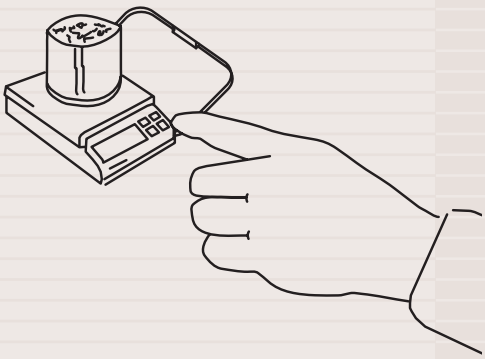
SOIL CLASSIFICATION

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

P1.07

After a hole has been prepared using the Edelman auger, the liner sampler is used to take a virtually undisturbed soil sample.

The sample is weighed using the portable electronic balance.



Soil research is a very important aspect in the planning and execution of agricultural- as well as civil engineering and operations. In order to make the soil research as comprehensive as possible the following studies must be made with regards to:

- The build up of a soil; i.e. determining the composition, the thickness and the position of the various strata.
- The soil properties; measuring the permeability, the filtration capacity, the bearing capacity, etc.

The build up of a soil and strata is determined with the use of augers. The hand auger is generally used for not too deep bore holes. Hand augers are extremely useful for soil research.
Investigating the properties of a soil either takes place in situ, or in the laboratory with the aid of soil samples. For the execution of a universal soil classification in situ various articles have been included in our program.

08.15 Soil sampling and classification set, standard set for investigations down to a depth of 2 meter

The soil sampling and soil classification set has been assembled to allow for in situ investigation as much as possible. The standard set is suitable for investigations down to a depth of 2 meter.

The standard set consists of:

- An Edelman auger (combination type suitable for various types of soil), a gouge auger inclusive of accessories, as well as a liner sampler for taking undisturbed samples in sample liners (including soil sample containers).
- The acidity or pH of a soil is determined by using a pH-indicator. This indicator, with a range of pH 4 to 9, gives a global pH reading accurate to 0.5.
- To determine the physical qualities of the soil a pocket interchange sieve set, a sand ruler, a portable electronic balance, a colour

Soil sampling and classification set

BENEFITS

08.15 Soil classification set

- Kit only contains essentials for pedologists!
- Ideal basic kit for reconnaissance purposes

SOIL CLASSIFICATION

identification book for soil, a pocket penetrometer and a pocket vane shear tester, an aplanatic magnifier and a pocket knife are included in the set. For the determination of the groundwater level a sounding device with measuring tape has been included.

- Various accessories including: a glass fibre utility probe (to check the substratum to avoid cutting through obstacles such as cables and tubes), aluminium soil sample boxes, a field data registration set, maintenance kit, work gloves and an aluminium transport case.

08.14 Soil quality determination kit

The compact set can be used for basic research of soil properties. The set can be applied e.g. for training purposes in schools and soil research by farmers and gardners. The set includes a small gouge auger to sample the top layer, cleaning spatula, soil colour book, pocket penetrometer, pocket hand sieve set, pH indicator and a synthetic transport case.

08.11 Soil colour charts

Determination of a subgroup in the soil classification system is based among other aspects on colour differences. The colour of the soil is determined by comparing the sample with standard soil colour charts (Munsell). Soil colour charts are available in a Japanese (12 colour charts) and American (8 colour charts) version.

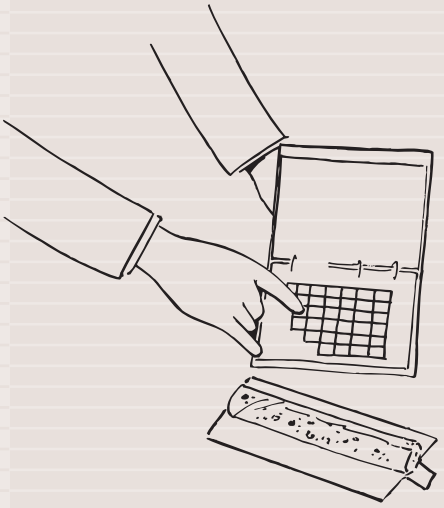
99.07 Geologist hammers

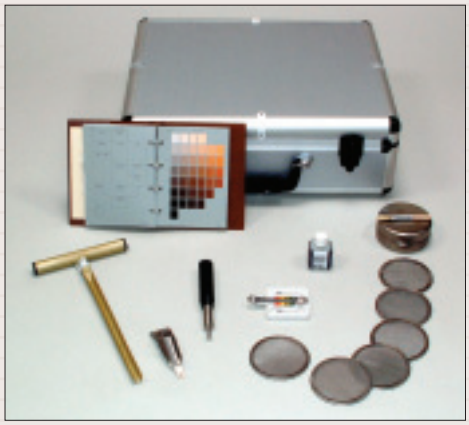
Geologist hammers can be obtained pointed or with a blade. They are used to obtain a rough indication of the hardness of soil or rock, the removing of fossils, scraping stones, emptying gouges and many other applications.

99.08 Sample flasks and boxes

For storage and transportation of soil-, water- and plant samples various means of storage can be obtained such as: aluminium boxes, plastic flasks, sample gutters and a variety of glass bottles.

The soil colour is classified by comparing the sample with standard colour charts.





Soil quality determination kit

Geologist hammers

The geologist hammer is used to loosen a piece of stone.

Soil colour chart

Sample flasks and aluminium boxes

PARTS LIST

Art.no.	Description	Qty. in set
P1.07	**Soil classification**	
	In soil classification two factors play an important part: sampling and the measurement of the physical qualities of the soil. From our overall program we made a selection of different (small) instruments which we offer as an overall set in a practical aluminimium case (extremely suitable for orientation research, instruction and or training).	
08.15	**Soil sampling and classification set, standard set to a depth of 2 m.**	
**01.10.17.B	Handle, normal, 60 cm, with all synthetic, detachable grip (incl. coupling sleeve), bay.	1
**01.02.02.07.B	Edelman auger, bottom part, comb.type, bay., Ø 7 cm	1
**04.02.01.30.B	Gouge auger, bottom part, op. length 50 cm, bay., Ø30 mm	1
**04.05.01.20	Bent spatula, breadth 20 mm	1
**01.10.07.B	Extension rod, 100 cm (incl. coupling sleeve) bay.	1
**04.15.01.C	Stainless steel coring apparatus for sample tube Ø 40x38 mm (incl. spare parts), conical screwthread	1
**01.10.99.11	Coupling part c.sc. (inside) - bay. (pin)	1
**04.15.02	Sample tube with cutting shoe, Ø 40x38 mm, length 22 cm	1
**04.15.03	Sample liner, inner Ø 37 mm, length 22 cm, set of 10 pcs.	1
**04.15.04	Plastic sample liner container Ø 40 mm	5
**99.60.07	Screw driver, 6.5 mm bit	1
**08.10	Hellige pH-indicator for soil, measuring range pH4 - pH9, (incl. 50 cc indicatorfluid, for about 50 pH-tests)	1
**08.11.01	Soil colour book, with 12 colour charts (7.5R/10R/2.5YR/ 5YR/7.5YR/ 10YR/2.5Y/5Y/7.5Y /5R and GLEY = two charts. Total 389 colour chips japanese version, English text)	1
**08.05.04	Mini hand sieves set, pocket size, height 40 mm, with 6 inter-changeable rimmed gauze sieve discs, Ø 100 mm, sieve openings: 2.0, 1.0, 0.500, 0.250, 0.125 and 0.063 mm	1
**06.03	Pocket penetrometer, with compression spring 50 N (5 kgf), robust steel design	1
**14.10	Pocket vane tester, with 3 vanes, measuring range 0-0.2, 0-1 and 0-2.5 kg/cm2, incl. notebook and carrying case	1
**08.04.03	Sandruler with 10 fractions according to NEN 2560, ASTM 11, ISO 565, BS 410 and DIN 4188. Fractions are divided between 63, 90, 125, 180, 250, 355, 500, 710, 1000, 1400 and 2000 µ	1
**99.08.03.03	Aluminium soil sample box with lid, Ø 58.4x45 mm, cont. 120 cc	10
**98.02.03	Electronic pocket balance, capacity 320 gram, accuracy 0.1 gram. With 3 batteries of 1.5 V. Dimensions weighing plate 80x70 mm.	1
**08.15.01	Aplanatic magnifier, lens Ø 13 mm, magnification 10x	1
**08.15.02	Pocket knife, heavy design, knife length 9 cm	1
**11.01.01.17	Sounding device, Ø 17 mm, with eye	1
**11.01.02.02	Measuring tape, glass fibre, with hook for sounding device, length 5 m	1
**01.11.04	Field data registration set	1
**01.11.03	Work gloves, pair, oil- and grease resistant, sturdy, with short sleeve	1
**01.11.01	Maintenance kit (brush, oilpad, vaseline)	1
**01.15.01	Utility probe with cone Ø 19 mm, fibre glass, length 105 cm, Ø shaft 12.5 mm. For safely checking the substratum for cables, tubes and pipes	1
**01.11.02	Aluminium transport case, dim. 108x23x14 cm (outside)	1
**01.11.02.01	Padlock	1
	For a limited research we supply a simple field set.	
08.14	**Soil quality determination kit. Complete set with soil sampler, cleaning spatula, soil colour book, pocketpenetrometer, pocket hand sieve set and pH indicator. In transport case**	
**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
**08.11.01	Soil colour book, with 12 colour charts (7.5R/10R/2.5YR/5YR/7.5YR/ 10YR/2.5Y/5Y/7.5Y/5R and GLEY = two charts. Total 389 colour chips japanese version, English text)	1
**06.03	Pocket penetrometer, with compression spring 50 N (5 kgf), robust steel design	1
**08.05.04	Mini hand sieves set, pocket size, height 40 mm, with 6 interchangeable rimmed gauze sieve discs, Ø 100 mm, sieve openings: 2.0, 1.0, 0.500, 0.250, 0.125 and 0.063 mm	1
**08.10	Hellige pH-indicator for soil, measuring range pH4- pH9, (incl. 50 cc indicator fluid, for about 50 pH-tests)	1
**08.14.90	Transport case for soil quality determination kit	1
08.11	**Soil colour charts**	
08.11.01	Soil colour book, with 12 colour charts (7.5R/10R/2.5YR/5YR/7.5YR/ 10YR/2.5Y/5Y/7.5Y /5R and GLEY = two charts. Total 389 colour chips japanese version, English text)	

Art.no.	Description	Qty. in set
08.11.02	Soil colour book (Munsell) with 8 colour charts (10R/2.5YR/5YR/ 7.5YR/10YR/2.5Y/5Y and GLEY). Total 251 colour chips (American version)	
99.07	**Hammer for geologist**	
99.07.01	Hammer for geologists, with point	
99.07.02	Hammer for geologists, with blade	
99.08	**Sample flasks and boxes**	
99.08.03.02	Aluminium soil sample box with lid, Ø 51.4x22 mm, cont. 45 cc	
99.08.03.03	Aluminium soil sample box with lid, Ø 58.4x45 mm, cont. 120 cc	
99.08.03.04	Aluminium soil sample box with lid, Ø 78.4x42 mm, cont. 200 cc	
99.08.04	Sprayer, transparent polyethylene. Content 1 litre	
99.08.07	Sample bottle, brown glass, wide neck, screw cap with teflon insertion, 1000 cc, set of 6 pcs.	
99.08.09	Synthetic beaker with lid, contents 500 ml	
99.08.10	Stainless steel bucket with g width 10 cm, length 100 cm, with removable head partition (to replace sample material into auger hole)	
99.08.20	Sample bags, polyetylane, pack of 100 pcs.	