

GY303 Igneous & Metamorphic Petrology Lab

Phaneritic Intermediate to Mafic
Igneous Rocks Identification

Intermediate to Mafic Minerals

- Ca-Plagioclase: same as Na-Plag but increasing anorthite (Ca) content changes color to dark gray or black. 2 directions of cleavage. Prismatic grains. Striations on (010) faces.
- Orthopyroxene: equidimensional “squareish” dark green, black, or reddish-pink grains with orthorhombic symmetry (ex. Enstatite). 2 directions of cleavage at approx. 90 degrees.
- Clinopyroxene: prismatic green to black monoclinic grains (ex. Diopside). 2 directions of cleavage at approx. 90 degrees.
- Olivine: light to dark olive green euhedral grains that are equidimensional. Conchoidal fractures common.

Intermediate to Mafic Minerals cont.

- Hornblende: dark green to black amphibole with 2 directions of cleavage at 120 and 60 degrees.
- Accessories: spinel, magnetite, pyrite, calcite, rutile.







