

Potassium

Equilibrium reaction	lgK at infinite dilution and $T = 298\text{ K}$		
	Baes and Mesmer, 1976	Nordstrom et al., 1990	Brown and Ekberg, 2016
$\text{K}^+ + \text{H}_2\text{O} \rightleftharpoons \text{KOH} + \text{H}^+$	-14.46	-14.46	-14.5 ± 0.4

C.F. Baes and R.E. Mesmer, *The Hydrolysis of Cations*. Wiley, New York, 1976, p. 86.

P.L. Brown and C. Ekberg, *Hydrolysis of Metal Ions*. Wiley, 2016, pp. 148–150.

D.K. Nordstrom, L.N. Plummer, D. Langmuir, E. Busenberg, H.M. May, B.F. Jones and D.L. Parkhurst, Revised chemical equilibrium data for major water-mineral reactions and their limitations. In: *Chemical Modeling of Aqueous Systems II*. D.C. Melchior and R.L. Bassett (eds.). ACS Symposium Series 416. ACS, Washington DC, 1990, pp. 398–446.

Distribution diagrams

These diagrams have been computed at two K concentrations ($1 \text{ mM} = 1 \times 10^{-3} \text{ mol L}^{-1}$ and $1 \text{ }\mu\text{M} = 1 \times 10^{-6} \text{ mol L}^{-1}$) with the 'best' equilibrium constant above (in green). Calculations assume $T = 298 \text{ K}$ for the limiting case of zero ionic strength (*i.e.*, even neglecting plotted ions).

