

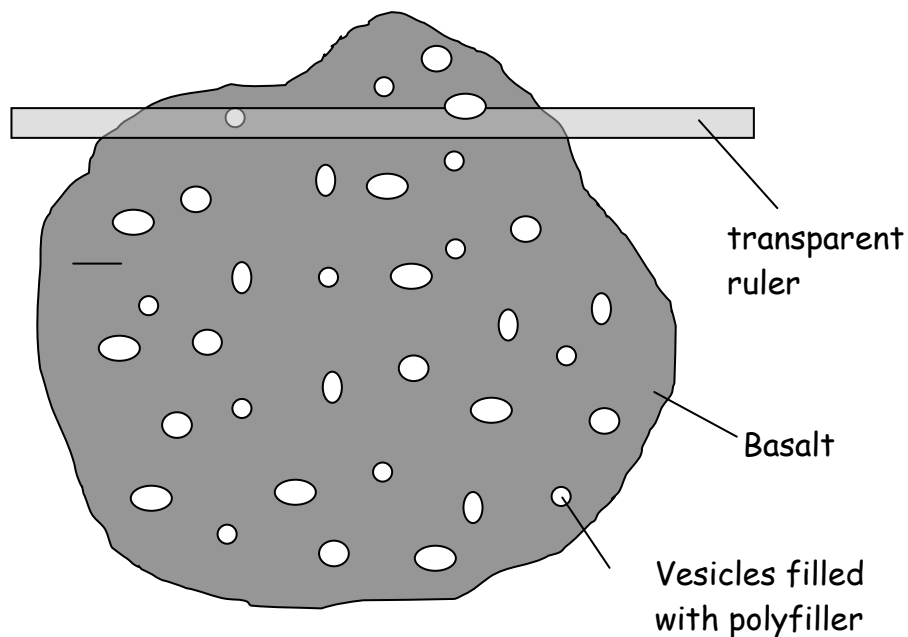
VESICULAR BASALT

Purpose

To find the percentage of vesicles and thus the porosity in a slab of vesicular basalt.

Instructions

1. Place a ruler on the photocopy and note whether it is rock or vesicle beneath the 1cm line. Repeat for every centimetre line along the ruler where it is over the rock.



2. Move the ruler down and repeat until you have 100 readings.
3. Calculate the percentage of rock and of vesicles.
4. Work out how much the magma was enlarged by the presence of the vesicles.
5. If the vesicles are large enough measure the diameter of fifty.
6. Calculate the mean size and the range.

7. Plot a bar graph of the size distribution.

Teacher's Section

Requirements

A piece of vesicular basalt with a sawn face. The size depends on the size of the vesicles. Fill in the holes with Polyfiller. Place a scale on the edge of the slab and photocopy enlarging if necessary.

Notes

At the top of a lava flow there may a gradation in the size of the vesicles and this change could then be studied.

Time

30 minutes



Photograph of a slice of vesicular basalt with the vesicles filled with Polyfiller. Enlarge to A4 size for point counting.