

CHEMISTRY DATA SHEET

1 mole of any element contains 6.02×10^{23} molecules

FORMULAE OF COMMON IONS	
Positive	Negative
Ag ⁺	Br ⁻
Al ³⁺	Cl ⁻
Ca ²⁺	CO ₃ ²⁻
Cu ²⁺	HCO ₃ ⁻
Fe ²⁺	HSO ₄ ⁻
Fe ³⁺	I ⁻
H ⁺	NO ₃ ⁻
K ⁺	O ²⁻
Li ⁺	OH ⁻
Mg ²⁺	S ²⁻
Na ⁺	SO ₃ ²⁻
NH ₄ ⁺	SO ₄ ²⁻
Pb ²⁺	PO ₄ ³⁻
Zn ²⁺	HPO ₄ ³⁻
Ba ²⁺	H ₂ PO ₄ ⁴⁻

REACTIVITY SERIES	
Elements	Reactivity
Potassium	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 20px;"><i>Most reactive</i></div> <div style="margin-bottom: 20px;">↓</div> <div style="margin-bottom: 20px;"><i>Decrease in</i></div> <div style="margin-bottom: 20px;"><i>Reactivity</i></div> <div style="margin-bottom: 20px;">↓</div> <div><i>Least reactive</i></div> </div>
Sodium	
Lithium	
Calcium	
Magnesium	
Aluminium	
(Carbon)	
Zinc	
Iron	
Tin	
Lead	
(Hydrogen)	
Copper	
Silver	
Gold	
Platinum	

SOLUBILITY OF SALTS AND HYDROXIDES IN COLD WATER

Soluble	Insoluble
All sodium, potassium and ammonium salts	
All nitrates	
Most bromides, chlorides & iodides	Bromides, chlorides & iodides of silver & lead*
Most sulphates	Sulphates of barium, calcium & lead*
Carbonates & hydroxides of sodium, potassium & ammonium	Most other carbonates & hydroxides
Calcium hydroxide is only slightly soluble	*lead salts are more soluble in hot water

Chemistry Data Sheet

The Periodic Table of Elements

I	II											III	IV	V	VI	VII	VIII	
<div style="display: flex; justify-content: space-between;"> atomic number mass number † </div> <div style="display: flex; justify-content: space-between;"> ← ← </div>	H 1 1																	He 2 4
	Li 3 7	Be 4 9										B 5 11	C 6 12	N 7 14	O 8 16	F 9 19	Ne 10 20	
	Na 11 23	Mg 12 24										Al 13 27	Si 14 28	P 15 31	S 16 32	Cl 17 35	Ar 18 40	
	K 19 39	Ca 20 40	Sc 21 45	Ti 22 48	V 23 51	Cr 24 52	Mn 25 55	Fe 26 56	Co 27 59	Ni 28 59	Cu 29 64	Zn 30 65	Ga 31 70	Ge 32 73	As 33 75	Se 34 79	Br 35 80	Kr 36 84
	Rb 37 85	Sr 38 88	Y 39 89	Zr 40 91	Nb 41 93	Mo 42 96	Tc 43 (98)	Ru 44 101	Rh 45 103	Pd 46 106	Ag 47 108	Cd 48 112	In 49 115	Sn 50 119	Sb 51 122	Te 52 128	I 53 127	Xe 54 131
	Cs 55 133	Ba 56 137		Hf 72 178	Ta 73 181	W 74 184	Re 75 186	Os 76 190	Ir 77 192	Pt 78 195	Au 79 197	Hg 80 201	Tl 81 204	Pb 82 207	Bi 83 209	Po 84 (209)	At 85 (210)	Rn 86 (222)
	Fr 87 223	Ra 88 226		Rf 104 (261)	Db 105 (262)	Sg 106 (266)	Bh 107 (264)	Hs 108 (277)	Mt 109 (268)	Ds 110 (281)	Rg 111 (272)	Cn 112 (285)	Uut 113 (284)	Uuq 114 (289)	Uup 115 (288)	Uuh 116 (292)	Uus 117 (291)	Uuo 118 (294)
Lanthanum Series				La 57 139	Ce 58 140	Pr 59 141	Nd 60 144	Pm 61 (145)	Sm 62 150	Eu 63 152	Gd 64 157	Tb 65 159	Dy 66 163	Ho 67 165	Er 68 167	Tm 69 169	Yb 70 173	Lu 71 175
Actinium Series				Ac 89 (227)	Th 90 232	Pa 91 231	U 92 238	Np 93 (237)	Pu 94 (244)	Am 95 (243)	Cm 96 (247)	Bk 97 (247)	Cf 98 (251)	Es 99 (252)	Fm 100 (257)	Md 101 (258)	No 102 (259)	Lr 103 (262)

† mass number relates to the commonest isotope.
 For all calculations assume relative atomic mass = mass number, except for CHLORINE.
 For chlorine, relative atomic mass = 35.5