

Beryllium

Reaction	Baes and Mesmer, 1976	Brown and Ekberg, 2016
$\text{Be}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{BeOH}^+ + \text{H}^+$	-5.40	-5.39 ± 0.14
$\text{Be}^{2+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Be}(\text{OH})_2 + 2 \text{H}^+$	-13.65	-11.20 ± 0.07
$\text{Be}^{2+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Be}(\text{OH})_3^- + 3 \text{H}^+$	-23.25	-23.39 ± 0.27
$\text{Be}^{2+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Be}(\text{OH})_4^{2-} + 4 \text{H}^+$	-37.41	
$2 \text{Be}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{Be}_2\text{OH}^{3+} + \text{H}^+$	-3.97	-3.54 ± 0.04
$3 \text{Be}^{2+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Be}_3(\text{OH})_3^{3+} + 3 \text{H}^+$	-8.92	-8.83 ± 0.09

$5 \text{ Be}^{2+} + 6 \text{ H}_2\text{O} \rightleftharpoons \text{Be}_5(\text{OH})_6^{4+} + 6 \text{ H}^+$		-19.1 ± 0.1
$6 \text{ Be}^{2+} + 8 \text{ H}_2\text{O} \rightleftharpoons \text{Be}_6(\text{OH})_8^{4+} + 8 \text{ H}^+$	-27.2	-26.3 ± 0.1
$\alpha\text{-Be}(\text{OH})_2(\text{cr}) + 2 \text{ H}^+ \rightleftharpoons \text{Be}^{2+} + 2 \text{ H}_2\text{O}$	6.69	6.87 ± 0.10
$\beta\text{-Be}(\text{OH})_2(\text{cr}) + 2 \text{ H}^+ \rightleftharpoons \text{Be}^{2+} + 2 \text{ H}_2\text{O}$		6.49 ± 0.10

C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976, p. 95.

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 155–178.