NEW MINERALS

Eakleite


Name: after Prof. Arthur S. Eakle, University of California. Pronounced ak-el-ite.

PHYSICAL AND OPTICAL PROPERTIES

Color: pale pink; luster: vitreous to silky. Form: compact, tough layers of fibers. H: about 6½. Sp. Gr. 2.685-2.705. The fibers give parallel extinction, and are elongated parallel to Z. Optically +, with a small axial angle. Refractive indices: α and β = 1.583, γ = 1.593, all ± 0.001.

CHEMICAL PROPERTIES

Composition: 5CaO.5SiO₂.H₂O. It may be a calcium-pectolite. Analysis by Prof. Eakle gave: SiO₂, 50.43; Fe₂O₃, 0.98; CaO, 45.51; MgO tr., Na₂O and K₂O none, H₂O, 3.25, sum 100.17.

Fuses at about 2.5 with slight boiling to a glassy, somewhat vesicular globule: easily soluble in acid with separation of flaky silica without gelatinization.

Found in the Museum of the University of California, labeled “Wollastonite, St. Ines, Calif.”

S. G. G.

Gilpinite


The augite occurs in a nepheline-syenite; associated with brown bark-evkitie hornblende, biotite, nephelite, apatite, titanite, and ilmenite. Analysis by M. F. C. gave: SiO₂, 41.80; Al₂O₃, 9.30; Fe₂O₃, 5.44; FeO, 3.30; MgO, 10.82; CaO, 22.59; H₂O, 0.16; H₂O+ +, 1.10; TiO₂, 4.84; MnO, 0.10; sum 99.75; Sp. Gr. 3.39.

The augite is black, and fine-grained, containing abundant minute rod-like black inclusions, believed to be ilmenite, arranged in two distinct series, parallel to the vertical axis, and to the edge 001-010. The mineral exhibits striking optical properties and is compared with one from Rio de Janeiro, which it nearest approaches.

S. G. G.


Leverrierite occurs in the veins of quartz and manganese oxides at Beidell, Saguache County, Colo., in cleavage plates up to several inches across. It has a very perfect basal cleavage. It becomes plastic when wet. Optically—practically uniaxial, the optic axis emerging sensibly normal to the cleavage α = 1.558, β and γ = 1.602. A chemical analysis of the mineral by E. T. W. is given, and the loss of H₂O at different temperatures. This analysis and analyses of rectorite, leverrierite, batchelorite, kryptite, and delanouite are compared, and show some variation in the water content and more especially in the SiO₂:Al₂O₃ ratio, which varies from 1.86 in batchelorite to 3.95 in delanouite. However, optical study of the six minerals indicates that they belong to a single group, probably related to the micas. Analyses of muscovite show almost as wide a range in the SiO₂:Al₂O₃ ratio. The formula of the leverrierite group may be written Al₂O₃.2±SiO₂.2±H₂O.

S. G. G.


A study of the analyses of melilite and gehlenite with a discussion of their empirical and structural formulas.

S. G. G.


The following six South African minerals have been observed to be radioactive: monazite, aeschynite, euxenite, fergusonite, carnotite with uranium ochre, and pitchblende. In none of the minerals analyzed were U and Th found together.

EXCHANGE NOTICES.

Edgar T. Wherry, U. S. National Museum, Washington, D. C. Wanted, specimens of the following native element minerals (small fragments will answer): seleniferous tellurium ("selttellurium"); telluriferous sulfur ("tellursulfur"); monoclinic sulfur; selenium; monoclinic arsenic ("arsenolamprite"); amorphous sulfur; and amorphous selenium on lava.

Good study specimens of almost any minerals except the most excessively rare ones can be sent in exchange.