

(1.) The elements which it involves are now known to be :—

Chlorine.	Potassium.	Silica.	Nickel.
Iodine.	Calcium.	Boracic acid.	Manganese.
Bromine.	Iron.	Silver.	Alumina.
Sulphur.	Fluorine.*	Copper.	Strontia.
Carbon.	Phosphate of	Lead.	Baryta.
Sodium.	lime.	Zinc.	
Magnesium.	Ammonia.	Cobalt.	

(2.) The mean saltness of the Atlantic, between 0° and 30° north latitude, is 36.169 in 1000 parts of sea water ; the maximum, 37.908 ; the minimum, 34.283.

(3.) The mean saltness of the Atlantic between 30° and 55° north latitude is 35.946 ; the diminution being due to the quantity of fresh water poured in by the St. Lawrence.

(4.) In Baffin's Bay and Davis' Strait it is 33.281, and increases as we proceed northwards, being 33.598 in 69°.

(5.) The mean saltness of the Mediterranean is 37.936, as compared with 34.388, the mean saltness of ocean.

(6.) In the Black Sea the mean saltness is about 15.0, the saltness varying at different points from 11.880 to 18.146.

(7.) In the Indian Ocean the mean saltness is 38,868.

(8.) Excepting certain regions—namely, the North Sea, Kattegat, Sound, and Baltic, the Mediterranean and Black Sea, the Caribbean Sea, and the Red Sea—the mean numbers for the great ocean are as follow :—

Sea water.	Chlorine.	Sulphuric acid.	Lime.	Magnesia.	All salts.	Co-efficient.
1000 parts,	18.999	2.258	0.556	2.096	34.404	1.812
"	100	11.88	2.93	11.03
Equivalents,	429	45	16	82

It is evident, therefore, that sea water, as a whole, is no more of a chemical compound than is the atmospheric air ; that it consists of solutions of different chemical compounds ; that it is neutral, because it everywhere in the atmosphere finds carbonic acid to neutralize its bases, and everywhere on its bottom and shores finds carbonate of lime to neutralize any prevailing strong acid ; that, lastly, the great stability of its composition depends upon its enormous mass and its constant motion, which is the reason that any local variation is evanescent compared to the whole quantity of salt.

It only remains to be added that the specific gravity of sea water *decreases* as its depth *increases*.]

Owing to its saltness, the density of sea water is greater than that of fresh water. Its specific gravity, on an average, is represented by 1.027. That of the Mediterranean, according to Usiglio, is 1.025 at a temperature of 69° 30' F. The salinity of ocean, however, varies

* Discovered by the late Dr. George Wilson, of Edinburgh.