

Aqueous Solution Density Database

The main HSC database contains data of densities of gases and condensed substances, however, the densities of aqueous solutions must be calculated using the density calculator and Aqueous Solution Density database.

Density Database: C:\HSC6\Databases\Aqueous Solution Density.XLS

Component in water

- Cr2(SO4)3
- CuCl2
- CuSO4
- FeCl2
- FeSO4**
- FeCl3
- Fe2(SO4)3
- HCl
- HCN
- HNO3
- H3PO4
- H2SO4
- KCl
- K2CO3
- KNO3
- KOH
- K2SO4
- LiCl
- Li2SO4

Density of Aqueous Solution

H2O Density 988.10 kg/m3
Solution Density 1159.21 kg/m3

Temperature 50 °C

Components	Mass fraction
FeSO4	0.149
H2SO4	0.048

Close Select Delete Calculate

This calculator may be opened using the "Tools, Density Calculator..." menu selection. Aqueous solution densities are needed, for example, to convert concentrations analyzed in g/ml into quantities.

Aqueous solution components can be picked from the list on the right side of the form, the second step is to specify mass fractions and temperature, then pressing Calculate will give the results. The densities are based on mass fractions because this type of experimental data is available and the calculation model uses this primary data. Aqueous solution density is quite easy to measure experimentally but difficult to evaluate theoretically. You may add new data into Aqueous Solution Density.xls file using MS Excel.

The Aqueous Solution Density calculator may be started from the Sim module menu.