
Equilibrium constants for hydrolysis and associated equilibria in critical compilations

Radium

Equilibrium reaction	lgK at infinite dilution and $T = 298 \text{ K}$	
	Nordstrom et al., 1990	Brown and Ekberg, 2016
$\text{Ra}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{RaOH}^+ + \text{H}^+$	-13.49	-13.49 ± 0.20

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 217–219.

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 Ra 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).

