Barrydawsonite-(Y)  \( \text{Na}_{1.5}\text{CaY}_{0.5}\text{Si}_3\text{O}_9\text{H} \)

**Crystal Data:** Monoclinic.  *Point Group: 2/m.*  As prismatic crystals to 0.2 mm or as grains to 0.5 mm.

*D(meas.)* = n.d.  *D(calc.)* = 3.161

*Optical Class:* Biaxial (+).  \( a = 1.612(1) \)  \( \beta = 1.617(1) \)  \( \gamma = 1.630(1) \)  \( 2\nu(meas.) = 63(1)° \)  
*2\nu(calc.)* = 64°  *Orientation:* \( Z = b; X^\wedge c = 15° \) in obtuse \( \beta. \)  *Dispersion:* Moderate, \( r < v. \)

**Cell Data:**  *Space Group:* \( P2_1/\text{a}. \)  \( a = 15.5026(2) \)  \( b = 7.0233(1) \)  \( c = 6.9769(1) \)  \( \beta = 95.149(1)° \)  \( Z = 4 \)

**X-ray Powder Pattern:** Merlot Claim, North Red Wine Pluton, Labrador, Canada.  
2.905 (100), 3.094 (30), 1.761 (29), 3.272 (27), 2.161 (27), 1.702 (27), 1.546 (19)

**Chemistry:**

<table>
<thead>
<tr>
<th>Element</th>
<th>Na(_2)O</th>
<th>CaO</th>
<th>Gd(_2)O (_3)</th>
<th>Tb(_2)O (_3)</th>
<th>Ho(_2)O (_3)</th>
<th>Er(_2)O (_3)</th>
<th>Tm(_2)O (_3)</th>
<th>Yb(_2)O (_3)</th>
<th>Lu(_2)O (_3)</th>
<th>H(_2)O</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>12.82</td>
<td>11.14</td>
<td>16.16</td>
<td>2.92</td>
<td>1.33</td>
<td>48.46</td>
<td>11.61</td>
<td>0.03</td>
<td>0.19</td>
<td>0.05</td>
</tr>
<tr>
<td>(2)</td>
<td>13.35</td>
<td>16.16</td>
<td>2.92</td>
<td>1.33</td>
<td>48.46</td>
<td>11.61</td>
<td>0.03</td>
<td>0.19</td>
<td>0.05</td>
<td>2.43</td>
</tr>
<tr>
<td>(1)</td>
<td></td>
<td></td>
<td>0.95</td>
<td>0.24</td>
<td>1.81</td>
<td>0.41</td>
<td>1.15</td>
<td>0.76</td>
<td>0.07</td>
<td>2.59</td>
</tr>
<tr>
<td>(2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97.23</td>
<td>100.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Merlot Claim, Labrador, Canada; average of 14 electron microprobe analyses supplemented by IR spectroscopy, H\(_2\)O calculated from stoichiometry; corresponding to \( \text{Na}_{1.54}(\text{Ca}_{0.73}\text{Mn}_{0.13}\text{Fe}_{0.07})_{2-0.96} \)
(\( \text{Y}_{0.38}\text{Nd}_{0.01}\text{Sm}_{0.01}\text{Gd}_{0.02}\text{Tb}_{0.01}\text{Dy}_{0.01}\text{Ho}_{0.01}\text{Er}_{0.02}\text{Yb}_{0.01})_{2-0.51}\text{Si}_3\text{O}_9\text{H}. \)  
(2) \( \text{Na}_{1.5}\text{CaY}_{0.5}\text{Si}_3\text{O}_9\text{H}. \)

**Mineral Group:** Pyroxenoid of the pectolite-serandite group.

**Occurrence:** Poikilitic in amphibole and pyroxene in metamorphosed eudialyte-syenite.

**Association:** Y-bearing pectolite, arfvedsonite, jadeitic aegirine, steenstrupine, britholite.

**Distribution:** From the Merlot Claim, North Red Wine Pluton, Labrador, Canada.

**Name:** Honors Professor John Barry Dawson (1932-2013), a British petrologist, for his groundbreaking studies of silica-undersaturated rocks.

**Type Material:** Natural History Museum, London, England (BM-2014-50), at the Natural History Museum of Los Angeles County, Los Angeles, California, USA (64171), and the Robert B. Ferguson Museum of Mineralogy, University of Manitoba, Winnipeg, Canada (M7889).