**GLY 4310C LAB 3  CLASS:SILICATES**

**Subclass:Tectosilicates**

**Silica Group - Crystalline and Amorphous**

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>H</th>
<th>G</th>
<th>Color</th>
<th>Streak Color</th>
<th>Cleavage, Fracture, or Parting</th>
<th>Luster</th>
<th>Other Properties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUARTZ, VAR. ROCK CRYSTAL</td>
<td>7</td>
<td>2.7</td>
<td>clear/none</td>
<td>conchoidal fracture</td>
<td>vitreous</td>
<td>transparent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. ROSE</td>
<td>7</td>
<td>2.7</td>
<td>pink/none</td>
<td>subconchoidal fracture</td>
<td>vitreous</td>
<td>translucent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. SMOKY</td>
<td>7</td>
<td>2.7</td>
<td>gray-brown/none</td>
<td>even to subconchoidal fracture</td>
<td>vitreous</td>
<td>translucent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. AMETHYST</td>
<td>7</td>
<td>2.7</td>
<td>lilac/none</td>
<td>poor conchoidal fracture</td>
<td>vitreous</td>
<td>transparent to translucent</td>
<td>parallel striations on crystal faces</td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. CITRINE</td>
<td>7</td>
<td>2.7</td>
<td>golden brown/none</td>
<td>even fracture</td>
<td>vitreous</td>
<td>translucent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. MILKY</td>
<td>7</td>
<td>2.7</td>
<td>milky/none</td>
<td>even to subconchoidal fracture</td>
<td>vitreous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. CHRYSOPRASE</td>
<td>7</td>
<td>2.7</td>
<td>green with blue streaks/none</td>
<td>even fracture</td>
<td>dull</td>
<td>translucent on thin edges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRISTOBALITE</td>
<td>4.5</td>
<td>nd</td>
<td>gray/white</td>
<td>uneven fracture</td>
<td>dull</td>
<td>in obsidian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OPAL</td>
<td>6.5</td>
<td>2.3</td>
<td>yellow-white/none</td>
<td>conchoidal fracture</td>
<td>resinous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIATOMACEOUS EARTH</td>
<td>&lt;1.0</td>
<td>&lt;2.0</td>
<td>white/white</td>
<td>uneven fracture</td>
<td>dull</td>
<td>absorbs liquid</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### GLY 4310C LAB 3  CLASS: SILICATES

#### Subclass: Tectosilicates

**Silica - cryptocrystalline**

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>H</th>
<th>G</th>
<th>Color Streak Color</th>
<th>Cleavage, Fracture, or Parting</th>
<th>Luster</th>
<th>Other Properties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUARTZ, VAR. CHALCEDONY</td>
<td>7.0</td>
<td>2.7</td>
<td>white to gray-black bands/none</td>
<td>conchoidal fracture</td>
<td>waxy</td>
<td>SW-green</td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. JASPER</td>
<td>7.0</td>
<td>2.7</td>
<td>brick red, mustard, or black/none</td>
<td>conchoidal fracture</td>
<td>greasy to dull</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. FLINT</td>
<td>7.0</td>
<td>2.7</td>
<td>tan-gray to dark-gray/none</td>
<td>conchoidal fracture</td>
<td>dull</td>
<td>LW-pale yellow</td>
<td></td>
</tr>
<tr>
<td>QUARTZ, VAR. CHERT</td>
<td>7.0</td>
<td>2.9</td>
<td>milky to gray/none</td>
<td>conchoidal fracture</td>
<td>dull</td>
<td></td>
<td>edges are very sharp</td>
</tr>
<tr>
<td>QUARTZ, VAR. NOVACULITE</td>
<td>(7.0)</td>
<td>2.7</td>
<td>tan/(none)</td>
<td>conchoidal fracture</td>
<td>waxy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Zeolite Group

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>H</th>
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<th>Luster</th>
<th>Other Properties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>STILBITE</td>
<td>3.5</td>
<td>2.0</td>
<td>milky-pink, orange/white</td>
<td>subconchoidal fracture</td>
<td>pearly</td>
<td></td>
<td>globular to reticulated habit</td>
</tr>
<tr>
<td>NATROLITE</td>
<td>3.5</td>
<td>2.4</td>
<td>white/white</td>
<td>subconchoidal fracture</td>
<td>silky</td>
<td></td>
<td>radiating habit</td>
</tr>
</tbody>
</table>
## Class: Silicates
### Subclass: Tectosilicates
#### Feldspar Group

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>H</th>
<th>G</th>
<th>Color</th>
<th>Cleavage, Fracture, or Parting</th>
<th>Luster</th>
<th>Other Properties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MICROCLINE</td>
<td>6</td>
<td>2.4</td>
<td>mottled orange and white/white</td>
<td>good 2-dir @ 90°</td>
<td>vitreous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MICROCLINE, VAR. AMAZONITE</td>
<td>5.5</td>
<td>2.5</td>
<td>turquoise/white</td>
<td>good 2-dir @ 90°</td>
<td>vitreous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORTHOCLASE</td>
<td>6</td>
<td>2.6</td>
<td>tan/white</td>
<td>2-dir @ 90° not always visible</td>
<td>vitreous dull</td>
<td>No twin striations</td>
<td>often formless in rocks; may show distinct crystal shape (see fig. 13.131, p. 540)</td>
</tr>
<tr>
<td>ANORTHOCLASE</td>
<td>5.5</td>
<td>3</td>
<td>blue/black/white</td>
<td>good 2-dir near 90°</td>
<td>vitreous</td>
<td>play of colors</td>
<td></td>
</tr>
<tr>
<td>ALBITE</td>
<td>5.5</td>
<td>2.6</td>
<td>milk to pale green/white</td>
<td>good 2-dir, $\neq$ 90°</td>
<td>vitreous</td>
<td>twinning striations visible on cleavage planes</td>
<td></td>
</tr>
<tr>
<td>OLIGOCLASE</td>
<td>5.5</td>
<td>2.9</td>
<td>milk to pale green/white</td>
<td>good 2-dir, $\neq$ 90°</td>
<td>vitreous</td>
<td>twinning striations visible on cleavage planes</td>
<td></td>
</tr>
<tr>
<td>LABRADORITE</td>
<td>5.5</td>
<td>2.9</td>
<td>gray-black, blue/white</td>
<td>2-dir near 90°</td>
<td>vitreous</td>
<td>play of colors</td>
<td>twinning striations visible on cleavage planes</td>
</tr>
<tr>
<td>BYTOWNITE</td>
<td>-5.5</td>
<td>2.7</td>
<td>clear to milky, pink/(white)</td>
<td>good 2-dir, near 90°</td>
<td>vitreous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ANORTHITE</td>
<td>-5.5</td>
<td>nd</td>
<td>light green to jade</td>
<td>good 2-dir, near 90°</td>
<td>dull with</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>vitreous flecks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DANBURITE</td>
<td>5.5</td>
<td>2</td>
<td>clear/white</td>
<td>conchoidal fracture</td>
<td>vitreous</td>
<td>transparent</td>
<td>twinning striations</td>
</tr>
</tbody>
</table>
### GLY 4310C LAB 3  CLASS:SILICATES

**Subclass:Tectosilicates**  
**Feldspathoid Group**

<table>
<thead>
<tr>
<th>Mineral Name</th>
<th>H</th>
<th>G</th>
<th>Color/ Streak Color</th>
<th>Cleavage, Fracture, or Parting</th>
<th>Luster</th>
<th>Other Properties</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEUCITE</td>
<td>4.5</td>
<td>2.9</td>
<td>white to tan/white</td>
<td>conchoidal fracture</td>
<td>Dull to vitreous</td>
<td></td>
<td>trapezohedral crystals</td>
</tr>
<tr>
<td>NEPHELINE</td>
<td>5.0</td>
<td>2.6</td>
<td>gray to pink/white</td>
<td>poor 1-dir/subconchoidal fracture</td>
<td>greasy</td>
<td></td>
<td>may associate with sodalite</td>
</tr>
<tr>
<td>SODALITE</td>
<td>5.5</td>
<td>2.4</td>
<td>royal to dark blue/white</td>
<td>subconchoidal to uneven fracture</td>
<td>vitreous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PETALITE</td>
<td>5.0</td>
<td>3.5</td>
<td>white/white</td>
<td>uneven fracture</td>
<td>dull to vitreous</td>
<td></td>
<td>associated with muscovite and lepidolite</td>
</tr>
<tr>
<td>ANALCIME</td>
<td>3.5</td>
<td>2.3</td>
<td>black, white/tan, white</td>
<td>jagged fracture</td>
<td>vitreous to dull</td>
<td></td>
<td>bladed crystals reticulated habit; may be trapezohedral</td>
</tr>
<tr>
<td>SCAPOLITE</td>
<td>4.5</td>
<td>2.6</td>
<td>yellow-brown/white</td>
<td>good 2-dir $\neq 90^\circ$</td>
<td>silky</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>