Heklaite

KNaSiF₆

Crystal Data: Orthorhombic.  

**Point Group:** 2/m 2/m 2/m. As masses of intergrown micrometer-sized crystals.

Physical Properties: Cleavage: n.d.  
Fracture: n.d.  
Tenacity: n.d.  
Hardness = n.d.

D(meas.) = n.d.  
D(calc.) = 2.69

Optical Properties: Transparent.  
Color: Colorless.  
Streak: White.  
Luster: Vitreous.

Optical Class: n.d.

Cell Data: Space Group: Pnma.  
a = 9.3387(7)  
b = 5.5032(4)  
c = 9.7957(8)  
Z = 4

3.34 (100), 4.26 (56), 4.33 (53), 2.050 (52), 3.40 (49), 3.37 (47), 2.016 (29)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Na</td>
<td>11.98</td>
<td>11.26</td>
</tr>
<tr>
<td>K</td>
<td>18.29</td>
<td>19.15</td>
</tr>
<tr>
<td>Si</td>
<td>13.91</td>
<td>13.76</td>
</tr>
<tr>
<td>F</td>
<td>55.66</td>
<td>55.83</td>
</tr>
<tr>
<td>Total</td>
<td>99.84</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Hekla volcano, Iceland; average of 5 EDS analyses; corresponds to Na₁₀₆₃K₀₉₅₄Si₁₀₁₀F₅₉₇₄.  
(2) KNaSiF₆.

Occurrence: A sublimate precipitated around fumaroles emitting F-rich volcanic gases.

Association: Ralstonite, malladrite, hieratite, jakobssonite.

Distribution: From the Hekla central volcano, Eastern Volcanic Zone, South Iceland. From lava tubes in Hawaii, USA.

Name: For the *Hekla* volcano, Iceland, where the first specimens were collected.

Type Material: Icelandic Institute of Natural History, Reykjavik, Iceland (NI 15513); and Department of Mineralogy, University of Bari, Italy (9/nm-V28).