

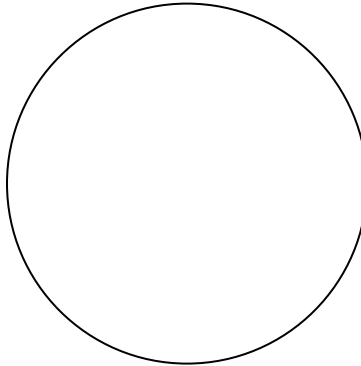
LAB 6
VOLCANIC INTERMEDIATE ROCKS

1. Study the handsample and thin section for rock 1) **103/c4-13**.
 - a) Provide a handsample description.

 - b) Give this rock a field name.

 - c) This thin section contains examples of zoned hornblende with reaction rims. How do you know that it's hornblende?

 - d) Provide an illustration of a hornblende phenocryst exhibiting these textures.

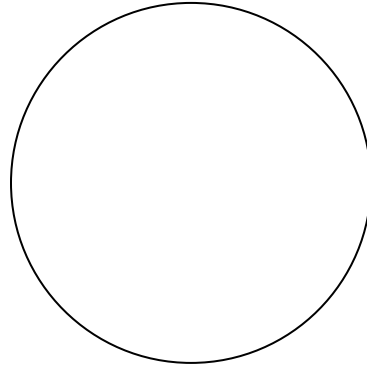


- e) What could cause zoning?

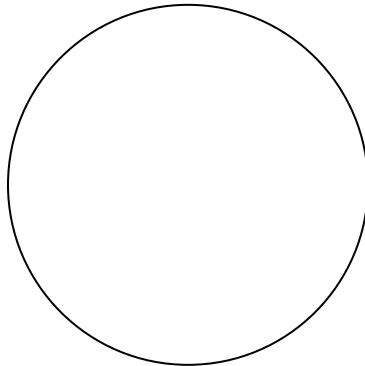
 - f) What could cause the reaction rim?

2. Study the handsample and thin section for rock 2) **L-95-3**.
 - a) This rock contains the minerals nepheline and sanidine (K-feldspar). Make sure you can identify both nepheline and sanidine in thin section by summarizing the optical characteristics of each mineral below.

3. Study the handsample and thin section for rock 3) **214/s-324d**.
- This sample exhibits magma mixing. Find an example of this in the thin section and provide an illustration.



- Within the groundmass, plagioclase laths appear aligned. This is an example of what kind of texture?
4. Study the handsample and thin section for rock 4) **214/s-265a**.
- Give this rock a field name.
 - The plagioclase phenocrysts in this rock contain zones of disequilibrium called sieve texture. Provide an illustration containing three plagioclase phenocrysts which exhibit sieve texture and label zones of equilibrium and disequilibrium respectively.



- Are the plagioclase phenocrysts zoned?
- What process would produce normal, reverse, and oscillatory zoning in the same rock?