Iimoriite-(Y) $Y_2(SiO_4)(CO_3)$

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As masses up to 3 cm.

Physical Properties: *Cleavage:* Distinct on {011}. Hardness = 5.5–6 D(meas.) = 4.47 D(calc.) = 4.91

Optical Properties: Semitransparent. *Color:* Buff-tan, light purplish gray; in thin section, colorless. *Streak:* White. *Luster:* Vitreous to resinous.
Optical Class: Biaxial (–). $\alpha = 1.75–1.79$ $\beta = 1.82–1.83$ $\gamma = 1.83$ 2V(meas.) = 31° 2V(calc.) = 31.5°

Cell Data: *Space Group:* $P\bar{1}$. $a = 6.573(1)$ $b = 6.651(1)$ $c = 6.454(1)$ $\alpha = 116.44°$ $\beta = 92.34°$ $\gamma = 95.63°$ Z = 2

X-ray Powder Pattern: Bokan Mountain, Alaska, USA.
2.881 (100), 2.954 (80), 2.784 (40), 3.023 (36), 2.841 (35), 2.705 (29), 3.20 (27)

Chemistry:

	(1)
SiO_2	19.0
TiO_2	0.05
Y_2O_3	45.7
RE_2O_3	22.8
Fe_2O_3	0.4
CaO	0.1
MnO	0.01
H_2O^+	0.39
H_2O^-	0.10
CO_2	11.3
P_2O_5	< 0.2
Total	99.85

(1) Bokan Mountain, Alaska, USA; primarily by emission spectrographic analysis; corresponds to $(Y_{1.44}RE_{0.49}Fe^{3+}_{0.20}Ca_{0.02})_{\Sigma=2.15}Si_{1.12}O_4[(CO_3)_{0.91}(H_2O)_{0.14}]_{\Sigma=1.05}$.

Occurrence: In quartz-microcline pegmatite (Fusamata, Japan); in veins in peralkalic riebeckite-aegirine granite (Bokan Mountain, Alaska, USA).

Association: Biotite, monazite, fergusonite, uraninite, thalenite (Fusamata, Japan); quartz, albite, siderite, pyrite, fluorite, sphalerite, galena, zircon (Bokan Mountain, Alaska, USA).

Distribution: In Japan, at Fusamata and Suishoyama, Fukushima Prefecture, and Soraku, Kyoto Prefecture. On the I and L No. 4 claim, Bokan Mountain, Prince of Wales Island, Alaska, USA. From the Trimouns talc deposit, six km northeast of Luzenac, Ariège, France.

Name: For Takeo Iimori and Satoyasu Iimori (1885–?), Japanese mineralogists, and *yttrium* in the composition.

Type Material: National Science Museum, Tokyo, Japan, M16288; National Museum of Natural History, Washington, D.C., USA, 120635.

References: (1) Kato, A. and K. Nagashima (1970) In: Introduction to Japanese minerals, Geol. Surv. Japan, 39, 85–86. (2) (1973) Amer. Mineral., 58, 140 (abs. ref. 1). (3) Foord, E.E., M.H. Staatz, and N.M. Conklin (1984) New data for iimoriite. Amer. Mineral., 69, 196–199.