SOIL ANALYSIS

You will return to the contents of P1 SOIL by clicking the pictogram

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 Nitrachek reflectometer

The Nitrachek 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.

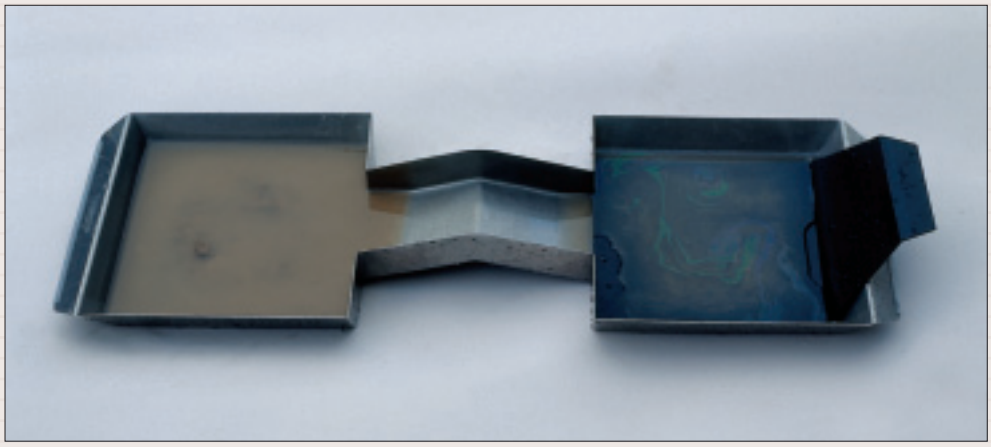
20.02 Oil detection pan

The oil detection pan is developed for a rapid on-site analysis of soil and groundwater for floating contaminants e.g. soaps, dyestuffs and all kinds of oil derivates such as tar, lubricating oil, kerosine and petrol. In addition to laboratory analysis, rapid on-site analysis may be very useful in investigations of soil contaminations:

- ❒ Rapid monitoring of environmental conditions is necessary for safety measures during site investigation, excavation and remedial actions.
- ❒ In case of excavation, rapid decisions have to be made about the extent to which the soil is contaminated.
- ❒ The extent of the contamination can be determined more accurately in the field, which means better sampling for laboratory analysis and thus lower costs.

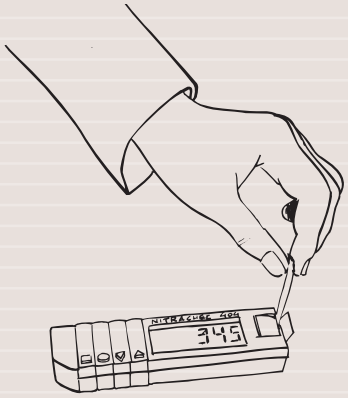
Hellige pH-indicator

Read-out unit Nitracheck



Oil detection pan

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

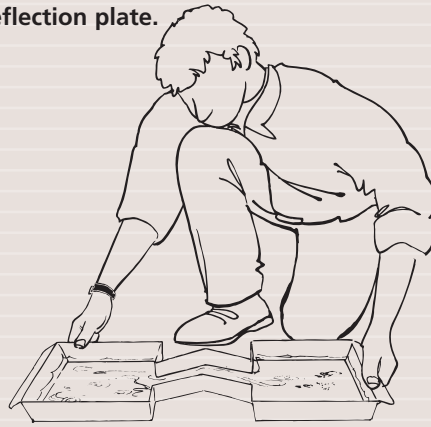


BENEFITS

18.40 Nitrachek

- Uses fresh field samples, no transport needed
- Accurate when used properly
- Batchwise calibration by user
- Can also be used for diluted plant juices
- Soil can be mixed with KCl-Water and filtered

To examine the sample, in the oil detection pan, water is moved to the part with the black anti-reflection plate.



BENEFITS

20.02 Oil detection pan

- Shows oil in soil directly in the field
- Can detect oil down to lowest level
- Experienced user can separate in 4 classes
- Photo manual included
- Ideal during first soil research
- Ideal to separate soil types when remediating
- Prevents active smelling of soil samples
- No wear, no costs
- Can be used for yes-no or for quantification

Eijkelkamp Agrisearch Equipment

www.eijkelkamp.com

SOIL ANALYSIS

You will return to the contents of P1
SOIL by clicking the pictogram

P1.67

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

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.

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 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.

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

pH field analysis set with ISFET electrode

Soil test kit for macronutrients, micronutrients and pH

Art.no.	Description	Qty. in set
Soil analysis (P1.67)		
	For analysis of soil we supply various instruments that can be used directly in the field.	
	PH MEASUREMENT To measure pH of soil we supply two sets: - pH indicator - pH meter with accessories (set)	
08.10	**Hellige pH-indicator for soil, measuring range pH4 - pH9, (incl. 50 cc indicator fluid, for about 50 pH-tests)**	
	Accessories for pH-indicator (spare part):	
08.10.02	pH indicator fluid, pH 4.0 -9.0, bottle of 500 cc	
18.44	**Field analysis set to determine the pH of liquids and soil. Included in the set are: a multi-meter 18.21, a pre-drill auger, a pH electrode soil/ISFET PT1000, a thumb spatula, calibration liquids and a bag.**	
**18.21	pH/mV/EC/T meter, without electrodes, 0-14 pH, ±1100 mV, 0-100 mS/cm, 0-100 °C. IP65 housing. Menu-operated calibrations. Simultaneous measurement of pH and EC possible. Graphic display according GLP. In case with adjusting & maintenance liquids +batteries	1
**18.21.23	Temperature probe Pt1000 with stainless steel shaft, measuring range -30 till +130 °C, dimensions 120x6 mm, banana plugs, cable length 1 m, splash proof (IP65)	1
**18.44.01	pH electrode ISFET with BNC plug, measuring range pH 0-14. Accuracy 0.03 pH. Measuring depth 80 mm. Suitable for measurements in liquids and soil.	1
**04.06.02	Auger for arable land, Ø 13 mm, operational length 25 cm, total length 32 cm, graduation 5 cm, totally zinc plated construction	1
**04.06.03	Thumb spatula	1
**18.44.91	Bag to store the auger for arable land and the thumb spatula	1
	DETERMINATION OF NITRATE CONTENT	
	Here we supply the Nitrachek for water and watery extracts	
18.40	**Nitrachek reflectometer, measuring range 5-500 ppm with date and time related data storage, with 100 nitrate test strips, calibration solution and accessories in bag**	
	Accessories for Nitrachek (spare parts)	
18.40.01	Nitrate test strips, package of 100 pcs	
18.40.02	Calibration solution for nitrachek, 100 ppm	
	DETERMINATION OF VARIOUS PARAMETERS	
	For complete soil analysis in agricultural soils we supply three sets:	
18.02	**Soil test kit for macro nutrients and pH. Complete test kit for pH (100x) and N (nitrate), P and K tests (50x). In carrying case.**	
18.04	**Soil test kit for macro-nutrients and pH, humus, calcium and magnesium. Complete test kit for pH (100x) and N (nitrate), P, K, Ca, Mg and humus tests (50x). In carrying case.**	
18.06	**Soil test kit for macro- and micro-nutrients and pH. Complete test kit for pH (100x) and N (nitrate + nitrite), P, K, Ca, Mg, NH3, Mn, Ae, NH4, sulphate, Fe, chloride and humus (50x). In carrying case.**	
	We also offer complete reagent test kits for above sets: (spare parts)	
18.02.02	Reagent refill kit for soil test kit, model 18.02	
18.04.02	Reagent refill kit for soil test kit, model 18.04	
18.06.02	Reagent refill kit for soil test kit, model 18.06	
	DETERMINATION OF FLOATING CONTAMINANTS (OIL) IN SOIL	
	Here we offer the oil detection pan	
20.02	**Oil detection pan, type Arcadis-Eijkelkamp, for semi-quantitative field determination of the content of mineral oil in soil samples. Incl. one anti-reflection plate**	