

- 1 Diabase from summit of Mt Marcy, Essex co. Analyst Leeds. N. Y. State Mus. 30th An. Rep't, p.102.
- 2 Diabase from shore of Upper Chateaugay lake, Clinton co. Analyst Eakle. Am. Geol. July 1893, p.35.
- 3 Diabase from Palmer hill, Black Brook township, Clinton co. Analyst Kemp. U. S. Geol. Sur. Bul. 107, p.26.
- 4 Olivin diabase, Belmont township, Franklin co., dike 13. Analyst Morley. 18th An. Rep't N. Y. State Geol. p.120, and 20th An. Rep't, p.r79. Very fresh, olivin not perceptibly serpentinized.
- 5 Olivin diabase from shore of Upper Chateaugay lake, Clinton co. Analyst Eakle. *Op. cit.* p.35.
- 6 Very basic syenite porphyry, Rand hill, Clinton co. Analyst Morley. Geol. Soc. Am. Bul. 9:248.
- 7 Normal syenite porphyry, Rand hill, Clinton co. Analyst Morley. *Op. cit.* p.248, and 20th An. Rep't N. Y. State Geol. p.r79.
- 8 Syenite porphyry from shore of Upper Chateaugay lake. Analyst Eakle. *Op. cit.* p.34.
- 9 Acid syenite porphyry, Rand hill, Clinton co. Analyst Morley. *Op. cit.* p.248 and r79.

The analyses quoted above are all that are known to the writer of these rocks. Many of them are quite old but are valuable for comparative purposes, though not going into the minutiae of modern requirements. The diabases show considerable variation, as would be expected, yet on the whole harmonize well with one another. No. 4 is the only tolerably complete analysis, and at the same time seems to represent about a mean between the extreme types and will hence serve as a fair representative of the average diabase of the district. It consists essentially of labradorite and augite in about equal amounts, with considerable olivin and magnetite and a rather unusual amount of biotite, much of which is clearly primary. Apatite is about the only other mineral. The magnetite is only slightly titaniferous, if at all, since the very small amount of titanium present may likely all be in the biotite. The augite is in two generations, but the feldspar not. The structure is only poorly ophitic.

No. 1 is the rock long ago analyzed by Leeds, the analysis not being accompanied by any description however. Augite is the only mineral specifically stated to be present.

No. 2, according to Eakle, appears to lack olivin, and the augite is almost wholly altered to chlorite and epidote. No. 5, according to the same author, is an ordinary olivin diabase, though he makes no mention of augite, and it is only inferentially supposed to be present. It is noteworthy in being exceptionally acid for