

or intimate mixture of orthoclase and quartz, rendered porphyritic by the presence of grains or crystals of orthoclase, of quartz, or of both of these minerals together. The occurrence of this rock at Grenville, where it forms dykes in the syenite of that region, has just been noticed. The fine-grained petrosilicious base of this rock varies in color from dark green to various shades of red, purple, and black; these differences probably depending upon the degree of oxydation of the contained iron. Throughout this paste are disseminated well-defined crystals of a rose-red or flesh-red feldspar apparently orthoclase, sometimes very abundant; and less frequently small grains of nearly colorless translucent quartz. An analysis was made of a characteristic variety of the rock, the base of which was greenish-black, jasper-like, conchoidal in fracture, and feebly translucent on the edges, with a somewhat waxy lustre. The hardness was nearly equal to that of quartz, and the specific gravity 2.62. A few distinct crystals of red orthoclase, and some grains of quartz, were present. The base, freed as much as possible from these, gave as follows:

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Silica.....	72.20
Alumina.....	12.50
Peroxyd of iron.....	3.70
Lime.....	.90
Potash.....	3.88
Soda.....	5.30
Volatile.....	.60
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	99.08

The oxygen ratio of the alkalies and alumina is 2.02: 5.84, or nearly 1:3. The alumina requires 43.80 parts of silica to form with the alkalies 65.48 parts of a feldspar having the ratios 1:3:12, which are those of orthoclase and albite. There will then remain 28.4 parts of silica. This, with the exception of a small amount which is probably united with the oxyd of iron and lime, may be regarded as uncombined. The porphyries of this region receive a high polish, and are sometimes very beautiful.

**SYENITE.**—The syenite of this region consists of orthoclase, usually flesh-red in color, and grayish vitreous quartz, with a small portion of blackish-green hornblende, which is sometimes almost or altogether wanting, and is occasionally accompanied with a little mica. The orthoclase is often nearly compact, but more gen-