

# SOIL CLASSIFICATION

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.

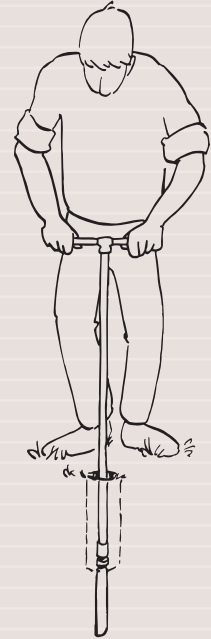
The standard set consists of:

- 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

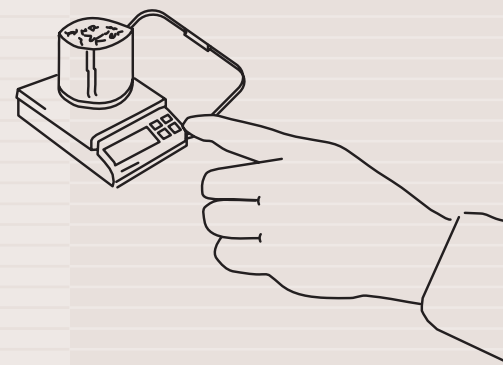


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**After a hole has been prepared using the Edelman auger, the liner sampler is used to take a virtually undisturbed soil sample.**



**The sample is weighed using the portable electronic balance.**

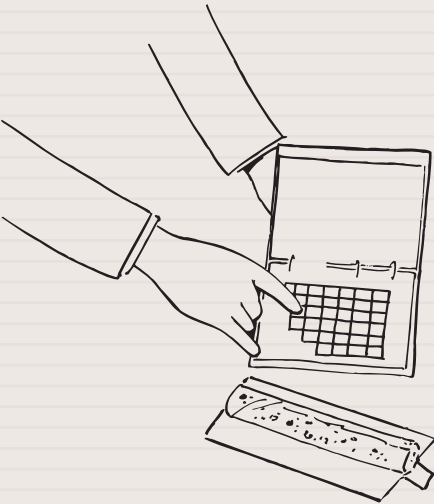


Soil sampling and classification set



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



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



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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 gardeners.

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.



Soil quality determination kit



Geologist hammers



Soil colour chart



Sample flasks and aluminium boxes