

Ytterbium

Reaction	Baes and Mesmer, 1976	Brown and Ekberg, 2016
$\text{Yb}^{3+} + \text{H}_2\text{O} \rightleftharpoons \text{YbOH}^{2+} + \text{H}^+$	-7.7	-7.31 ± 0.18
$\text{Yb}^{3+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Yb}(\text{OH})_2^+ + 2 \text{H}^+$	(-15.8)	
$\text{Yb}^{3+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Yb}(\text{OH})_3 + 3 \text{H}^+$	(-24.1)	
$\text{Yb}^{3+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Yb}(\text{OH})_4^- + 4 \text{H}^+$	-32.7	
$2 \text{Yb}^{3+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Yb}_2(\text{OH})_2^{4+} + 2 \text{H}^+$		-13.76 ± 0.20
$3 \text{Yb}^{3+} + 5 \text{H}_2\text{O} \rightleftharpoons \text{Yb}_3(\text{OH})_5^{4+} + 5 \text{H}^+$		-30.6 ± 0.3

$\text{Yb(OH)}_3(\text{s}) + 3 \text{H}^+ \rightleftharpoons \text{Yb}^{3+} + 3 \text{H}_2\text{O}$	14.7	15.35 ± 0.20
$\text{Yb(OH)}_3(\text{c}) + \text{OH}^- \rightleftharpoons \text{Yb(OH)}_4^-$	-4.0 ± 0.2	
$\text{Yb(OH)}_3(\text{c}) \rightleftharpoons \text{Yb(OH)}_3$	~ -9.4	

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. 247, 250–251 and 300–303.