THE FIRST TWENTY ELEMENTS

The first twenty elements are the basic elements that one ought to know to understand basic chemistry. These elements are hydrogen, helium, lithium, berylium, boron, carbon, nitrogen, oxygen, fluorine, neon, sodium (natrium), magnesium, aluminium, silicon, phosphorus, sulfur, chlorine, argon, potassium (kalium) and calcium.

When describing elements, five parametres are very important. They are atomicity, atomic number, mass number, oxidation state, and symbol.

Name	Sym	Atomic no.	Mass no,	Oxidation no.	Atomicity
Hydrogen	H	1	1	+/-1	2
Helium	He	2	4	0	1
Lithium	Li	3	7	+1	1
Beryllium	Be	4	9	+2	1
Boron	B	5	11	+3	1
Carbon	C	6	12	+/-4	1
Nitrogen	N	7	14	-3	2
Oxygen	O	8	16	-2	2
Fluorine	F	9	19	-1	2

Neon	Ne	10	20	0	1
Sodium	Na	11	23	+1	1
Magnesium	Mg	12	24	+2	1
Aluminium	Al	13	27	+3	1
Silicon	Si	14	28	+/-4	1
Phosphorus	P	15	31	-3	4
Sulfur	S	16	32	-2	8
Chlorine	Cl	17	35.5	-1	2
Argon	Ar	18	40	0	1
Potassium	K	19	39	+1	1
Calcium	Ca	20	40	+2	1

Qualitative Description of the First Twenty Elements

Hydrogen. Hydrogen (water former) is a gas that is flammable and burns in air to produce water.

Helium. Helium is a colourless, odourless, tasteless, non-toxic, inert monoatomic gas. Its boiling point is lowest among all the elements.

Lithium. Lithium is a silvery white, soft metal very reactive chemically, forms Li_2O and LiCl readily.

Beryllium. Beryllium is a grey metal, much harder than lithium, fairly reactive chemically, forms BeO and $BeCl_2$ easily.

Boron. Boron is a yellow or brown non-metal, very hard element, not very reactive, but will form BCl_3 and B_2O_3.

Carbon. Carbon is a black non-metal, brittle, non-reactive at room temperature. It forms CO_2 and CCl_4

Nitrogen. Nitrogen is a colourless gas; not very reactive; will form N_2O_5 and NH_3.

Oxygen. Oxygen is a colourless and tasteless gas; moderately reactive; will combine with most elements; forms CO_2, MgO, etc.

Fluorine. Fluorine is a green-yellow gas, extremely reactive, irritating to smell, and forms NaF, MgF_2.

Neon. Neon is a colourless gas, and is non-reactive chemically.

Sodium. Sodium is a silvery soft metal, very reactive chemically, forms Na_2O, NaCl.

Magnesium. Magnesium is a silvery white metal much harder than sodium. Fairly reactive and forms MgO and $MgCl_2$.

Aluminium. Aluminium is a silvery white metal like magnesium but isn't as reactive. It forms Al_2O_3 and $AlCl_3$.

Silicon. Silicon is a gray, non-metallic substance and is non-reactive at room temperature; it forms SiO_2 and $SiCl_4$.

Phosphorus. Phosphorus is a black, red (or violet), or white (or yellow) solid with low melting point, and is quite reactive. It forms P_2O_5 and PCl_3.

Sulfur. Sulfur is a yellow solid with low melting point. It is moderately reacive and combines with most elements. It forms SO_2, MgS, etc.

Chlorine. Chorine is a greenish yellow gas, extremely reactive, irritating to smell, and forms NaCl, $MgCl_2$, etc.

Argon. Argon is a colourless gas and is very non-reactive chemically.

Potassium. Potassium is a silver soft metal. It is very reactive chemically and forms K_2O and KCl.

Calcium. Calcium is silver white metal much harder than potassium. It is fairly reactive and forms CaO and $CaCl_2$.