

NEW MINERALS

RACEWINITE

A. N. Winchell; Racewinite, a peculiar mineral from ore deposits in Utah. *Econ. Geol.*, 13, (8), 611-615, 1918.

NAME, derived by a rather novel method: From Racewin, the *cable address* of H. V. Winchell, who discovered the mineral.

PHYSICAL PROPERTIES

Color: brown to yellow in thin splinters, nearly black in mass; bluish green on fresh fractures. Luster: dull to bright. Form: coarsely crystalline, with no visible cleavages or crystal faces; marked conchoidal fracture. H. = 2.5, rather fragile. Sp. gr. = 1.94-1.98.

OPTICAL PROPERTIES

Mean n about 1.51, birefringence comparable with quartz, optically —, biaxial with a large optic axial angle.

CHEMICAL PROPERTIES

Analyses: 1. Philip J. Hickey, 2. Charles L. Austin.

	1.	2.
SiO ₂	43.92	43.24
Al ₂ O ₃	23.68	23.69
Fe ₂ O ₃ (+ FeO)	7.37	8.05
MgO	0.50	0.78
CaO	2.52	2.42
H ₂ O	22.04	21.80
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	100.03	99.98

A large amount of H₂O can be driven off by heating, without destroying the crystal structure, or materially altering the optical properties. H₂O is also lost by exposure to dry air and rapidly over H₂SO₄. The mineral adheres to the tongue. In water it slacks or breaks to small pieces.

A freshly broken green piece changed slowly to brownish black. In boiling HNO₃ insoluble, but the color changes to a translucent brownish yellow, probably due to extraction of iron. Unchanged and unattacked by H₂SO₄; slowly soluble in HCl. The fine powder is nearly white, but on dipping in oil of cloves the color changes to green and black, probably due to oxidation of ferrous iron present. It is suggested that the iron, like the water, may be present in solid solution.

OCCURRENCE

Obtained at the Highland Boy mine, Bingham, Utah, where it occurs in veins and irregular masses with pyrite and other ore minerals, in limestone, apparently one of the latest products of hydrothermal alteration of the limestone.

S. G. G.