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Equilibrium constants for hydrolysis and associated equilibria in critical compilations

Curium(III)

Equilibrium reactions	lg*K* at infinite dilution and *T* = 298 K
	Brown and Ekberg, 2016
$Cm^{3+} + H_2O \rightleftharpoons Cm(OH)^{2+} + H^+$	−7.66 ± 0.07
$Cm^{3+} + 2\ H_2O \rightleftharpoons Cm(OH)_2^{+} + 2\ H^+$	−15.9 ± 0.1
$Cm^{3+} + 3\ H_2O \rightleftharpoons Cm(OH)_3(s) + 3\ H^+$	−13.9 ± 0.4

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 415−420.

Distribution diagrams

These diagrams have been computed at two Bk(III) concentrations (1 mM = $1x10^{-3}$ mol L^{-1} and 1 µM = $1x10^{-6}$ mol L^{-1}) with the 'best' equilibrium constants above. Calculations assume T = 298 K for the limiting case of zero ionic strength (*i.e.*, even neglecting plotted ions).