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Last update: 03/12/2024
Source: modified from compilation COST Action 1802

Equilibrium constants for hydrolysis and associated equilibria in critical compilations

Iridium

Equilibrium reactions	lg*K* at infinite dilution and *T* = 298 K
	Brown and Ekberg, 2016
$Ir^{3+} + H_2O \rightleftharpoons IrOH^{2+} + H^+$	−3.77 ± 0.10
$Ir^{3+} + 2\ H_2O \rightleftharpoons Ir(OH)_2^+ + 2\ H^+$	−8.46 ± 0.20
$Ir(OH)_3(s) + 3\ H^+ \rightleftharpoons Ir^{3+} + 3\ H_2O$	8.88 ± 0.20

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 736–739.

Distribution diagrams

These diagrams have been computed at two Ir 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).