Copper(II)

Equilibrium reactions	lg*K* at infinite dilution and *T* = 298 K				
	Baes and Mesmer, 1976	NIST46	Plyasunova et al., 1997	Powell et al., 2007	Brown and Ekberg, 2016
$Cu^{2+} + H_2O \rightleftharpoons CuOH^+ + H^+$	< –8	–7.7	–7.97 ± 0.09	–7.95 ± 0.16	–7.64 ± 0.17
$Cu^{2+} + 2\ H_2O \rightleftharpoons Cu(OH)_2 + 2\ H^+$	(< –17.3)	–17.3	–16.23 ± 0.15	–16.2 ± 0.2	–16.24 ± 0.03
$Cu^{2+} + 3\ H_2O \rightleftharpoons Cu(OH)_3^- + 3\ H^+$	(< –27.8)	–27.8	–26.63 ± 0.40	–26.60 ± 0.09	–26.65 ± 0.13
$Cu^{2+} + 4\ H_2O \rightleftharpoons Cu(OH)_4^{2-} + 4\ H^+$	–39.6	–39.6	–39.73 ± 0.17	–39.74 ± 0.18	–39.70 ± 0.19
$2\ Cu^{2+} + H_2O \rightleftharpoons Cu_2(OH)^{3+} + H^+$			–6.71 ± 0.30	–6.40 ± 0.12	–6.41 ± 0.17
$2\ Cu^{2+} + 2\ H_2O \rightleftharpoons Cu_2(OH)_2^{2+} + 2\ H^+$	–10.36	–10.3	–10.55 ± 0.17	–10.43 ± 0.07	–10.55 ± 0.02

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$3\ Cu^{2+} + 4\ H_2O \rightleftharpoons Cu_3(OH)_4^{2+} + 4\ H^+$			–20.95 ± 0.30	–21.1 ± 0.2	–21.2 ± 0.4
$CuO(s) + 2\ H^+ \rightleftharpoons Cu^{2+} + H_2O$	7.62		7.64 ± 0.06	7.64 ± 0.06	7.63 ± 0.05
$Cu(OH)_2(s) + 2\ H^+ \rightleftharpoons Cu^{2+} + 2\ H_2O$				8.67 ± 0.05	8.68 ± 0.10

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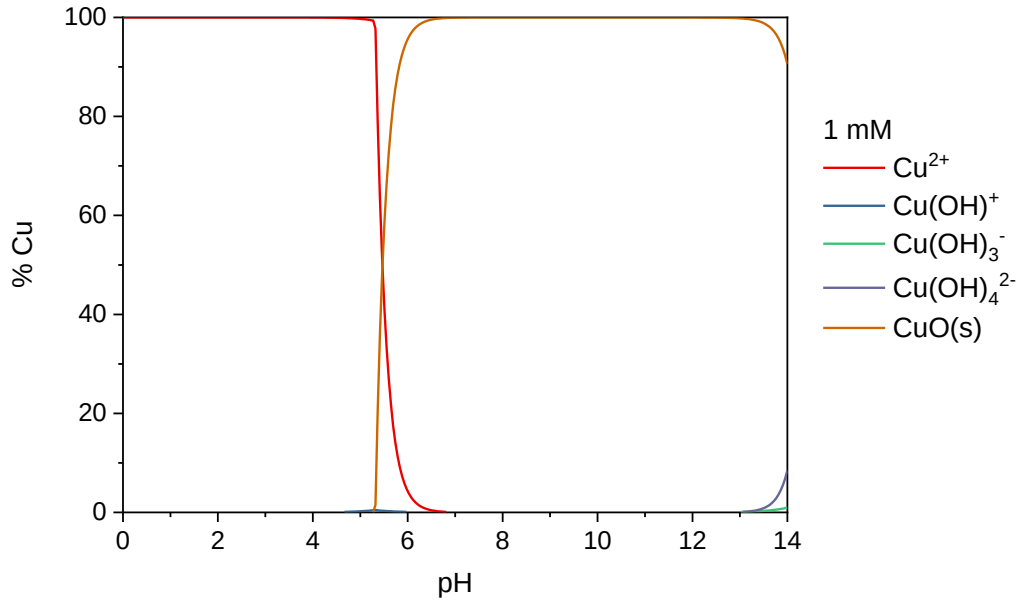
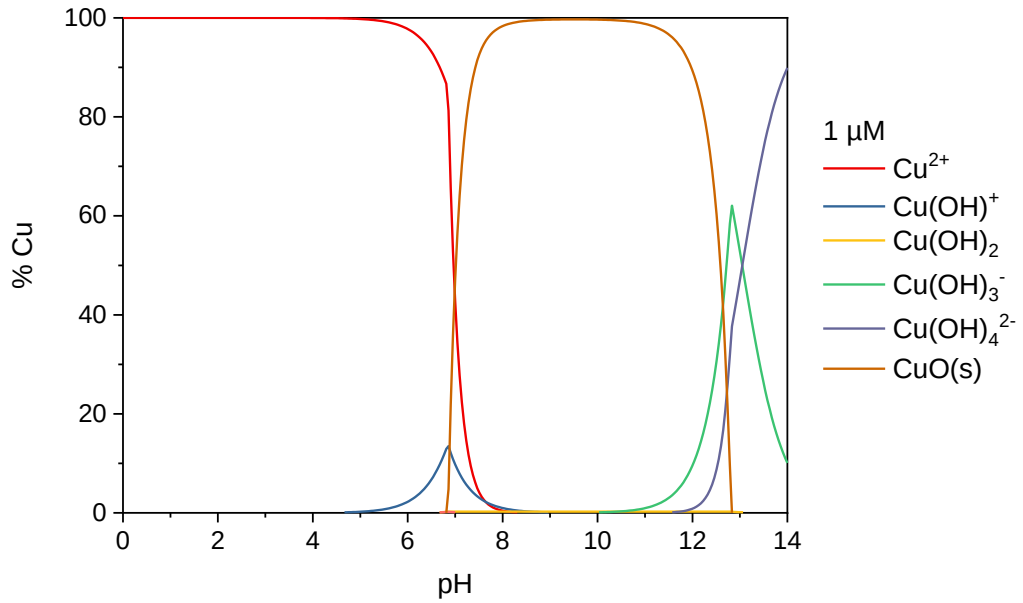
Distribution diagrams

These diagrams have been computed at two Cu(II) 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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