Chromium(VI)

Equilibrium reactions	lg*K* at infinite dilution and *T* = 298 K	
	Baes and Mesmer, 1976	Ball and Nordstrom, 1998
$CrO_4^{2-} + H^+ \rightleftharpoons HCrO_4^-$	6.51	6.55 ± 0.04
$HCrO_4^- + H^+ \rightleftharpoons H_2CrO_4$	–0.20	
$CrO_4^{2-} + 2\ H^+ \rightleftharpoons H_2CrO_4$		6.31
$2\ HCrO_4^- \rightleftharpoons Cr_2O_7^{2-} + H_2O$	1.523	
$2\ CrO_4^{2-} + 2\ H^+ \rightleftharpoons Cr_2O_7^{2-} + H_2O$		14.7 ± 0.1

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

J.W. Ball and D.K. Nordstrom, Critical evaluation and selection of standard state thermodynamic properties for chromium metal and its aqueous ions, hydrolysis species, oxides and hydroxides. J. Chem. Eng. Data, 43, 895–918 (1998).

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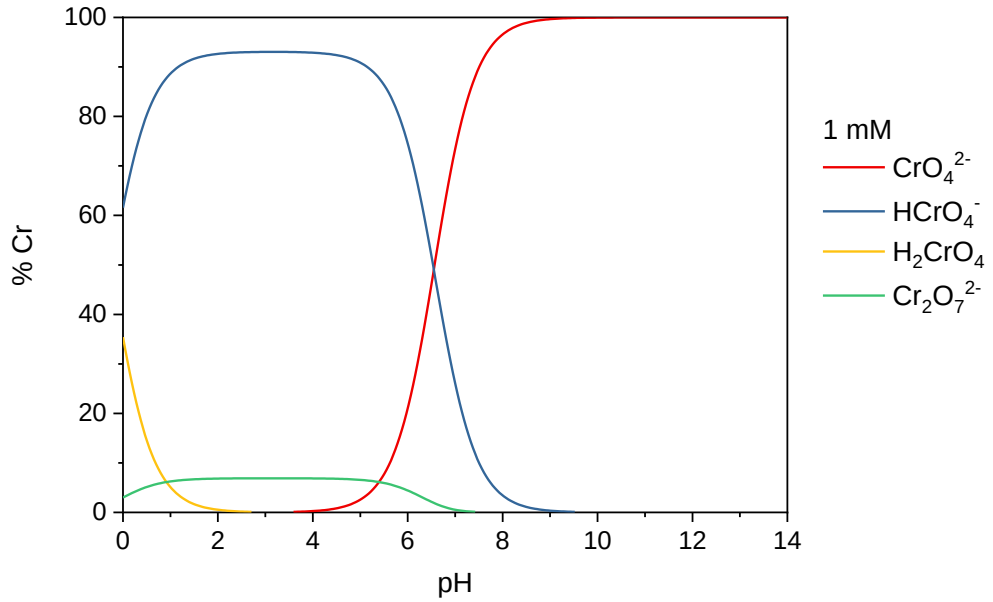
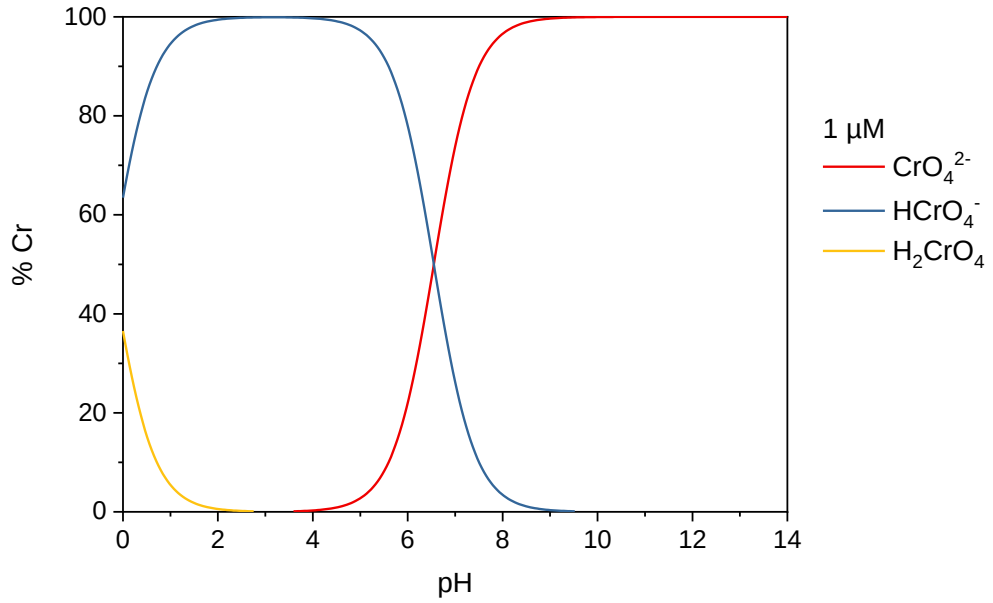
Distribution diagrams

These diagrams have been computed at two Cr(VI) 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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