Thulium

Equilibrium reaction	lg*K* at infinite dilution and *T* = 298 K	
	Baes and Mesmer, 1976	Brown and Ekberg, 2016
$Tm^{3+} + H_2O \rightleftharpoons TmOH^{2+} + H^+$	−7.7	−7.34 ± 0.09
$2\ Tm^{3+} + 2\ H_2O \rightleftharpoons Tm_2(OH)_2^{4+} + 2\ H^+$		−13.2 ± 0.2
$3\ Tm^{3+} + 5\ H_2O \rightleftharpoons Tm_3(OH)_5^{4+} + 5\ H^+$		−30.5 ± 0.3
$Tm(OH)_3(s) + 3\ H^+ \rightleftharpoons Tm^{3+} + 3\ H_2O$	15.0	15.56 ± 0.40

C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976, p. 137.

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 247, 250−251 and 297−300.

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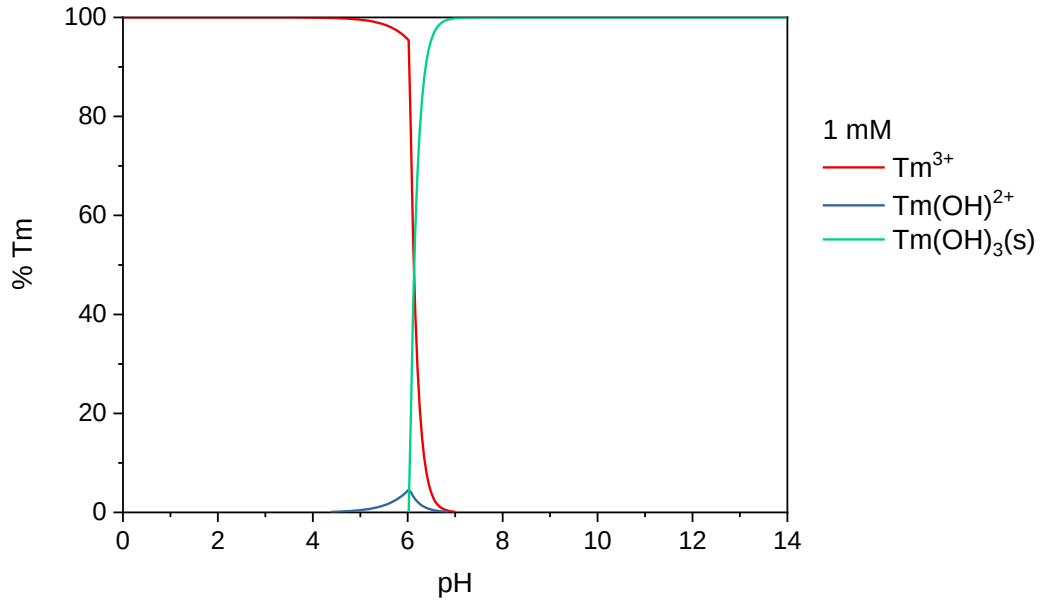
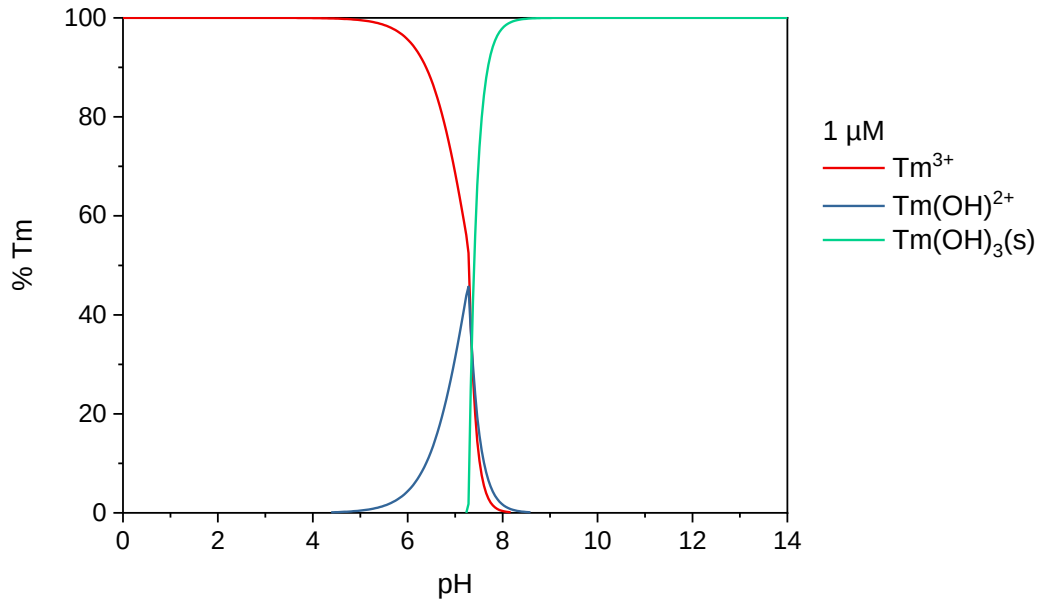
Distribution diagrams

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





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