

ART. V.—*Analysis of Kunzite*; by R. O. E. DAVIS.

AT the request of Professor Charles Baskerville, Director of the Chemical Laboratory, I undertook the chemical analysis of kunzite, the new and beautiful variety of spodumene, described by Kunz and himself.* The methods used were those given in Hillebrand's excellent "Principles of Rock Analysis" † and need not be re-stated here.

A selected, clean, deep lilac-colored crystal, quite free from flaws, was ground to an impalpable powder and used in the analytical work. Following are the figures obtained :

	Percent.
SiO ₂	64.05
Al ₂ O ₃	27.30
NiO	0.06
MnO	0.11
ZnO	0.44
CaO	0.80
MgO	none
K ₂ O	0.06
Na ₂ O	0.30
Li ₂ O	6.88
Loss on ignition	0.15
Total	100.15

No chromium, vanadium, titanium, iron, strontium, barium, thorium, zirconium or phosphorus was found. On account of the unique properties possessed by the mineral the other rare earths were looked for. Dr. W. J. Humphreys, of the Rouss Physical Laboratory of the University of Virginia, kindly photographed the arc spectrum obtained from the material which had been freed from silicon and lithium. He reported none of the characteristic lines of cerium and yttrium groups present. The material lost its pink color on ignition.

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* See the preceding paper; also Science, xviii, 303 and 769, 1903.

† Bulletin of the U. S. Geological Survey, No. 176.