

PARTICLE SIZE DISTRIBUTION

The particle size distribution (also called grain size distribution or texture) is one of the most important characteristics of the soil. Agricultural- as well as soil scientific properties are greatly determined by the texture of a soil. The particle size distribution has an effect on many properties of the soil such as for instance the ease of tillage, the capillary conductivity of a soil, the available moisture, the permeability of a soil, compaction, etc. The coarseness of a sandy soil is indicated on a map when doing soil survey work.

Furthermore the determination of the particle size is essential for the assessment of the availability of substances for the flora and fauna, the behavior of a substance in the soil and the determination of the quality of the soil (target- and intervention values for these parameters are calculated on the basis of, among other the clay fraction).

08.05 Granular composition test set

Applying this set allows you to determine the particle size distribution of soil samples in order to be able to classify the soils on the basis of international standards.

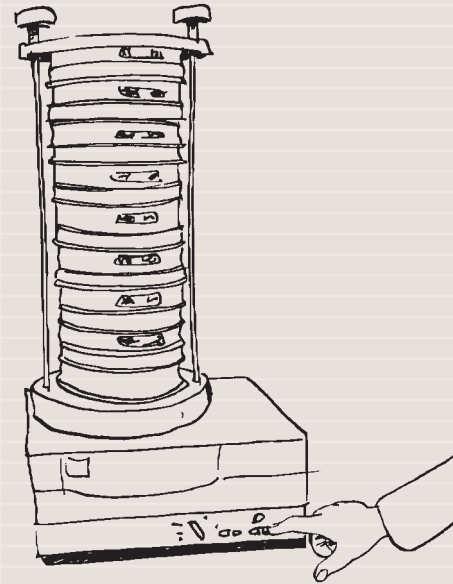
The granular composition of the representative sample obtained in this way can be determined applying an electromagnetic sieve shaker. The sieve shaker keeps the sample continuously in motion in order to obtain the best possible sieving results.

The sieve shaker and the stainless steel mesh sieves (inclusive receivers and lids) are suitable for wet as well as dry sieving.



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The sieve time can be set on the electro magnetic sieve shaker.



Granular composition test set

Manual sieving with the standard hand-sieve set.



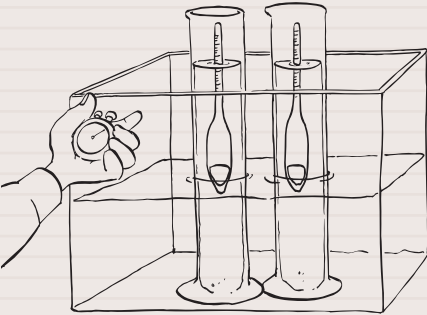


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PARTICLE SIZE DISTRIBUTION

The hydrometer is read.



08.30 Hydrometer kit, standard set

To obtain an accurate determination of the particle size distribution of the smallest fractions it is possible to apply the hydrometer method.

In this method the sample is cleaned from organic matter after which it is dried and weighed.

Next it is suspended in water and sieved.

The solution that passes through the sieve is transferred to a measuring cylinder with water. Hydrometer readings are taken after regular intervals. Sedimentation time and hydrometer readings are used to determine the grain sizes according to the Stoke's Law.

The hydrometer kit, among other items, contains: a number of hydrometers, sedimentation cylinders, a thermometer, a glass container, a heating element with thermostat and stirrer, a soil stirrer and various accessories.

08.05.04 Mini hand sieves set

The mini hand sieves set is used for the determination of the particle size distribution of small quantities of soil in the laboratory as well as in the field.

The set contains sieves, lid and receiver, brush and a storage bag.

08.04 Sand rulers

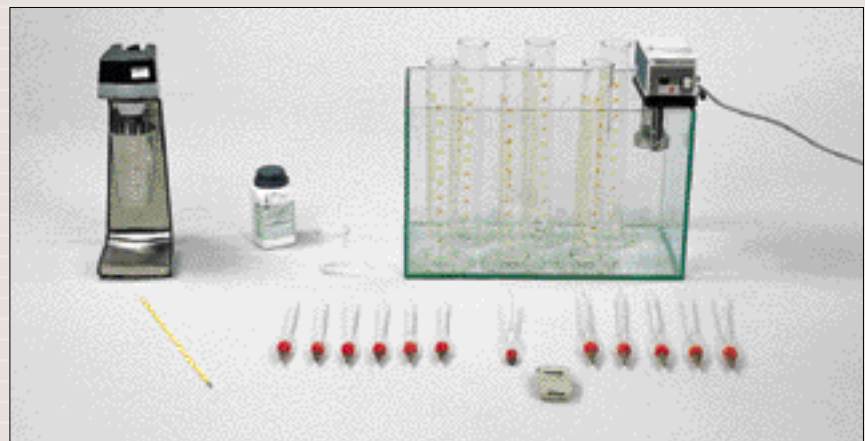
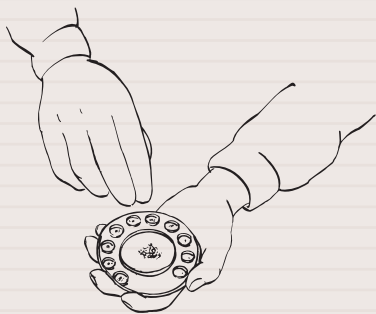
A sand ruler is a disc made of transparent material with standard (specimen) samples. It is an excellent indicative aid in determining the particle size distribution.

Of the sample to be tested a representative part is rubbed dry with the fingers in the palm of the hand.

The sample is then placed in the hollow area in the center of the ruler. The average grain size is now judged by comparing the average grain size of the sample with the specimen in the ruler.

The sand ruler is available with different fractions.

The average grain size is compared to the specimen samples.



Hydrometer kit



Mini hand sieves set



Sand ruler with ten fractions