Whenever a weak acid is present in aqueous solution in company with such bases as sodium, potassium, calcium, magnesium, etc., which are invariable constituents of the ocean, blood, protoplasm, etc., *provided the acid be in excess*, it is a simple matter to determine the reaction, which can best be measured by the values of $(\overset{+}{H})$ and $(\overset{-}{OH})$, following the considerations above.

Now there is a certain characteristic property of an acid, its ionization constant, k, which measures its tendency to dissociate in aqueous solution, thereby to produce hydrogen ions, and hence to increase the intensity of acidity. Strong acids have ionization constants which are of the order of magnitude of 1.0, weak acids of the order of magnitude of 0.0001, the weakest acids, 0.00000001, or less.

TABLE OF IONIZATION CONSTANTS

HCl, HNO₃, etc.	1.
H₃PO₄	0.011
H₃AsO₄	0.005
HNO₂	0.0005
H₂CO₃	0.0000003
NaH₂PO₄	0.0000002
H₂S	0.000000091
H₃BO₃	0.0000000007
Na₂HPO₄	0.00000000000036

It has been discovered that in the general case above discussed the concentration of