

Silica.....	14.73
Alumina.....	7.17
Peroxide of iron.....	14.87
Lime.....	4.47
Magnesia.....	2.03
Water.....	3.09

46.36

In the undecomposed residue light red and dark coloured particles are discernible. On digesting it with hydrochloric acid and subsequently with a weak solution of potash, it sustains a further loss of 10.6 per cent., which consists of

Silica	3.48
Alumina.....	3.03
Peroxide of iron.....	1.98
Lime.....	1.76
Magnesia35

The undecomposed residue was still found to consist of a light red and a dark coloured constituent. The latter was the heavier, and an approximate separation was accomplished by washing. The dark coloured particles, which could not however be freed wholly from the light coloured felspathic constituent, fused readily to a dark brown glass. To judge from its gravity and fusibility it would not appear unreasonable to regard it as either pyroxene or hornblende. In quantity, however, it did not exceed one-eighth of the felspar. The latter fused easily before the blow-pipe to a colourless glass, tinging the flame strongly yellow. It would therefore seem to be of the nature of labradorite, although it is only slightly decomposed by hydrochloric acid. Since, according to Girard, neither labradorite, nor pyroxene nor magnetite are decomposable by nitric acid, it may reasonably be concluded that the constituents removed by the nitric acid are those of the chloritic mineral. On treating the rock, previous to ignition, with hydrochloric acid, much of the iron is removed as protoxide. Although some peroxide is also possibly present, I have calculated the whole of the iron as protoxide, and have moreover added the difference of weight between it and the iron as peroxide, to the loss sustained by ignition, and put it down as water. In this way the composition of the chloritic mineral calculated to 100 parts, would be