

Arsenic(III)

Equilibrium reaction	lgK at infinite dilution and $T = 298 \text{ K}$		
	Baes and Mesmer, 1976	Nordstrom and Archer, 2003	Nordstrom et al., 2014
$\text{As(OH)}_4^- + \text{H}^+ \rightleftharpoons \text{As(OH)}_3 + \text{H}_2\text{O}$		9.17	9.24 ± 0.02

C.F. Baes and R.E. Mesmer, *The Hydrolysis of Cations*. Wiley, New York, 1976, p. 375.

D.K. Nordstrom and D. Archer, Arsenic thermodynamic data and environmental geochemistry. In: *Arsenic in Ground Water*. Welch AH, Stollenwerk KG (eds) Kluwer Academic Publishers, Amsterdam, 2003, pp. 1–25.

D.K. Nordstrom, J. Majzlan and E. Königsberger, Thermodynamic properties for As minerals & aqueous species. *Reviews in Mineralogy & Geochemistry*, 79, 217–255 (2014).

Distribution diagrams

These diagrams have been computed at two As(III) 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).

