

SHORT COMMUNICATIONS

A simple spectroscope eye-piece for testing monazite under the microscope.

A MICROMETER eye-piece may be converted into a spectroscope eye-piece by putting a suitable stop (fig. 1) in place of the micrometer disc and a liquid prism (stippled in figs. 2 and 3) over the upper lens. The

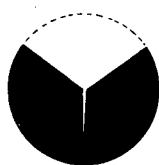


FIG. 1

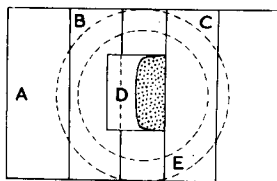


FIG. 2

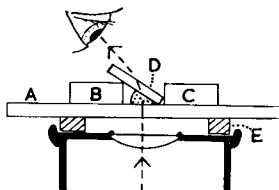


FIG. 3

stop, which may be made of Bristol board darkened with Indian ink, provides a viewing area and a tapering slit, the latter being made by a single cut with a razor blade and forced open slightly at the free end. The holder for the liquid prism is a piece of microscope slide (A in figs. 2 and 3) with two strips of glass, B and C, glued to it to support a loose piece of glass, D. A cardboard ring E, fixed to the undersurface of A, serves to keep the device in position. A few drops of some liquid with high dispersion (e.g. α -bromonaphthalene or nitrobenzene) are placed between A and D, and after use can be washed away by means of benzene.

The spectrum is seen by viewing obliquely (fig. 3). It is brighter than that given by more elaborate instruments but the red and violet are less widely separated. In testing monazite grains it is found that the absorption band in the yellow is sharply defined, particularly if the slit is carefully focused and the grain is moved to correspond to the narrow part of it.

The instrument has been successfully used in the identification of monazite in heavy residues from soils.

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