

24. RED CLAY.—Station 9. Lat. 23° 23' N., long. 35° 11' W., 3150 fathoms (Hornung).

- I. 1.1459 grms. of substance dried at 110° C., fused with carbonates of soda and potash, gave 0.6519 gm. of silica, 0.2323 gm. of alumina, 0.1148 gm. of ferric oxide, 0.0150 gm. of lime, 0.0293 gm. of magnesia, and 0.0770 gm. loss on ignition.
- II. 1.1162 grms. of substance dried at 110° C., treated with sulphuric and hydrofluoric acids, gave 0.0219 gm. of potash, and 0.0092 gm. of soda.

Silica,	.	.	.	.	.	.	.	.	.	56.89
Alumina,	.	.	.	.	.	.	.	.	.	20.28
Ferric oxide,	.	.	.	.	.	.	.	.	.	10.02
Lime,	.	.	.	.	.	.	.	.	.	1.31
Magnesia,	.	.	.	.	.	.	.	.	.	2.56
Potash,	.	.	.	.	.	.	.	.	.	1.91
Soda,	.	.	.	.	.	.	.	.	.	0.81
Loss on ignition,	.	.	.	.	.	.	.	.	.	6.72
Barium, manganese, and phosphoric acid,	.	.	.	.	.	.	.	.	.	traces
										<hr/> 100.50

25. RED CLAY.—Station 29. Lat. 27° 49' N., long. 64° 59' W., 2700 fathoms (Renard).

- I. 1.370 grms. of substance dried at 110° C., fused with the carbonates of soda and potash, gave 0.0513 gm. of water, 0.5774 gm. of silica, 0.2776 gm. of alumina, 0.0967 gm. of peroxide of iron, 0.1811 gm. of lime, 0.0815 gm. of pyrophosphate of magnesia = 0.0294 gm. of magnesia.
- II. 0.9872 gm. of substance, dried at 110° C., gave 0.0969 gm. of carbonic acid.
- III. 1.329 grms. of substance dried at 110° C., treated with hydrofluoric and sulphuric acids, gave 0.0416 gm. of the chlorides of potash and soda, 0.0769 gm. of chloroplatinate of potash = 0.0149 gm. of potash, and, by difference, 0.0095 gm. of soda.

Silica,	.	.	.	.	.	.	.	.	.	42.15
Alumina,	.	.	.	.	.	.	.	.	.	20.27
Peroxide of iron,	.	.	.	.	.	.	.	.	.	7.06
Lime,	.	.	.	.	.	.	.	.	.	13.22
Magnesia,	.	.	.	.	.	.	.	.	.	2.15
Potash,	.	.	.	.	.	.	.	.	.	1.12
Soda,	.	.	.	.	.	.	.	.	.	0.72
Carbonic acid,	.	.	.	.	.	.	.	.	.	9.82
Water,	.	.	.	.	.	.	.	.	.	3.75
										<hr/> 100.26

26. RED CLAY (after the finer parts had been washed away).—Station 281.

Lat. 22° 21' S., long. 150° 17' W., 2385 fathoms (Hornung).

0.3436 gm. of substance, dried at 100° C., lost 0.0297 gm.	.	.	.	.	.	.	.	.	.	= 8.52 per cent.
0.8375 "	"	"	"	0.0657 "	.	.	.	.	.	= 7.81 "
0.8392 "	"	"	"	0.0698 "	.	.	.	.	.	= 8.28 "
1.1275 "	"	"	"	0.0933 "	.	.	.	.	.	= 8.27 "
Mean loss on ignition										= 8.22 "

- I. 0.3024 gm. of substance, dried at 100° C., fused with the carbonates of potash and soda in a porcelain tube, gave 0.0194 gm. of water.
- II. 0.7694 gm. of substance, dried at 100° C., gave 0.3333 gm. of silica, 0.1074 gm. of alumina, 0.1346 gm. of peroxide of iron, 0.0459 gm. of lime, 0.1258 gm. of pyrophosphate of magnesia = 0.0453 gm. of magnesia.
- III. 0.4973 gm. of substance, dried at 100° C., treated at 140° C. in a closed glass tube with sulphuric acid, required 3.5 c.c. of permanganate of potash (1 c.c. of permanganate of potash = 0.04813 gm. of protoxide of iron), corresponding to 0.02166 gm. of protoxide of iron.