Ingodite  
\( \text{Bi}_2(\text{S, Te}) \)

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Crystal Data:  Hexagonal.  \textbf{Point Group}: \( \overline{3} 2/m, 3m, \text{or } 32 \).  Massive, presumably.

\( \text{VHN} = 60.9-64.6 \) \( \text{D(meas.)} = \text{n.d.} \) \( \text{D(calc.)} = 7.88 \)

\( R_1-R_2^2: (460) 55.5-51.4, (540) 57.7-52.5, (580) 57.8-52.4, (660) 56.9-51.6 \)

Cell Data:  \textbf{Space Group}: \( P\overline{3}m, P\overline{3}m1, P\overline{3}1m, \) or \( P\overline{3}21 \).  
\( a = 4.2477(24) \) \( c = 23.075(22) \) 
\( Z = 3 \)

X-ray Powder Pattern:  Ingoda deposit, Russia or Brandy Gill, England. 
\( 3.10 \text{ (10), 2.27 (5), 1.647 (5), 2.13 (4), 1.929 (3), 1.254 (3), 1.224 (3) } \)

Chemistry:  
\begin{tabular}{lcc}
 & (1) & (2) \\
\hline
\text{Bi} & 73.3 & 72.36 \\
\text{Pb} & 0.6 & \\
\text{Te} & 19.3 & 22.09 \\
\text{Se} & 0.1 & \\
\text{S} & 6.3 & 5.55 \\
\hline
\text{Total} & 99.6 & 100.00 \\
\end{tabular}

(1) Ingoda deposit, Russia or Brandy Gill, England; by electron microprobe, corresponds to \( \text{Bi}_{2.00}\text{Pb}_{0.02}(\text{S}_{1.12}\text{Te}_{0.86}\text{Se}_{0.01})_{\Sigma=1.99} \).  (2) \( \text{Bi}_2(\text{S, Te}) \) with S:Te = 1:1.

Occurrence:  In feldspar-quartz veins and greisen (Ingoda deposit, Russia).

Association:  Bismuthinite, joséite, tetradymite (Ingoda deposit, Russia); gold, bismuthinite, baksanite, joséite-A (Tyrnyauz deposit, Russia).

Distribution:  In Russia, from the Verkhne-Ingodiinskoye (Ingoda) tin deposit, near the source of the Ingoda River, central Transbaikal [TL]; and otherwise unspecified localities in Kamchatka and the Southern Ural Mountains; in the Tyrnyauz W–Mo deposit, left bank of the Baksan River Valley, northern Caucasus Mountains. At Brandy Gill, Cumbria, England [TL]. From Băiţa (Războiany), Romania. At the Bluebird mine, Little Dragoon Mountains, Cochise Co., Arizona, USA.

Name:  For the Ingoda deposit, Russia.

Type Material:  A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, vis1803.