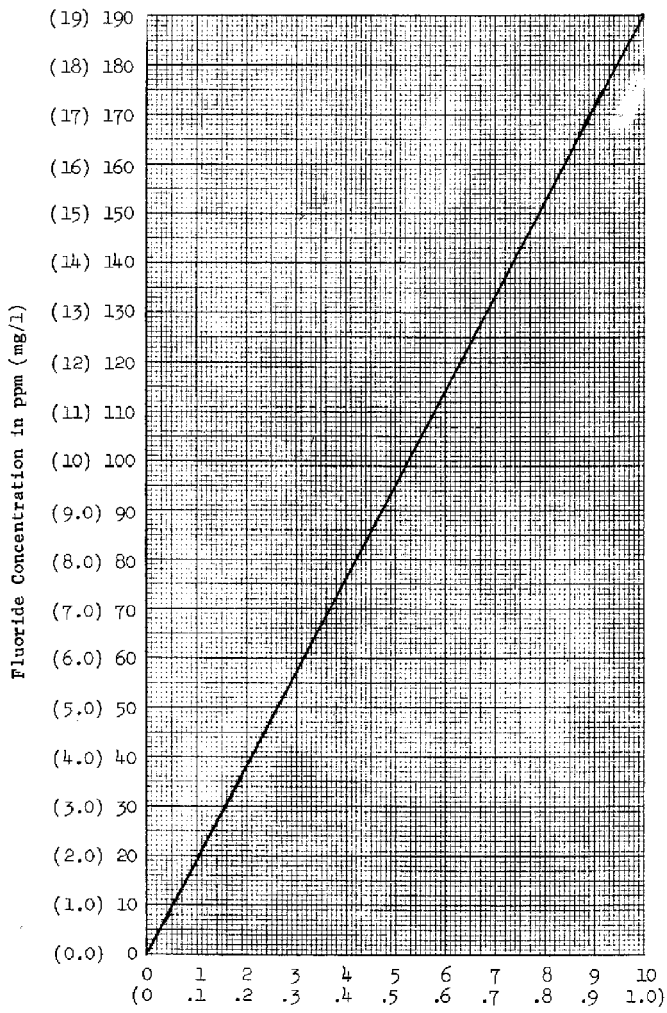
CONVERSION TABLE MOLES TO PPM

Concentration of Aqueous Fluoride Solution



NOTE: In dilute water solution, fluoride concentration in mM (millimoles of F^- per liter of solution) is related to fluoride concentration expressed as mg/l or ppm (milligrams of F^- per liter of water, or parts by weight of F^- per million parts of water) by the equation:

$$mM = \frac{ppm}{19.0} \quad \text{or} \quad ppm = 19.0 \times mM.$$

Aqueous Fluoride Solution Concentration Conversion Tables

A. Conversion of Molar Concentration to Weight/Weight Concentration:

Molar Concentration			Weight/Weight Concentration
M (Moles/1)	mM (Millimoles/1)	μM (Micromoles/1)	ppm* (mg/1)
1.0	1,000	10^6	19,000
0.1	100	10^5	1,900
0.05	50	5×10^4	950
0.01	10	10^4	190
0.005	5.0	5×10^3	95
10^{-3}	1.0	1,000	19
10^{-4}	0.1	100	1.9
10^{-5}	0.01	10	0.19
10^{-6}	0.001	1.0	0.019
10^{-7}	0.0001	0.1	0.0019

B. Conversion of weight/weight concentration to molar concentration:

Weight/Weight Concentration	Molar Concentration
ppm* (mg/1)	mM
1,000	52.7
500	26.3
250	13.2
100	5.27
75	3.95
50	2.63
25	1.32
20	1.05
15	0.79
10	0.527
5.0	0.263
3.0	0.158
2.0	0.105
1.0	0.0527 (52.7 μM)
0.10	0.00527 (5.27 μM)
0.010	0.000527 (0.527 μM)

*For conversion to ppb (parts per billion, or ug/1), multiply by 1,000.

A.W.B.

Volume 2 Number 3
July, 1969