PIPETTE EQUIPMENT

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

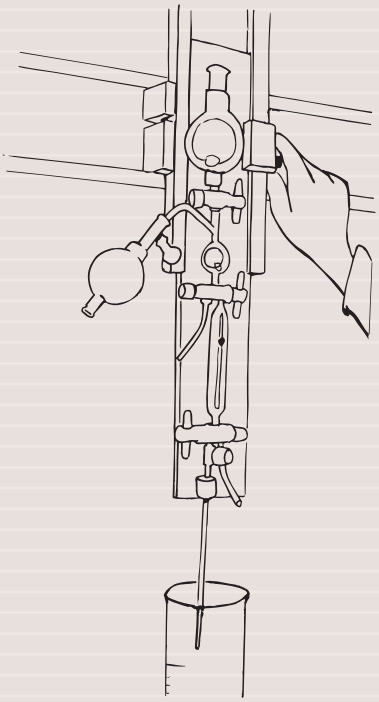
The particle-size distribution is one of the most important physical qualities of a soil. The division of soils (soil classification) is primarily based on particle-size distribution.
When accurately determining the particle size in samples, in addition to the determination using sieves, other methods will need to be applied.

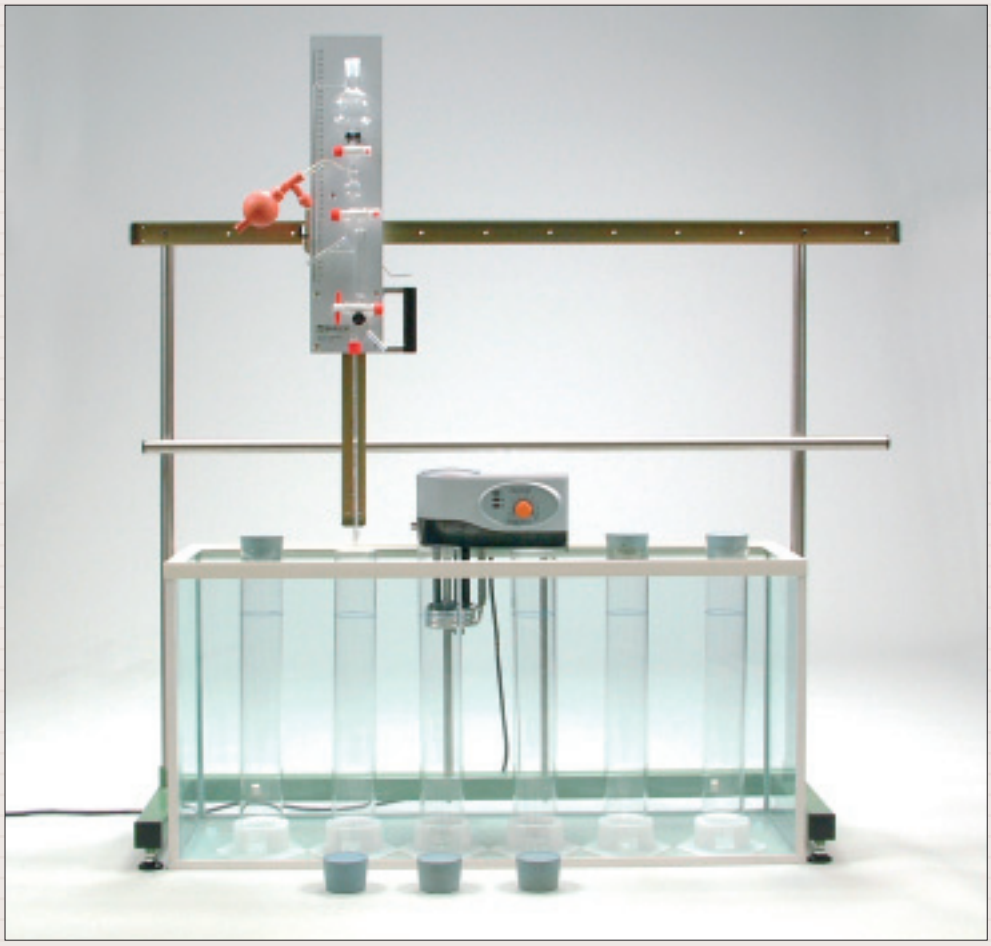
A simple method for the determination of the particle size is the pipette method.
After carbonates, organic substances and possible iron oxide have been removed (because of their binding function) the pipette method is used to determine the fractions of particles smaller then 38 µm.
The method is based on the difference in sedimentation speed between small and large soil particles. The sedimentation of the particles is the result of two opposing forces: gravity and friction resulting from movement in a fluid medium.
In the pipette method a sample is pipetted at different times and different depths of the suspension of the sample in a measuring cylinder. Time and depth are determined applying the Law of Stokes. The pipetted suspension is condensed and dried and weighing determines the mass ratio of the pipetted fraction.
Eijkelkamp Agrisearch Equipment, in cooperation with research institutes, developed two models of pipette apparatus that meet the standards.

08.16.SA Pipette apparatus, table model in accordance with NEN 5753

Using the basic set the fractions of 7 samples can be determined simultaneously.
The pipette apparatus can be placed on a laboratory table.

The pipette holder can be adjusted accurately.

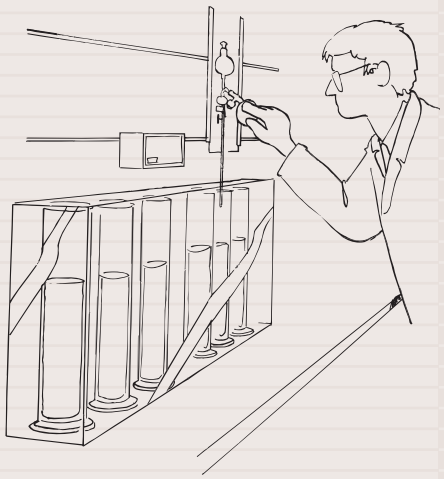




Pipette apparatus, table model

PIPETTE EQUIPMENT

A sample is pipetted.



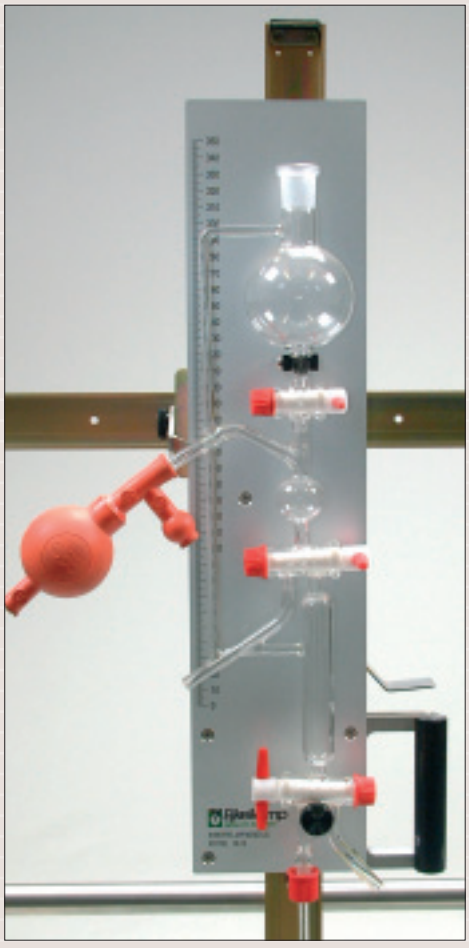
Among other items the standard set consists of: a runner with pipette holder, a table frame, a glass tank, a heating element with thermostat and stirrer, pipette upper section and pipette lower section, pipette balloon, glass sample cylinders, rubber stoppers and sodium hexametaphosphate.

08.16.SB Pipette apparatus, wall model in accordance with NEN 5753

Among other items the standard set consists of: a runner with pipette holder, a wall frame, a glass tank, a heating element with thermostat and stirrer, pipette upper section and pipette lower section, pipette balloon, glass sample cylinders, rubber stoppers and sodium hexametaphosphate.

Advantages

- The pipette apparatus meets the NEN 5753 standard and ISO/DIS 11277.
- Ergonomical working height.
- The whole is vibration free as the glass tank is independent of the heating element and the stirrer.
- Pipette holder and runner are designed with wear-resistant plastic toothed wheels.
- The apparatus has a large insert depth of 340 mm.



Pipette holder with pipette

Heating element with stirrer

Art.no.	Description	Qty. in set
Pipette equipment (P1.82)		
	The pipette apparatus is supplied in two different designs: **- A table model. The apparatus is placed on a table as an autonomous unit.** **- A wall model. The apparatus can be fixed over the table to a wall.**	
08.16.SA	**Pipette apparatus, table model, according to NEN 5753 (ISO/ DIS 11277 request for approval). Standard set for 7 samples**	
**08.16.30	Runner with pipette holder. Front panel provided with graduation in mm. Total insertion depth ca 340 mm	1
**08.16.31	Bench frame for runner with pipette holder (08.16.30)	1
**08.16.03	Glass tank, outside dimensions 94x30x45 cm. Contents about 110 l	1
**08.30.10	Heating element with thermostat and stirrer	1
**08.16.05	Pipette, upper section, for determination of lutum content according to NEN 5753 (ISO/DIS 11277 request for approval)	1
**08.16.08	Pipette, lower section, for determination of lutum content according to NEN 5753(ISO/DIS 11277 request for approval) length 485 mm.	1
**08.16.07	Pipette balloon with 3 ball valves, contents 50 ml	1
**08.30.12	Sedimentation cylinder 1000 cc, glass, with synthetic foot	7
**08.30.04	Rubber stopper for Ø 56 to 65 mm, height 45 mm	8
**08.30.06	Sodium hexameta-phosphate, 1 kg	1
08.16.SB	**Pipette apparatus, wall model, according to NEN 5753(ISO/DIS 11277 request for approval). Standard set for 7 samples**	
**08.16.30	Runner with pipette holder. Front panel provided with graduation in mm. Total insertion depth ca 340 mm	1
**08.16.32	Wall frame for runner with pipette holder (08.16.30)	1
**08.16.03	Glass tank, outside dimensions 94x30x45 cm. Contents about 110 l	1
**08.30.10	Heating element with thermostat and stirrer	1
**08.16.05	Pipette, upper section, for determination of lutum content according to NEN 5753 (ISO/DIS 11277 request for approval)	1
**08.16.08	Pipette, lower section, for determination of lutum content according to NEN 5753(ISO/DIS 11277 request for approval), length 485 mm	1

Art.no.	Description	Qty. in set
**08.16.07	Pipette balloon with 3 ball valves, contents 50 ml	1
**08.30.12	Sedimentation cylinder 1000 cc, glass, with synthetic foot	7
**08.30.04	Rubber stopper for Ø 56 to 65 mm, height 45 mm	8
**08.30.06	Sodium hexameta-phosphate, 1 kg	1
	Optional items: (For the processing of the sample, before the pipette test can be executed)	
08.05.01.05	Electromagnetic sieve shaker, to accept max. 8 sieves (50 mm height) with Ø of 200 mm 230V-50Hz. Time controlled. operation 1-99 min. Vibration height adjustable 0-3 mm with visuable control. Incl. clamping cover (200 mm) for dry sieving.	
08.05.10	Sieve set Ø 200 mm, standard set for wet and dry sieving, for electro magnetic sieve shaker (08.05.01.05)	
98.23	Soil stirrer, revolution adjustable in 10000, 14000 or 17000 rpm, 220V 50Hz., incl. beaker with content 1 liter	