### Lithology

<table>
<thead>
<tr>
<th>Area</th>
<th>Formation</th>
<th>Iwaki Fm.</th>
<th>Abukuma granite</th>
</tr>
</thead>
<tbody>
<tr>
<td>A, C, D</td>
<td>very fine, fine-grained sandstone</td>
<td>medium, fine-grained sandstone</td>
<td>alternation of sand and mud</td>
</tr>
</tbody>
</table>

### Major element compositions (%)

<table>
<thead>
<tr>
<th>Element</th>
<th>Iwaki Fm.</th>
<th>Abukuma granite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Na₂O</td>
<td>2.88</td>
<td>3.67</td>
</tr>
<tr>
<td>MgO</td>
<td>2.68</td>
<td>1.79</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>14.58</td>
<td>16.35</td>
</tr>
<tr>
<td>SiO₂</td>
<td>65.87</td>
<td>62.63</td>
</tr>
<tr>
<td>K₂O</td>
<td>3.55</td>
<td>4.51</td>
</tr>
<tr>
<td>CaO</td>
<td>3.52</td>
<td>4.51</td>
</tr>
<tr>
<td>TiO₂</td>
<td>0.46</td>
<td>0.71</td>
</tr>
<tr>
<td>MnO</td>
<td>0.09</td>
<td>0.09</td>
</tr>
<tr>
<td>FeO</td>
<td>3.50</td>
<td>3.08</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>3.70</td>
<td>3.48</td>
</tr>
<tr>
<td>P₂O₅</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>LOI*</td>
<td>-0.01</td>
<td>0.11</td>
</tr>
</tbody>
</table>

### Trace element compositions (ppm)

<table>
<thead>
<tr>
<th>Element</th>
<th>Iwaki Fm.</th>
<th>Abukuma granite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Li</td>
<td>36</td>
<td>39</td>
</tr>
<tr>
<td>Be</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>15.4</td>
<td>20.6</td>
</tr>
<tr>
<td>Sc</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>V</td>
<td>71</td>
<td>62</td>
</tr>
<tr>
<td>Cr</td>
<td>30</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Co</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Ni</td>
<td>&lt;20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Cu</td>
<td>&lt;10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Zn</td>
<td>50</td>
<td>90</td>
</tr>
<tr>
<td>Ga</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>Ge</td>
<td>1.7</td>
<td>1.7</td>
</tr>
<tr>
<td>As</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Rb</td>
<td>104</td>
<td>53</td>
</tr>
<tr>
<td>Sr</td>
<td>218</td>
<td>478</td>
</tr>
<tr>
<td>Y</td>
<td>11.8</td>
<td>12.8</td>
</tr>
<tr>
<td>Zr</td>
<td>103</td>
<td>118</td>
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<tr>
<td>Nb</td>
<td>7.4</td>
<td>7.4</td>
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<tr>
<td>Mo</td>
<td>&lt;2</td>
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<tr>
<td>Ag</td>
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<td>&lt;0.5</td>
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<tr>
<td>In</td>
<td>&lt;0.1</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Sn</td>
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<td>1</td>
</tr>
<tr>
<td>Sb</td>
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<td>0.3</td>
</tr>
<tr>
<td>Cs</td>
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<td>4.3</td>
</tr>
<tr>
<td>Ba</td>
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<td>469</td>
</tr>
<tr>
<td>La</td>
<td>20.2</td>
<td>25.7</td>
</tr>
<tr>
<td>Ce</td>
<td>37.8</td>
<td>49.3</td>
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<tr>
<td>Pr</td>
<td>3.71</td>
<td>4.92</td>
</tr>
<tr>
<td>Nd</td>
<td>12.4</td>
<td>17.2</td>
</tr>
<tr>
<td>Sm</td>
<td>2.41</td>
<td>2.88</td>
</tr>
<tr>
<td>Eu</td>
<td>0.669</td>
<td>0.937</td>
</tr>
<tr>
<td>Gd</td>
<td>2.26</td>
<td>2.15</td>
</tr>
<tr>
<td>Tb</td>
<td>0.36</td>
<td>0.29</td>
</tr>
<tr>
<td>Dy</td>
<td>2.05</td>
<td>1.37</td>
</tr>
<tr>
<td>Ho</td>
<td>0.39</td>
<td>0.25</td>
</tr>
<tr>
<td>Er</td>
<td>1.17</td>
<td>0.64</td>
</tr>
<tr>
<td>Tm</td>
<td>0.186</td>
<td>0.094</td>
</tr>
<tr>
<td>Yb</td>
<td>1.31</td>
<td>0.60</td>
</tr>
<tr>
<td>Lu</td>
<td>0.222</td>
<td>0.101</td>
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<tr>
<td>Hf</td>
<td>3.0</td>
<td>2.9</td>
</tr>
<tr>
<td>Ta</td>
<td>1.09</td>
<td>0.58</td>
</tr>
<tr>
<td>W</td>
<td>1.8</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Ti</td>
<td>0.40</td>
<td>0.29</td>
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<tr>
<td>P</td>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>Bi</td>
<td>&lt;0.1</td>
<td>0.1</td>
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<tr>
<td>Th</td>
<td>11.5</td>
<td>9.19</td>
</tr>
<tr>
<td>U</td>
<td>4.82</td>
<td>2.15</td>
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</tbody>
</table>

Loss on ignition