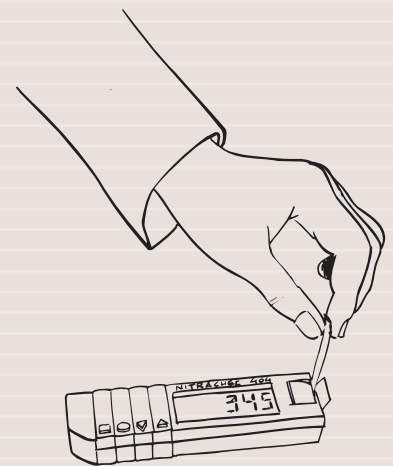


Nitrasol set



Read-out unit Nitratech

The test strip is placed in the read-out unit.





P1.67
Parts List
Pg 341-342

After drilling a small hole the electrode can be pushed into the soil.



The reagent is added to the liquid soil extract, after which the color reaction is measured against the color chart.



SOIL ANALYSIS



18.44 pH field analysis set

For the direct determination of the pH of soils (and liquids) a special electrode is used. Measurement of pH is based on semi conductor technology. The special, sturdy electrode, contains an Ion Sensitive Field Effect Transistor (ISFET) sensor, a silver/silver-chloride potassium-chloride reference system and a thermistor to allow for automatic temperature compensation.

The electrode has a measuring range of 0-14 pH with an accuracy of 0.03 pH. Measurement depth is 80 mm. The electrode is used in combination with a multimeter. The complete set includes the multimeter with electrode, a small pre-drill auger land with thumb spatula and calibration liquids.

methods for determination of available nutrients found in agricultural soils.

A series of rapid, accurate chemical tests use standardized reagents to produce color reactions measured against laminated color charts.

Colorimetric test methods are used for most test factors.

Some tests are based on turbidity measurements.

A single extraction procedure provides the liquid soil extract for all the nutrient tests with the exception of chloride, which is extracted with demineralized water.

Soil pH is determined colorimetrically, covering the range of pH 3.8 to 9.6. Complete reagent refill packages are available for each outfit.

All kits outfits are furnished in lightweight carrying cases with components securely mounted in removable foam trays.

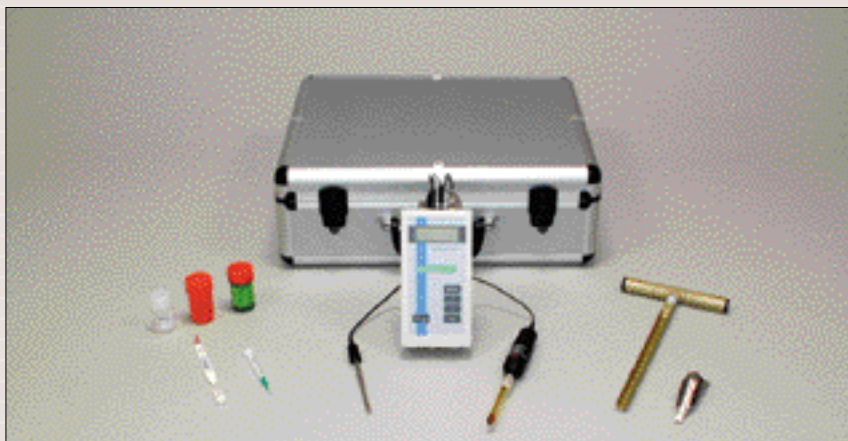
Each kit includes complete instructions, a soil management handbook and a pad of soil analysis report forms.

18.02 Soil test kit for macronutrients & pH

18.04 Soil test kit for macronutrients, pH, humus, calcium & magnesium

18.06 Soil test kit for macronutrients, micronutrients & pH

The (agricultural) soil test kits offer simplified



pH field analysis set with ISFET electrode



Soil test kit for macronutrients, micronutrients and pH