These figures appear to show (1) that intermediate waters are more free from organic contamination than either surface- or bottom-waters, as might be expected from the comparative absence of animal life in these waters; (2) that the total absence of organic matter is least frequent in bottom-waters, and most frequent in intermediate waters, surface-waters occupying a middle place in this respect; and (3) that there is not much difference between bottom- and surface-waters, either in the total quantity of organic contamination or in the relative proportions of the "decomposed" and "easily decomposable" organic matter.

It may be worth notice that when the bottom-water from great depths was muddy, tests made before and after filtration showed that some of the organic matter was removed by this operation.

## APPENDIX B.

*Results of the Analyses of Eight Samples of Sea-Water collected during the Third Cruise of the 'Porcupine.'* By Dr. FRANKLAND, F.R.S.

ROYAL COLLEGE OF CHEMISTRY,
*November* 15*th*, 1869.

DEAR DR. CARPENTER,—Herewith I enclose results of analyses of the samples of sea-water collected during your recent cruise in the 'Porcupine.'

I shall not attempt to draw any general conclusions from these results; your own intimate knowledge of the circumstances under which the different samples were collected will enable you to do this much better than I.

There is, however, one point which is highly remarkable, and to which I would draw your attention; it is the large amount of very highly nitrogenized organic matter contained in most of