

57. GLOBIGERINA OOZE (residue after removal of carbonate of lime by dilute acid).—Station 224.

Lat. 7° 45' N., long. 144° 20' E., 1850 fathoms (Renard).

The ooze was first treated in the manner described on pages 220 and 221.

- I. 0.5660 grm. of substance dried at 110° C. served for the direct determination of water, and gave 0.0401 grm. of water.
- II. 0.9345 grm. of substance dried at 110° C. gave 0.5995 grm. of silica, 0.1403 grm. of alumina, 0.0755 grm. of peroxide of iron, 0.0155 grm. of lime, 0.0444 grm. of pyrophosphate of magnesia = 0.0160 grm. of magnesia.
- III. 0.8390 grm. of substance dried at 110° C. gave 0.0294 grm. of the chlorides of soda and potash, 0.0483 grm. of chloroplatinate of potash = 0.00976 grm. of potash and, by difference, 0.0076 grm. of soda.

Silica,	64.16
Alumina,	15.13
Peroxide of iron,	8.19
Lime,	1.66
Magnesia,	1.79
Potash,	1.01
Soda,	0.90
Water,	7.10
Barium, manganese, and phosphoric acid,	traces
	99.94

58. GLOBIGERINA OOZE (determination of organic matter).—Station 224.

Lat. 7° 45' N., long. 144° 20' E., 1850 fathoms (Hornung).

0.9905 grm. of substance, dried at 100° C., lost 0.0537 grm.	-5.42 per cent.
0.9588 „ „ „ „ 0.0558 „ „	-5.82 „ „
Mean loss on ignition,	-5.62 „ „

- I. 0.4413 grm. of substance dried at 100° C., burnt with oxide of copper, gave 0.0453 grm. of carbonic acid = 0.01235 grm. of carbon.
- II. 0.9012 grm. of substance dried at 100° C., mixed with oxide of copper, and burnt in a current of carbonic acid (barometer, 743.95 mm., mean temperature, 22° 5 C.), gave 6.4 cc. of nitrogen = 0.0753 grm.

Carbon,	2.80 per cent.
Nitrogen,	0.785 „

The proportion of carbon and nitrogen in this organic substance is thus 53.48 : 15.

59. GLOBIGERINA OOZE (residue after removal of carbonate of lime by dilute acid).—Station 338.

Lat. 21° 15' S., long. 14° 2' W., 1990 fathoms (Klement).

1.0185 grms. of the ooze dried at 110° C. gave 0.4120 grm. of carbonic acid, corresponding to 0.9364 grm. of carbonate of lime = 91.94 per cent.

A rather large quantity of the ooze was treated as described on pages 220 and 221.

- I. 0.8360 grm. of substance dried at 110° C., fused with the carbonates of soda and potash, gave 0.4219 grm. of silica, 0.1506 grm. of alumina, 0.1066 grm. of peroxide of iron, 0.0220 grm. of dioxide of manganese, 0.0143 grm. of lime, 0.0567 grm. of pyrophosphate of magnesia.
- II. 1.1293 grms. of substance dried at 110° C. gave 0.1235 grm. of loss on ignition, and, after treatment with hydrofluoric and sulphuric acids, 0.0423 grm. of the chlorides of soda and potash, 0.0647 grm. of chloroplatinate of potash.