
Equilibrium constants for hydrolysis and associated equilibria in critical compilations

Lead(IV)

Equilibrium reactions	IgK at infinite dilution and T = 298 K
	Feitknecht and Schindler, 1963
$\beta\text{-PbO}_2 + 2 \text{H}_2\text{O} \rightleftharpoons \text{Pb}^{4+} + 4 \text{OH}^-$	-64
$\beta\text{-PbO}_2 + 2 \text{H}_2\text{O} + 2 \text{OH}^- \rightleftharpoons \text{Pb(OH)}_6^{2-}$	-4.5

W. Feitknecht and P. Schindler, Solubility constants of metal oxides, metal hydroxides and metal hydroxide salts in aqueous solution. Pure Appl. Chem., 6, 125–206 (1963).

Distribution diagrams

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

