

Group 1/ I; Hydrogen

Group I actually contains also the [alkali metals](#) but hydrogen (H) is not counted among them and thus rates a separate page.

Hydrogen accounts for much of the universe - about 93 %. [Helium](#) (He) provides a bit less than 7 %; the rest thus can be seen as trace elements; the ash of burnt-out stars.

Jupiter and Saturn, the big planets of our solar system, consist mostly of hydrogen while our earth contains only about 0.12 % (more or less in the water of the oceans). That still makes hydrogen, after oxygen (O) and silicon (Si), the third most frequent element. The earth is too small to hold gaseous hydrogen for long, and so are the other smaller planets.

In the human body hydrogen accounts for about 60 % of the elements, so nothing needs to be said about its importance in organic chemistry. World production of hydrogen is around 150 Mio tons a year. If we ever switch from an oil / coal driven economy to a hydrogen-fueled one, this number will have to go up tremendously.

Table of Basic Data

Name (German)	Hydrogen <i>Wasserstoff</i>
Atomic number	1
Atomic mass [u]	1 2 = Deuterium, 3 = Tritium
Melting point [K]	14
Melting point [°C]	-259
Melting point [°F]	-434
Boiling point [K]	20
Density [g/cm³] gas	8,4 · 10 ⁻⁵ (Record low)

In case of doubt all numbers are for room temperatures

fcc = [face centered cubic](#); lattice const. = a

bcc = [body centered cubic](#)

sc = [simple cubic](#)

hp = simple [hexagonal](#)

hcp = [hexagonal close packed](#); lattice constants a and c.

op = [simple orthorhombic](#), [monoclinic](#), [triclinic](#)

tp = [simple tetragonal](#)

dia = [diamond structure](#)

r = [trigonal](#) or rhomboedral trigonal