Ishikawaite

(U, Fe, Y)NbO₄

Crystal Data: Orthorhombic. Point Group: n.d. As prismatic crystals, tabular on {100}, with nine forms noted, to 1 cm.


X-ray Powder Pattern: Ishikawa district, Japan. 2.972 (100), 3.103 (98), 3.73 (38), 2.615 (30), 2.476 (28), 2.819 (26), 2.819 (26), 2.819 (26), 3.60 (22)

Chemistry:

(1) Ishikawa district, Japan; average electron microprobe analysis; corresponds to \((U_{0.354}Fe_{0.262}Mn_{0.086}Y_{0.081}REE_{0.077}Th_{0.037}W_{0.022})(Nb_{0.854}Ta_{0.078}Ti_{0.017}Fe_{3+0.099})O_4\).

(2) Honeycomb Hill, USA; by electron microprobe, \(RE_2O_3 = Y_2O_3 1.05\%, La_2O_3 0.03\%, Ce_2O_3 0.41\%, Nd_2O_3 0.73\%, Sm_2O_3 0.33\%, Gd_2O_3 0.50\%, Tb_2O_3 0.21\%, Dy_2O_3 1.37\%, Er_2O_3 1.27\%, Yb_2O_3 2.87\%, Lu_2O_3 0.40\%.

Mineral Group: Samarskite group (U+Th dominant in the A site).

Occurrence: In pegmatite, and alluvium (Ishikawa district, Japan); as micro-inclusions in vitrophyre clasts in highly differentiated, rare-element rich, pyroclastic rhyolites (Honeycomb Hills, USA).

Association: Samarskite, ferrocolumbite (Ishikawa district, Japan).

Distribution: From the Ishikawa district, Fukushima Prefecture, Japan. Reported from other localities in Japan and elsewhere, but confirmation is impossible, lacking type material. From Kunar, Afghanistan. Material from the Honeycomb Hills, Juab Co., Utah, USA, for example, seems very similar but is regarded as uranoan samarskite.

Name: For the occurrence in the Ishikawa district, Japan.

Type Material: Destroyed.