

Possible Useful Information

$$N_A = 6.022 \times 10^{23} \text{ units/mol}$$

1 H 1.0079																	2 He 4.0026
3 Li 6.941	4 Be 9.0122											5 B 10.81	6 C 12.011	7 N 14.007	8 O 15.999	9 F 18.998	10 Ne 20.179
11 Na 22.990	12 Mg 24.305											13 Al 26.982	14 Si 28.086	15 P 30.974	16 S 32.06	17 Cl 35.453	18 Ar 39.948
19 K 39.098	20 Ca 40.08	21 Sc 44.956	22 Ti 47.88	23 V 50.942	24 Cr 51.996	25 Mn 54.938	26 Fe 55.847	27 Co 58.933	28 Ni 58.69	29 Cu 63.546	30 Zn 65.38	31 Ga 69.72	32 Ge 72.59	33 As 74.922	34 Se 78.96	35 Br 79.904	36 Kr 83.80
37 Rb 85.468	38 Sr 87.62	39 Y 88.906	40 Zr 91.22	41 Nb 92.906	42 Mo 95.94	43 Tc (98)	44 Ru 101.07	45 Rh 102.91	46 Pd 106.42	47 Ag 107.87	48 Cd 112.41	49 In 114.82	50 Sn 118.69	51 Sb 121.75	52 Te 127.60	53 I 126.90	54 Xe 131.29
55 Cs 132.91	56 Ba 137.33	*La 138.91	72 Hf 178.49	73 Ta 180.95	74 W 183.85	75 Re 186.21	76 Os 190.2	77 Ir 192.22	78 Pt 195.08	79 Au 196.97	80 Hg 200.59	81 Tl 204.38	82 Pb 207.2	83 Bi 208.98	84 Po (209)	85 At (210)	86 Rn (222)
87 Fr (223)	88 Ra 226.03	89 †Ac 227.03															

* 58 Ce 140.12	59 Pr 140.91	60 Nd 144.24	61 Pm (145)	62 Sm 150.36	63 Eu 151.96	64 Gd 157.25	65 Tb 158.93	66 Dy 162.50	67 Ho 164.93	68 Er 167.26	69 Tm 168.93	70 Yb 173.04	71 Lu 174.97
† 90 Th 232.04	91 Pa 231.04	92 U 238.03	93 Np 237.05	94 Pu (244)	95 Am (243)	96 Cm (247)	97 Bk (247)	98 Cf (251)	99 Es (252)	100 Fm (257)	101 Md (258)	102 No (259)	103 Lr (260)

Table 4.4
Water Solubility* of Common* Inorganic Compounds

- All acids are soluble. Ammonia is soluble.
- All Na^+ , K^+ , and NH_4^+ compounds are soluble.
- All nitrates and acetates are soluble.
- All chlorides are soluble except AgCl and Hg_2Cl_2 ; PbCl_2 is only slightly soluble.
All bromides are soluble except AgBr and Hg_2Br_2 ; PbBr_2 and HgBr_2 are only slightly soluble.
All iodides are soluble except AgI , Hg_2I_2 , PbI_2 , and HgI_2 .
- All sulfates are soluble except PbSO_4 , Hg_2SO_4 , SrSO_4 , and BaSO_4 ; Ag_2SO_4 and CaSO_4 are only slightly soluble.
- All sulfides are insoluble except those of the Group IA and IIA (group 1 and 2) metals and ammonium sulfide.
- All hydroxides are insoluble except those of the Group IA (1) metals and $\text{Ba}(\text{OH})_2$; $\text{Sr}(\text{OH})_2$ and $\text{Ca}(\text{OH})_2$ are slightly soluble.
- All carbonates, phosphates, and sulfites are insoluble except those of the Group IA (1) metals and the ammonium ion.
- Carbon dioxide (CO_2), sulfur dioxide (SO_2), and hydrogen sulfide (H_2S) gases are slightly soluble.