

73. PHOSPHATIC CONCRETIONS.—Station 143.

Lat. 36° 48' S., long. 19° 24' E., 1900 fathoms (Klement).

- I. 1.1045 grms. of substance dried at 110° C. gave 0.1175 grm. of carbonic acid, and 0.0447 grm. of sulphate of barium.
- II. 0.4952 grm. of substance dried at 110° C. gave 0.1822 grm. of pyrophosphate of magnesia (P₂O₅), 0.0127 grm. of silica, 0.2028 grm. of lime, 0.0114 grm. of pyrophosphate of magnesia (MgO), 0.0138 grm. of peroxide of iron, 0.0071 grm. of alumina, and 0.0591 grm. of residue insoluble in dilute nitric acid.
- III. 3.3276 grms. of substance dried at 110° C. gave 0.1213 grm. of loss on ignition.
- IV. 0.1892 grm. of insoluble residue, calcined and fused with the carbonates of soda and potash, gave 0.1449 grm. of silica, 0.0262 grm. of alumina, 0.0150 grm. of peroxide of iron, 0.0024 grm. of lime, 0.0064 grm. of pyrophosphate of magnesia.

		Ratio of Equivalents.
Phosphoric acid,	23.54	0.498
Carbonic acid,	10.64	0.242
Sulphuric anhydride,	1.39	0.017
Silica,	2.56	
Lime,	40.95	0.731
Magnesia,	0.83	0.021
Peroxide of iron,	1.48	
Alumina,	2.79	
Loss on ignition,	3.65	
Insoluble residue,	11.93	
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	99.71	

Composition of the insoluble residue:—

Silica,	76.58
Alumina,	13.85
Peroxide of iron,	7.93
Lime,	1.27
Magnesia,	1.18
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	100.81

74. PHOSPHATIC CONCRETIONS.—Station 143.

Lat. 36° 48' S., long. 19° 24' E., 1900 fathoms (Brazier).

	Loss on ignition after drying at 230° Fahr.,	4.10
	Copper,	mere trace
	Alumina,	8.00
	Ferric oxide,	5.80
	Calcium phosphate,	49.57
Portion soluble in Hydrochloric Acid—86.74	Manganese oxide,	2.70
	Nickel,	...
	Cobalt,	...
	Calcium sulphate,	2.62
	Calcium carbonate,	16.07
	Magnesium carbonate,	0.98
	Silica,	6.00
Portion insoluble in Hydrochloric Acid—9.16	Alumina,	0.60
	Ferric oxide,	
	Lime,	0.16
	Magnesia,	fair trace
	Silica,	8.40
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NOTE.—Two pieces of heavy and hard material, smooth on the outside and of a grey colour; inside colour lighter grey.