

FIELD IDENTIFICATION OF DIASPORITE

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THE recognition of diasporite in bauxite deposits¹ and in comparatively large masses in association with clay² suggests that this mineral may be more widespread than heretofore supposed. As it may possibly prove to be of commercial value, either as an ore of aluminium or for the manufacture of abrasives, there is likely to be need for a rapid and convenient method of identifying this mineral in the field. The fact that it possesses, for a light-colored mineral, the exceptionally high specific gravity of 3.4, suggests that the method often used in scientific work, that of separation by heavy liquids, may be of practical value in this connection. A heavy liquid suitable for the purpose is bromoform, which can be purchased in many drug stores, or from dealers in chemicals. This has a specific gravity of about 2.8, so that pure diasporite will readily sink in it, whereas quartz, calcite, clay, etc., having distinctly lower gravities, will float.

The rock or clay to be investigated must be dry, and should be crushed to something like 60-mesh size, and the fine dust be removed by sifting or blowing. A pinch of the granular material may then be shaken up with bromoform in a small glass vial. If diasporite is present, it will tend to settle to the bottom, altho if the grains are coated with clay, films of air may remain attached to them, and sinking be prevented. It may then be necessary to boil the liquid containing the suspended particles for a few moments, until all are thoroly wetted. Bromoform is not inflammable, so there is no danger connected with this process, but it is somewhat poisonous, especially if partially decomposed by moisture or sunlight, so should not be inhaled.

There are of course other minerals which possess high specific gravities, but most of them are recognizable by other properties. Iron and titanium oxide minerals, such as magnetite, ilmenite, rutile, etc., are all dark in color; and any light-colored minerals other than diasporite which also sink are likely to be of even greater commercial interest than it.

¹ Wysor, D. C., *Econ. Geol.*, 11, 42-50, 1916.

² See *Am. Min.*, 2 (12), 144, 1917.