Iimoriite-(Y)

**Crystal Data:** Triclinic.  
**Point Group:** 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 (−).  
\[ \alpha = 1.75−1.79 \quad \beta = 1.82−1.83 \quad \gamma = 1.83 \quad 2V(meas.) = 31° \]
\[ 2V(calc.) = 31.5° \]

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

**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:**

<table>
<thead>
<tr>
<th>Compound</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{SiO}_2 )</td>
<td>19.0</td>
</tr>
<tr>
<td>( \text{TiO}_2 )</td>
<td>0.05</td>
</tr>
<tr>
<td>( \text{Y}_2\text{O}_3 )</td>
<td>45.7</td>
</tr>
<tr>
<td>( \text{RE}_2\text{O}_3 )</td>
<td>22.8</td>
</tr>
<tr>
<td>( \text{Fe}_2\text{O}_3 )</td>
<td>0.4</td>
</tr>
<tr>
<td>( \text{CaO} )</td>
<td>0.1</td>
</tr>
<tr>
<td>( \text{MnO} )</td>
<td>0.01</td>
</tr>
<tr>
<td>( \text{H}_2\text{O}^+ )</td>
<td>0.39</td>
</tr>
<tr>
<td>( \text{H}_2\text{O}^- )</td>
<td>0.10</td>
</tr>
<tr>
<td>( \text{CO}_2 )</td>
<td>11.3</td>
</tr>
<tr>
<td>( \text{P}_2\text{O}_5 )</td>
<td>&lt; 0.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>99.85</td>
</tr>
</tbody>
</table>

(1) Bokan Mountain, Alaska, USA; primarily by emission spectrographic analysis; corresponds to \( (\text{Y}_{1.44}\text{RE}_{0.49}\text{Fe}_{0.20}\text{Ca}_{0.02}\Sigma_{=2.15}\text{Si}_{1.12}\text{O}_{4.91}(\text{CO}_3)_{0.91}(\text{H}_2\text{O})_{0.14})\Sigma_{=1.05} \).

**Occurrence:** In quartz-microcline pegmatite (Fusamata, Japan); in veins in peralkaline 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:**  
(2) (1973) Amer. Mineral., 58, 140 (abs. ref. 1).  

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