Inderite  \( \text{MgB}_3\text{O}_3(\text{OH})_5 \cdot 5\text{H}_2\text{O} \)

Crystal Data:  Monoclinic.  \( \text{Point Group}: 2/m \).  As long prismatic crystals with nearly square cross-section, to 30 cm, dominated by \{110\}, \{120\}, and \{001\}; may be as aggregates of minute needles; reniform nodular, massive.

Physical Properties:  Cleavage: \{010\}, perfect; \{1\overline{1}0\}, good.  Hardness = 3  \( \text{D(meas.)} = 1.80 \quad \text{D(calc.)} = 1.794 \)

Optical Properties:  Translucent to transparent.  Color:  Colorless to white; colorless in transmitted light.  Luster:  Vitreous to pearly on cleavages, dull, greasy.  \( \text{Optical Class}: \text{Biaxial (+)}. \)  Orientation: \( X \approx b; Z \land c = 9^\circ \).  Dispersion: \( r > v \), weak.  \( \alpha = 1.488 \quad \beta = 1.491 \quad \gamma = 1.505 \quad 2V(\text{meas.}) = 37^\circ - 43^\circ \)

Cell Data:  \( \text{Space Group}: P2_1/a \).  \( a = 12.0350(9) \quad b = 13.1145(13) \quad c = 6.8221(3) \)

\( \beta = 104.552(8)^\circ \)  \( Z = 4 \)

X-ray Powder Pattern:  Jenifer mine, Boron, California, USA.  (ICDD 36–423).  \( 5.052 \ (100), 3.357 \ (68), 5.72 \ (60), 6.61 \ (44), 2.662 \ (44), 2.558 \ (44), 5.84 \ (40) \)

Chemistry:

\begin{tabular}{ccc}
\text{B}_2\text{O}_3 & 37.33 & 37.32 \\
\text{MgO} & 14.41 & 14.40 \\
\text{H}_2\text{O} & 48.28 & 48.28 \\
\text{insol.} & 0.08 & \\
\hline
\text{Total} & 100.10 & 100.00
\end{tabular}

(1) Jenifer mine, California, USA.  (2) \( \text{MgB}_3\text{O}_3(\text{OH})_5 \cdot 5\text{H}_2\text{O} \).

Polymorphism & Series:  Dimorphous with kurnakovite.

Occurrence:  Relatively rare as a primary mineral in lacustrine borate deposits.

Association:  Hydroboracite (Inder deposit, Kazakhstan); kurnakovite (Sarıkaya, Turkey); borax, ulexite, orpiment, realgar (Boron, California, USA).

Distribution:  From Kyzyl Tau Mountain, Inder boron deposit, Kazakhstan.  In the USA, in California, large crystals in the Boron open pit, and from the Baker and Jenifer mines, Kramer borate deposit, Kern Co.; at the Hard Scramble claim, Furnace Creek district, Death Valley, Inyo Co.  In the Tincalayu borax deposit, Salar del Hombre Muerto, Salta Province, Argentina.  From Sarıkaya, near Kirka, Eskişehir Province, Turkey.

Name:  For Inder Lake, Kazakhstan, near which the first specimens were collected.

Type Material:  n.d.