

hydrogen												helium																								
1	H											2	He																							
1.00794												4.0026																								
beryllium	lithium											boron	carbon	nitrogen	oxygen	fluorine	neon																			
4	Be	3	Li											5	B	6	C	7	N	8	O	9	F	10	Ne											
9.0122	6.941											10.811	12.011	14.007	15.999	18.998	20.180																			
sodium	11	12	Mg											13	Al	14	Si	15	P	16	S	17	Cl	18	Ar											
22.990	24.305											26.982	28.086	30.974	32.065	35.453	39.948																			
potassium	19	20	K	Ca	scandium	titanium	vanadium	chromium	manganese	iron	cobalt	nickel	copper	zinc	gallium	germanium	arsenic	selenium	bromine	krypton																
39.098	40.078	37	Rb	Sr	21	Sc	22	Ti	23	V	24	Cr	25	Mn	26	Fe	27	Co	28	Ni	29	Cu	30	Zn	31	Ga	32	Ge	33	As	34	Se	35	Br	36	Kr
85.468	87.62	44.956	47.867	50.942	51.996	54.938	55.845	58.933	58.933	63.546	65.39	69.723	72.04	74.922	78.96	79.904	83.80	85.468	89.904	91.224	92.906	95.94	98.906	101.07	102.91	106.42	107.87	112.41	114.82	118.71	121.76	127.60	126.905	131.29		
caesium	55	39	Rb	Sr	40	Zr	41	Nb	42	Mo	43	Tc	44	Ru	45	Rh	46	Pd	47	Ag	48	Cd	49	In	50	Sn	51	Sb	52	Te	53	I	54	Xe		
132.91	137.33	89-102	Fr	Ra	71	Hf	72	Ta	73	W	74	Re	75	Os	76	Ir	77	Pt	78	Au	79	Hg	80	Tl	81	Pb	82	Bi	83	Po	84	At	85	Rn		
87	88	89-102	Fr	Ra	103	Lr	104	Rf	105	Db	106	Sg	107	Bh	108	Hs	109	Mt	110	Uun	111	Uuu	112	Uub	113	Uuq	114	Uuq	115	Uuq	116	Uuq	117	Uuq		
122.91	123.1	126.91	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1	127.1		

* Lanthanide series

** Actinide series

lanthanum	cerium	praseodymium	neodymium	promethium	europium	gadolinium	terbium	dysprosium	holmium	erbium	thulium	ytterbium															
57	La	58	Ce	59	Pr	60	Nd	61	Pm	62	Sm	63	Eu	64	Gd	65	Tb	66	Dy	67	Ho	68	Er	69	Tm	70	Yb
138.91	140.12	140.91	144.24	144.91	145.91	150.36	151.96	157.25	158.93	162.50	164.93	167.26	168.93	173.04													
actinium	thorium	protactinium	uranium	neptunium	plutonium	americium	curium	berkelium	californium	einsteinium	fermium	mendelevium	nobelium														
89	Ac	90	Th	91	Pa	92	U	93	Np	94	Pu	95	Am	96	Cm	97	Bk	98	Cf	99	Es	100	Fm	101	Md	102	No
227	232.04	231.04	238.03	237	241	243	247	247	251	252	257	259	259														

Common Ion Chart

Positive Ions (Cations)		Negative Ions (Anions)	
Aluminum	Al^{+3}	Acetate	$\text{C}_2\text{H}_3\text{O}_2^- / \text{CH}_3\text{COO}^-$
Ammonium	NH_4^+	Bromide	Br^-
Barium	Ba^{+2}	Carbonate	CO_3^{-2}
Cadmium	Cd^{+2}	Hydrogen Carbonate Ion / Bicarbonate	HCO_3^-
Calcium	Ca^{+2}	Chlorate	ClO_3^-
Chromium (II)	Cr^{+2}	Chloride	Cl^-
Chromium (III)	Cr^{+3}	Chlorite	ClO_2^-
Cobalt (II)	Co^{+2}	Chromate	CrO_4^{2-}
Copper (I)	Cu^+	Cyanide	CN^-
Copper (II)	Cu^{+2}	Dichromate	$\text{Cr}_2\text{O}_7^{-2}$
Hydrogen	H^+	Fluoride	F^-
Hydronium	H_3O^+	Hydride	H^-
Iron (II)	Fe^{+2}	Hydroxide	OH^-
Iron (III)	Fe^{+3}	Hypochlorite	ClO^-
Lead (II)	Pb^{+2}	Iodate	IO_3^-
Lead (IV)	Pb^{+4}	Iodide	I^-
Lithium	Li^+	Nitrate	NO_3^-
Magnesium	Mg^{+2}	Nitride	N^{-3}
Manganese (II)	Mn^{+2}	Nitrite	NO_2^-
Mercury (I)	Hg_2^{+2}	Oxalate	$\text{C}_2\text{O}_4^{-2}$
Mercury (II)	Hg^{+2}	Oxide	O^{-2}
Potassium	K^+	Hydrogen Oxalate Ion	HC_2O_4^-
Silver	Ag^+	Perchlorate	ClO_4^-
Strontium	Sr^{+2}	Permanganate	MnO_4^-
Sodium	Na^+	Peroxide Ion	O_2^{-2}
Tin (II)	Sn^{+2}	Phosphate	PO_4^{-3}
Tin (IV)	Sn^{+4}	Monoxygen Phosphate	HPO_4^{-2}
Zinc	Zn^{+2}	Dihydrogen Phosphate	H_2PO_4^-
		Silicate	SiO_3^{-2}
		Sulfate	SO_4^{-2}
		Hydrogen Sulfate Ion / Bisulfate	HSO_4^-
		Thiosulfate	$\text{S}_2\text{O}_3^{-2}$
		Sulfide	S^{-2}
		Hydrogen Sulfide Ion / Bisulfide	HS^-
		Sulfite	SO_3^{-2}
		Hydrogen Sulfite Ion / Bisulfite	HSO_3^-

1 - mono	5 - penta	9 - nona
2 - di	6 - hexa	10 - deca
3 - tri	7 - hepta	
4 - tetra	8 - octa	

SOLUBILITY OF COMMON COMPOUNDS IN WATER

The term soluble here means > 0.1 mol/L at 25°C.

Negative Ions (Anions)	Positive Ions (Cations)	Solubility of Compounds
All	Alkali ions: Li^+ , Na^+ , K^+ , Rb^+ , Cs^+ , Fr^+	Soluble
All	Hydrogen ion: H^+	Soluble
All	Ammonium ion: NH_4^+	Soluble
Nitrate, NO_3^-	All	Soluble
Chloride, Cl^- or Bromide, Br^- or Iodide, I^-	All others	Soluble
	Ag^+ , Pb^{2+} , Cu^+	Low Solubility
Sulphate, SO_4^{2-}	All others	Soluble
	Ag^+ , Ca^{2+} , Sr^{2+} , Ba^{2+} , Pb^{2+}	Low Solubility
Sulphide, S^{2-}	Alkali ions, H^+ , NH_4^+ , Be^{2+} , Mg^{2+} , Ca^{2+} , Sr^{2+} , Ba^{2+}	Soluble
	All others	Low Solubility
Hydroxide, OH^-	Alkali ions, H^+ , NH_4^+ , Sr^{2+}	Soluble
	All others	Low Solubility
Phosphate, PO_4^{3-} or Carbonate, CO_3^{2-} or Sulphite, SO_3^{2-}	Alkali ions, H^+ , NH_4^+	Soluble
	All others	Low Solubility

