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A SIMPLE AND FAST METHOD FOR SOFT ROCK IMPREGNATION

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In order to prepare thin section of soft rocks (both sandstone and mudstone) as well as unconsolidated sediments, a variety of methods have been used to harden them without disrupting the texture. Both high pressure and vacuum techniques have been applied for impregnating resins into the pore spaces of the rocks (Catt and Robinson, 1961; Ginsberg *et al* 1966 and Conway, 1982). All these methods are time consuming, tedious and involve breaking of individual containers for recovery of the sample. Impregnation of resins in such soft samples could be done in a simpler manner. The process requires a simple list of tools and material which are:

1. Vacuum chamber (30 × 30 × 25 cm)
2. Vacuum pump
3. Beaker
4. Araldite (Epoxy) Grade 556, R.I. = 1.58.
5. Hardener
6. Ethyl methyl ketone (Thinner)
7. Grease

The vacuum chamber is made from 3 mm thick heavy plastic sheets with two openings: one leading to the vacuum pump and other used as inlet for the impregnating resin (Fig. 1). The samples are taken in 250 ml glass beakers having mildly

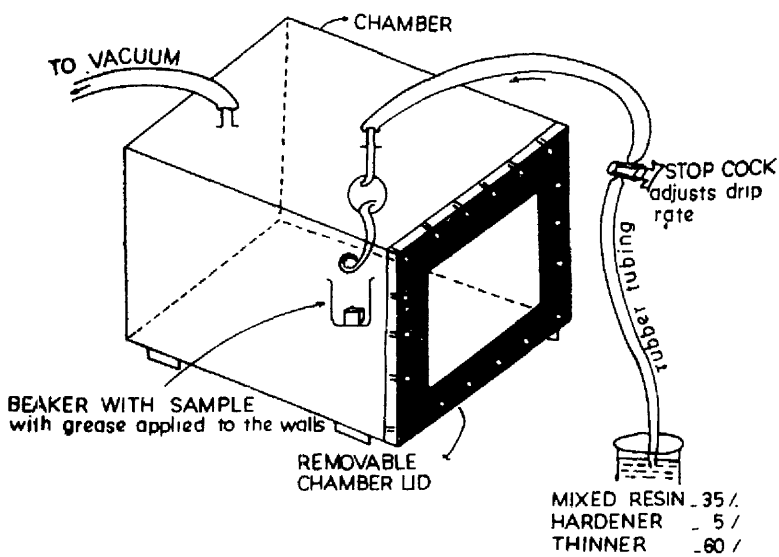

Figure 1. Sketch of apparatus fabricated for soft rock impregnation.

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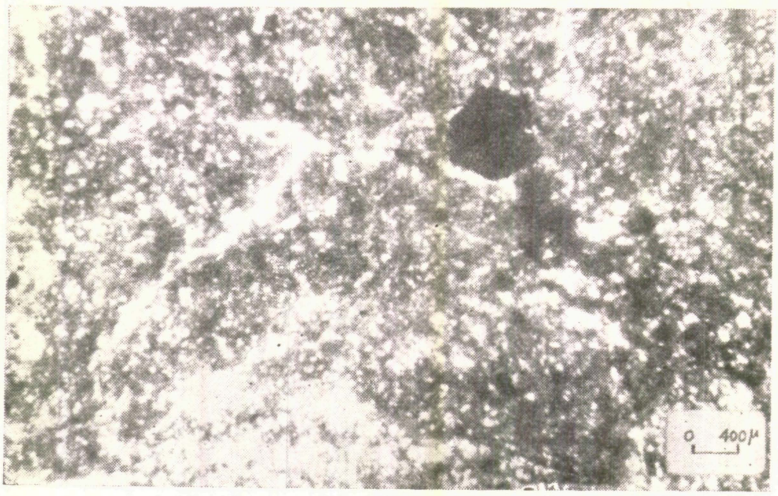

Figure 2. Photomicrograph of a thin section of loess made after epoxy impregnation. Cross nicols.

greased walls and placed in the impregnating chamber. Vacuum conditions are generated for 15 minutes. Then impregnating resin is allowed to drip slowly on the sample until it is completely submerged. The impregnating media consists of 60% thinner (Ethyl Methyl Ketone), 35% epoxy (Araldite 556) and 5% hardener. The beaker is then retrieved from the chamber and the sample is allowed to cure for 24 hours. Mild grease on the beaker walls permits easy removal of the hardened sample. Figure 2 shows a photomicrograph of a thin section of loess made after impregnation. This is the simplest and fastest method for soft rock impregnation.

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