

IV. 0.4112 gm. of substance gave 0.0242 gm. of loss on ignition, and fused with the carbonates of soda and potash gave 0.2277 gm. of silica, 0.0986 gm. of peroxide of iron, 0.0326 gm. of alumina, trace of manganese, 0.0057 gm. of lime, and 0.0325 gm. of pyrophosphate of magnesia = 0.01207 gm. of magnesia.

	I.	II.	III.	IV.	Mean
Silica, . . . . .	54.97	...	...	55.37	55.17
Peroxide of iron, . . . . .	21.39	...	...	21.84	21.59
Alumina, . . . . .	8.30	...	...	7.98	8.12
Protoxide of iron, . . . . .	...	...	1.95	...	1.95
Lime, . . . . .	1.30	...	...	1.38	1.34
Magnesia, . . . . .	2.74	...	...	2.93	2.83
Potash, . . . . .	...	3.36	...	...	3.36
Soda, . . . . .	...	0.27	...	...	0.27
Water, . . . . .	5.76	...	...	...	5.76
Manganese, . . . . .	...	...	...	...	trace
					100.39

NOTE.—This substance contained 30 per cent. of white, pale grey, and yellow casts, 40 per cent. pale green casts, 20 per cent. dark green casts, together with 10 per cent. of mineral particles and remains of siliceous organisms (J. M.).

#### 88. GLAUCONITE.—Station 185B.

Lat. 11° 38' 15" S., long. 143° 59' 38" E., 155 fathoms (Sipöcz).

- I. 0.3695 gm. of substance, fused with the carbonates of soda and potash, gave 0.0401 gm. of water, 0.1025 gm. of silica, 0.1548 gm. of peroxide of iron, 0.0481 gm. of alumina, trace of manganese, 0.0044 gm. of lime, and 0.0474 gm. of pyrophosphate of magnesia = 0.0171 gm. of magnesia.
- II. 0.2740 gm. of substance, treated with hydrofluoric and sulphuric acids, gave 0.0082 gm. of the chlorides of potash and soda, 0.0137 gm. of chloroplatinate of potash, corresponding to 0.0042 gm. of chloride of potash = 0.0025 gm. of potash, and 0.0040 gm. of chloride of soda = 0.0017 gm. of soda.
- III. 0.0990 gm. of substance required for oxidation, after treatment with hydrofluoric and sulphuric acids, 0.3 c.c. permanganate of potash (1 c.c. permanganate of potash = 0.0058355 gm. of protoxide of iron), corresponding to 0.00175 gm. of protoxide of iron.

Silica, . . . . .	27.74
Peroxide of iron, . . . . .	39.93
Alumina, . . . . .	13.02
Protoxide of iron, . . . . .	1.76
Manganese, . . . . .	trace
Lime, . . . . .	1.19
Magnesia, . . . . .	4.62
Potash, . . . . .	0.95
Soda, . . . . .	0.62
Water, . . . . .	10.85
	100.68

#### 89. PHILLIPSITE.—Station 275.

Lat. 11° 20' S., long. 150° 30' W., 2610 fathoms (Sipöcz).

- I. 0.5080 gm. of substance, after drying 16 hours at 125° C., lost 0.0465 gm. of water and gave 0.0385 gm. of loss on ignition, and then fused with the carbonates of soda and potash, gave 0.2418 gm. of silica, 0.0301 gm. of peroxide of iron, 0.0868 gm. of alumina, 0.0024 gm. manganoso-manganic oxide = 0.0022 gm. of manganous oxide, 0.0163 gm. of lime, and 0.0176 gm. of pyrophosphate of magnesia = 0.00634 gm. of magnesia.
- II. 0.3224 gm. of substance, treated with hydrofluoric and sulphuric acids, gave 0.0494 gm. of the chlorides of potash and soda, 0.0806 gm. of chloroplatinate of potash, corresponding to 0.0246 gm. of chloride of potash = 0.0155 gm. of potash, and 0.0248 gm. of chloride of soda = 0.01315 gm. of soda.