Shabynite \( \text{Mg}_5(\text{BO}_3)(\text{Cl, OH})_2(\text{OH})_5 \cdot 4\text{H}_2\text{O} \)

Crystal Data: Monoclinic (?). Point Group: n.d. Fine fibrous, in veinlets, to 1 cm thick.

Physical Properties:  
Tenacity: Elastic. Hardness = 3  
\( D(\text{meas.}) = 2.32 \) \( D(\text{calc.}) = \text{n.d.} \)

Optical Properties:  
Semitransparent.  
Color: Snow-white.  
\( \alpha = 1.543(2) \)  
\( \beta = 1.571(3) \)  
\( \gamma = 1.577(2) \)  
\( 2V(\text{meas.}) = \text{n.d.} \)

Cell Data:  
Space Group: n.d.  
Z = n.d.

X-ray Powder Pattern: Korshunovskoye deposit, Russia.  
9.27 (10), 2.439 (8), 3.69 (7b), 5.47 (6), 2.377 (6), 4.21 (5), 1.798 (5)

Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>Formula</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO(_2)</td>
<td>0.05</td>
<td>Na(_2)O</td>
</tr>
<tr>
<td>TiO(_2)</td>
<td>0.01</td>
<td>K(_2)O</td>
</tr>
<tr>
<td>B(_2)O(_3)</td>
<td>8.08</td>
<td>F(^-)</td>
</tr>
<tr>
<td>Al(_2)O(_3)</td>
<td>0.00</td>
<td>Cl(^1)</td>
</tr>
<tr>
<td>Fe(_2)O(_3)</td>
<td>0.18</td>
<td>H(_2)O(^+)</td>
</tr>
<tr>
<td>MnO</td>
<td>0.34</td>
<td>H(_2)O(^-)</td>
</tr>
<tr>
<td>MgO</td>
<td>50.20</td>
<td>(-\text{O} = (\text{F, Cl})_2)</td>
</tr>
<tr>
<td>CaO</td>
<td>0.40</td>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Korshunovskoye deposit, Russia; \( (\text{BO}_3)^{3-} \), \( (\text{OH})^{1-} \), \( \text{H}_2\text{O} \) confirmed by IR; corresponds to \( \text{Mg}_{5.95}(\text{BO}_3)_{0.94}[\text{Cl}_{1.49}(\text{OH})_{0.79}]_{\Sigma=2.28}(\text{OH})_5 \cdot 3.90\text{H}_2\text{O} \).

Occurrence: As veinlets in a brecciated dolomitic marble in a skarn magnetite deposit.

Association: Dolomite, korshunovskite, ekaterinite, dashkovaite, iowaite, halite.

Distribution: From the Korshunovskoye iron–boron skarn deposit, Irkutsk district, Siberia, Russia.

Name: Honors Leonid Ivanovich Shabynin (1909– ), Russian geologist, specialist in skarn deposits, Institute of Geology of Ore Deposits, Petrology, Mineralogy, and Geochemistry, Moscow, Russia.

Type Material: Mining Institute, St. Petersburg, 1225/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 80672; National Museum of Natural History, Washington, D.C., USA, 160483.