

tion of ionized hydrogen is from 0.000000011N to 0.0000000045 N. In his studies during a voyage of five months in the summer season of 1910 of the Danish steamship *Thor*, *Palitzsch* made the following observations:¹ surface water from the Skager-Rack, from the southern portions of the North Sea, and from the west of the Baltic ranged from about 0.000000010 N to about 0.000000009 N; in the North Sea the surface water varied from 0.0000000083 N to 0.0000000074 N; at the latitude of Murray Firth, twenty miles from the coast, the values were between 0.0000000071 N and 0.0000000066 N. In the Atlantic the surface water corresponded in the most northern portions to that of the North Sea, while in the Bay of Biscay and along the coast of Portugal the values were 0.0000000056 N, corresponding to slightly increased alkalinity, especially if account be taken of the rising temperature. In general the waters of the Mediterranean corresponded to those of the coast of Portugal. But from the Sea of Marmora, the Bosphorus, and the Black Sea samples were obtained which gave the value 0.0000000045 N.

In general, as the depth increased, the

¹ Palitzsch, "*Comptes-rendus des travaux du Laboratoire de Carlsberg*," 10me Volume, p. 85, 1911.