

SOIL BOTTLE TEST

This test will help you to estimate the amount of sand, silt and clay that is in a soil sample.

METHOD

1. Take a bottle and fill a third of it with the soil you want to test.
2. Pour water into the bottle until it is almost full.
3. Put a lid on and shake it well for a few minutes.
4. Leave the bottle for an hour so that the soil can settle in the water.

WHAT WILL HAPPEN

The substances will settle in layers. Each layer will have a different colour and consistency.

Heavy particles (gravel, pebbles and sand) will fall quickly to the bottom of the bottle.

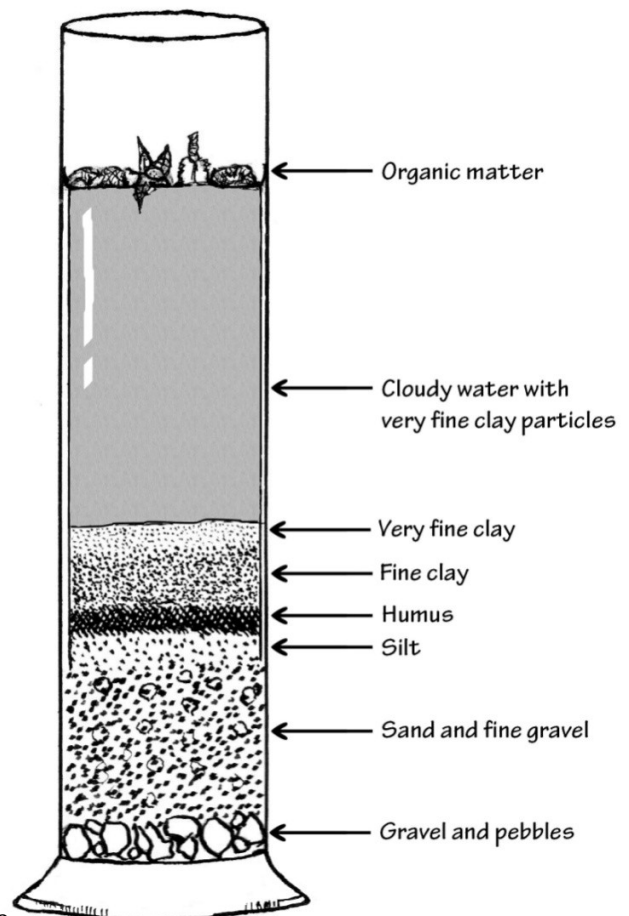
Finer substances will accumulate on top of the heavy particles (silt, humus, and then the fine and very fine clay).

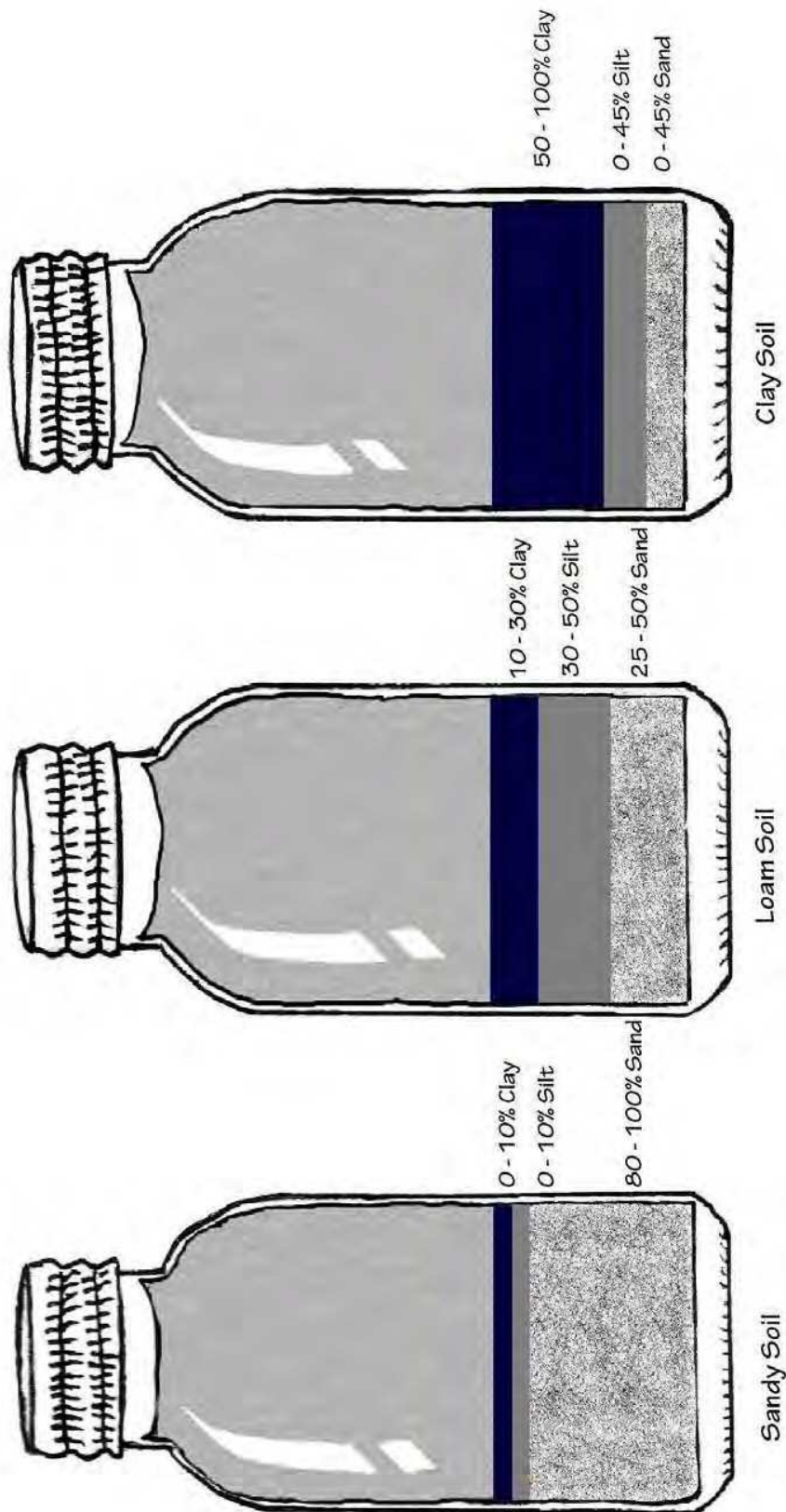
The top layer of the water will stay cloudy for a long time, because it will contain clay particles which are so small that they stay floating in the water.

Substances which are lighter than water (leaves, seeds, spores, insect and animal waste) will float on top.

IDENTIFYING THE SOIL TYPE

Once the soil has settled in the water you can use the diagram on the next page to identify the soil type. You do this by looking at the proportions of clay, silt and sand that are in the bottle.





Denison, J.A., Smulders, H., Kruger, E., Ndingi, H. & Botha, M.

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SOIL SAUSAGE TEST

This test will help you to estimate the amount of sand, silt and clay that is in a soil.

METHOD

1. Take a handful of soil, wet it and roll it into a ball between your hands.
2. Try to roll the ball into a sausage.
3. Look at the table below to identify what type of soil it is.



DESCRIPTION

Soil looks very sandy and feels rough. It cannot be rolled into a sausage.

Soil looks quite sandy and feels rough. It can be rolled into a sausage, but it cannot bend.

Soil looks half sandy and half smooth, and feels rough. It can be rolled into a sausage and can bend a little.

Soil looks mostly smooth. It feels a little sandy, quite smooth but not sticky. It can be rolled into a sausage which can bend about half way around.

Soil looks mostly smooth. It feels a little sandy, quite smooth and sticky. It can be rolled into a sausage which can bend more than half way around.

Soil looks smooth, and feels smooth and sticky. It can be rolled into a sausage which can bend into a circle.

TYPE OF SOIL

**Very sandy
(0-5% clay)**

**Sandy
(5-10% clay)**

**Sandy loam
(10-15% clay)**

**Loam or silt loam
(15-35% clay)**

**Clay loam or sandy
clay
(35-55% clay)**

**Clay
(more than 55%)**

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