

Review of Extrusive Igneous Rocks

The following homework is based on the lab lectures for labs 4 and 5. The PowerPoint versions are available on the web pages.

1. MORB stands for _____.

2-3. Basalts displaying a “pillow” structure are believed to have formed in one of two ways.

These are:

2. _____

3. _____

4-5. In the terminology used in the United States, the major minerals of diabase are

4) _____ and 5) _____.

6. Diabasic texture is (name and describe): _____

7-9 The major minerals of andesite are:

7) major felsic mineral (name and variety) _____

8) most common mafic mineral _____

9) other possible mafic minerals _____ and _____.

10. What is the major difference between dacite mineralogy and andesite mineralogy?

11-12 A lithic fragment is 11) _____, while a vitric fragment is

12) _____.

13-14 Compare bombs and blocks.

13) (bomb) _____

14) (block) _____

15. The names of extrusive rocks, when based on phenocrysts, should be preceded by the prefix _____.

16. A _____ is an individual particle ejected during a volcanic eruption, and is usually classified according to size.

17-19 Welded tuff is siliceous tuff indurated by the welding together of glass particles under the combined action of three agents, which are:

17) _____

18) _____, and

19) _____

20. Rhyolite grades into _____ as quartz content decreases.

21-22 Typical alkali feldspars phenocrysts in rhyolite are:

21) _____ or

22) _____

23. What is the $P/(A+P)$ range for latite? _____

24-26. Trachyte mineralogy:

24) Major type of feldspar _____

25) Compositional range of plagioclase: _____

26) Most common mafic: _____

27-29. What are the water contents of the following rocks?

27) Obsidian _____

28) Pearlite _____

29) Pitchstone _____

30. The chemical composition of both pumice and vitrophyre is like that of which extrusive rock? _____