

Sample preparation for microscopic study consists of separation of the tests from the sediments. This process may involve several steps:

- A- Disaggregation.
- B- Washing and Sieving.
- C-Picking and Mounting.

A-Disaggregation:

The partially consolidated rocks (marls, marly limestone, and soft limestone) may be disaggregated by different methods:

- 1-Soda (Na_2CO_3) method.
- 2-Crystallisation method (Glauber salt Na_2SO_4).
- 3-Hydrogen peroxide (H_2O_2) method.
- 4-Gasoline method.

The soda method is cheap, safe and effective with partially consolidated rocks. The following steps must be performed:

- 1- Break the fresh rock into fragments about 1-10 mm in the diameter. The harder rocks break to smaller fragments.
- 2- Place the rock fragments in a beaker, cover with water and one or two spoonsful of soda.
- 3- Set the liquid to boil until the rock shows no further signs of breaking down. It is best to keep the level topped up while boiling proceeds.

The harder rocks are difficult to disaggregate so that their microfossils are often studied in thin sections.

B- Washing and Sieving:

Washing and sieving are performed by placing sieves of 200-, 100-, 80-, 60-,40-, 20-, mesh one above other (smaller mesh on the top) and adding the aggregated sample from above, with a gentle jet of water from the top, which aid passage of the particles through the sieves. In this process the material is simultaneously washed and divided into different size fractions. After that the residues are dried.

If the sieves become plugged with the sediment and overflow one can use only the finest sieve for the washing and then sieve the dried samples.

C-Picking and Mounting:

Dried residue are scanned on a picking tray under binocular stereoscopic microscope. A small portion of the sample should be spread thinly over the tray. The microfossils can be picked out with a 000 brush or needle, and removed to a franke slide for storage.