

## Feldspathoids

Identification:

Nepheline-  $\text{Na}_3\text{K}(\text{Al}_4\text{Si}_4\text{O}_{16})$  –

Hand Sample: Usually found as anhedral masses in plutonic rocks. Crystals have a subvitreous to greasy luster and are usually white or grey. Can be confused with quartz but is softer, displays weak cleavage, and has a duller luster.

Thin Section: Plane Light: Low positive relief and colorless. Crossed Polars: Uniaxial (-), Low interference colors, often confused with quartz.

Occurrence: Common in alkali-rich, silica undersaturated rocks. Often associated with K-spar, Na-rich plag, biotite, and sodic and sodic-calcic amphiboles and pyroxenes.

Sodalite-  $\text{Na}_8(\text{Al}_6\text{Si}_6\text{O}_{24}) \text{C}_{12}$  –

Hand Sample: Sodalite displays poor cleavage with uneven to conchoidal fracture. It has a vitreous luster (again I think this is a catch-all) and a distinctive blue color. Sodalite can also be grey, colorless, white, yellow, or green.

Thin Section: Plane Light: Moderately negative relief, colorless to pale blue. Crossed Polars: Isotropic.

Occurrence: Also found in alkali-rich, silica-undersaturated rocks, usually in association with other feldspathoids. (Lapis Lazuli is derived from a variety of sodalite called lazurite).

Leucite-  $\text{KAlSi}_2\text{O}_6$  –

Hand Sample: White or grey in color with poor cleavage, usually displays conchoidal fracture. Vitreous luster.

Thin Section: Plane Light: Low negative relief and colorless. Crossed Polars: Uniaxial (-), nearly isotropic. Low first order grey interference colors.

Occurrence: An uncommon mineral usually only found in K rich volcanic rocks and associated shallow level intrusives. Leucite weathers readily and is hardly ever found in sediments.