9-4. Conversion of Concentration Units of Ionic Species

Compound	Fomular	Ionic Weight	Equiv. Weight	Conversion to	
				g $CaCO_3$/L	Eq/L
Neutral					
Ammonia	NH_3	17.0	17.0	2.94	0.0588
Carbon dioxide	CO_2	44.0	44.0	1.14	0.0227
Silica	SiO_2	60.0	60.0	0.83	0.0167
Positive lons					
Aluminum	Al^{+++}	27.0	9.0	5.56	0.1111
Ammonium	NH_4^+	18.0	18.0	2.78	0.0556
Barium	Ba^{++}	137.4	68.7	0.73	0.0146
Calcium	Ca^{++}	40.1	20.0	2.50	0.0500
Copper	Cu^{++}	63.6	31.8	1.57	0.0314
Ferrous lron	Fe^{++}	55.8	27.9	1.79	0.0358
Ferric lron	Fe^{+++}	55.8	18.6	2.69	0.0538
Hydrogen	H^+	1.0	1.0	50.0	1.0000
Magnesium	Mg^{++}	24.3	12.2	4.10	0.0820
Manganese	Mn^{++}	54.9	27.5	1.82	0.0364
Potassium	K^+	39.1	39.1	1.28	0.0256
Sodium	Na^+	23.0	23.0	2.18	0.0435
Negative lons					
Bicarbonate	HCO_3^-	61.0	61.0	0.82	0.0164
Carbonate	CO_3^{--}	60.0	30.0	1.67	0.3333
Chloride	Cl^-	35.5	35.5	1.41	0.0282
Fluoride	F^-	19.0	19.0	2.63	0.0526
Hydroxide	OH^-	17.0	17.0	2.94	0.0588
loide	I^-	126.9	126.9	0.39	0.0079
Nitrate	NO_3^-	62.0	62.0	0.81	0.0161
Phosphate(tri-basic)	PO_4^{---}	95.0	31.7	1.58	0.0315
Phosphate(di-basic)	HPO_4^{--}	96.0	48.0	1.04	0.0208
Phosphate(mono-basic)	$H_2PO_4^-$	97.0	97.0	0.52	0.0103
Sulfate	SO_4^{--}	96.1	48.0	1.04	0.0208
Bisulfate	HSO_4^-	97.1	97.1	0.52	0.0103
Sulfite	SO_3^{--}	80.1	40.0	1.25	0.0250
Bisulfite	HSO_3^-	81.1	81.1	0.62	0.0123
Sulfide	S^{--}	32.1	16.0	3.13	0.0625
Silica	SiO_2	60.0	60.0	0.83	0.0167