

Cadmium

Reaction	Baes and Mesmer, 1976	Powell et al., 2011	Brown and Ekberg, 2016
$\text{Cd}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{CdOH}^+ + \text{H}^+$	-10.08	-9.80 ± 0.10	-9.81 ± 0.10
$\text{Cd}^{2+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Cd}(\text{OH})_2 + 2 \text{H}^+$	-20.35	-20.19 ± 0.13	-20.6 ± 0.4
$\text{Cd}^{2+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Cd}(\text{OH})_3^- + 3 \text{H}^+$	<-33.3	-33.5 ± 0.5	-33.5 ± 0.5
$\text{Cd}^{2+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Cd}(\text{OH})_4^{2-} + 4 \text{H}^+$	-47.35	-47.28 ± 0.15	-47.25 ± 0.15
$2 \text{Cd}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{Cd}_2\text{OH}^{3+} + \text{H}^+$	-9.390	-8.73 ± 0.01	-8.74 ± 0.10
$4 \text{Cd}^{2+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Cd}_4(\text{OH})_4^{4+} + \text{H}^+$	-32.85		

$\text{Cd(OH)}_2(\text{s}) \rightleftharpoons \text{Cd}^{2+} + 2 \text{OH}^-$		-14.28 ± 0.12	
$\text{Cd(OH)}_2(\text{s}) + 2 \text{H}^+ \rightleftharpoons \text{Cd}^{2+} + 2 \text{H}_2\text{O}$	13.65	13.72 ± 0.12	13.71 ± 0.12

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

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 730–738.

K. J. Powell, P. L. Brown, R. H. Byrne, T. Gajda, G. Hefter, A.-K. Leuz, S. Sjöberg, and H. Wanner, Chemical speciation of environmentally significant metals with inorganic ligands. Part 4: The $\text{Cd}^{2+} + \text{OH}^-$, Cl^- , CO_3^{2-} , SO_4^{2-} , and PO_4^{3-} systems (IUPAC Technical Report). Pure Appl. Chem., 83, 1163–1214 (2011).