95. Basic Volcanic Glass (spec. grav., 2·89).—Station 302.

Lat. 42° 43′ S., long. 82° 11′ W., 1450 fathoms (Renard).

I. 1·0852 grms. of substance, fused with the carbonates of soda and potash, gave 0·5084 grm. of silica, 0·1480 grm. of peroxide of iron, 0·1930 grm. of alumina, 0·0046 grm. of manganous sulphide, 0·1288 grm. of lime, and 0·2783 grm. of pyrophosphate of magnesia = 0·10028 grm. of magnesia.

II. 0·4320 grm. of substance, treated with hydrofluoric and sulphuric acids, required for oxidation 8·0 c.c. of permanganate of potash (1 c.c. permanganate of potash = 0·0058296 grm. of protoxide of iron), corresponding to 0·04663 grm. of protoxide of iron.

III. 0·6690 grm. of substance, treated with hydrofluoric and sulphuric acids, gave 0·0287 grm. of the chlorides of soda and potash, 0·0080 grm. of chloroplatinate of potash, corresponding to 0·00244 grm. chloride of potash = 0·001542 grm. of potash, and 0·02626 grm. of chloride of soda = 0·01392 grm. of soda.

IV. 1·0251 grms. of substance, treated with hydrofluoric and sulphuric acids, gave 0·0393 grm. of the chlorides of potash and soda, 0·0122 grm. of chloroplatinate of potash, corresponding to 0·0037 grm. of chloride of potash = 0·00235 grm. of potash, and 0·00356 grm. of chloride of soda = 0·01887 grm. of soda.

V. 0·9799 grm. of substance, treated with hydrofluoric and sulphuric acids, gave 0·0460 grm. of the chlorides of potash and soda, 0·0200 grm. of chloroplatinate of potash, corresponding to 0·0061 grm. of chloride of potash = 0·00385 grm. of potash, and 0·0399 grm. of chloride of soda = 0·02116 grm. of soda.

	I.	II.	III.	IV.	V.	Mean.
Silica,	46·84	...	...	...	...	46·84
Peroxide of iron,	1·64	...	...	...	...	1·64
Protoxide of iron,	...	10·79	...	...	...	10·79
Alumina,	17·78	...	...	...	...	17·78
Manganous oxide	0·34	...	...	...	...	0·34
Lime,	11·87	...	...	...	...	11·87
Magnesia,	9·24	...	...	...	...	9·24
Potash,	...	...	0·23	0·23	0·39	0·28
Soda,	...	...	2·08	1·84	2·16	2·02
						100·80

96. Manganese Nodule.—Station 3.

Lat. 25° 45′ N., long. 20° 12′ W., 1525 fathoms (Brazier).

Loss on ignition after drying at 230° Fahr.,		24·84
Portion soluble in Hydrochloric Acid = 70·46 =	Copper,	trace
	Alumina,	2·50
	Ferric oxide,	31·60
	Calcium phosphate,	0·90
	Manganese oxide,	25·64
	Calcium sulphate,	1·16
	Calcium carbonate,	3·15
	Magnesium carbonate,	1·51
	Silica,	4·00
Portion insoluble in Hydrochloric Acid = 4·70 =	Alumina,	1·00
	Ferric oxide,	1·30
	Lime,	0·30
	Magnesia,	0·10
	Silica,	2·00
		100·00