NEW MINERAL NAMES

Yugawaralite

K. SAKURAI AND A. HAYASHI, "Yugawaralite," a new zeolite. *Sci. Repts. Yokohama National Univ.*, Sec. II, No. 1, 69–77 (1952) (in English).

The mineral occurs in net works and veins and as crystals in cavities in andesite tuffs that have been altered by waters of hot springs. The locality is 300 m. from the Yugawara hot spring, Kanagawa Prefecture, Japan. The mineral is colorless to white, luster vitreous, *b* (010) commonly iridescent. Hardness $4\frac{1}{2}$, G. = 2.201, 2.198. Monoclinic, flat crystals with *b* prominent up to 5 mm. (*a*-axis), 2 mm. (*b*-axis), 10 mm. (*c*-axis). Faces noted: *a* (100), *b* (010), *c* (001), *m* (110), *l* (120), *u* (011), *p* ($\bar{1}11$). Goniometric measurements gave $a:b:c = 0.9758:1:0.7129$, $\beta = 68°28'$. Cleavage imperfect on (010). *X*-ray oscillation photographs (MoKα) gave a_0 13.26, b_0 13.65, c_0 9.73 Å, β 68°30′. This gives $a:b:c = 0.9715:1:0.7136$. *X*-ray powder data are given and compared with those for mordenite, epistilbite, heulandite, and stilbite. The strongest lines are (Å.) 5.69, 4.71, 3.72, and 3.07.

The mineral is optically positive, α—1.495, β—1.497, γ—1.504, 2V = "56°, 68°, 76°, 89°, etc." on different specimens. Optical axial plane perpendicular to (010); extinction straight, elongation negative, absorption $r < v$.

Analyses by A. Hayashi and N. Simoda gave SiO_2 57.94, 58.44; Al_2O_3 17.65, 17.31; Fe_2O_3 0.35, 0.36; CaO 9.79, 9.75; MgO 0.86, 0.42; Na_2O 0.38, 0.36; K_2O 0.41, 0.12; H_2O^- 1.80, 2.03; H_2O^+ 10.70, 10.55; sum 99.88, 99.34%. These correspond to $Ca_4Al_7Si_{20}O_{54} \cdot 14H_2O$. The unit cell contains 1 molecule. Yugawaralite is not attacked by either cold or hot hydrochloric acid and does not gelatinize. A dehydration curve is given and compared with those given by laumontite, stilbite, heulandite, and ptilolite. About $3H_2O$ is lost to 100°, about $6H_2O$ from 100 to 400°, and about $4H_2O$ from 400 to 450°. A differential thermal analysis shows a marked endothermal peak at 540°. The name is for the locality.

MICHAEL FLEISCHER

Zinc hoegbomite

V. A. MOLEVA AND V. S. MIASNIKOV, Hoegbomite and its variety—zinc hoegbomite. *Doklady Akad. Nauk S.S.S.R.*, **83**, 733–736 (1952); from a translation kindly made by Mr. V. L. Skitsky.

Complete analyses and optical data are given for three samples of hoegbomite, but the localities are not stated. One sample was found in chlorite rock, associated with spinel, magnetite, epidote, and apatite. Analysis of the hoegbomite gave ZnO 11.12, MgO 9.07, FeO 8.41, MnO 0.80, Fe_2O_3 9.32, Cr_2O_3 none, Al_2O_3 56.67, TiO_2 5.12; sum 100.51%. This gives MgO:ZnO:FeO = 0.227:0.137:0.117. This variety is called zinc hoegbomite. The other analyses show ZnO none, 1.12%.

DISCUSSION: Should be called zincian hoegbomite.

M. F.