

Erbium

Reaction	Baes and Mesmer, 1976	Brown and Ekberg, 2016
$\text{Er}^{3+} + \text{H}_2\text{O} \rightleftharpoons \text{ErOH}^{2+} + \text{H}^+$	-7.9	-7.46 ± 0.09
$\text{Er}^{3+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Er}(\text{OH})_2^+ + 2 \text{H}^+$	(-15.9)	
$\text{Er}^{3+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Er}(\text{OH})_3 + 3 \text{H}^+$	(-24.2)	
$\text{Er}^{3+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Er}(\text{OH})_4^- + 4 \text{H}^+$	-32.6	
$2 \text{Er}^{3+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Er}_2(\text{OH})_2^{4+} + 2 \text{H}^+$	-13.65	-13.50 ± 0.20
$3 \text{Er}^{3+} + 5 \text{H}_2\text{O} \rightleftharpoons \text{Er}_3(\text{OH})_5^{4+} + 5 \text{H}^+$	<-29.3	-31.0 ± 0.3

$\text{Er(OH)}_3(\text{s}) + 3 \text{H}^+ \rightleftharpoons \text{Er}^{3+} + 3 \text{H}_2\text{O}$	15.0	15.79 ± 0.30
$\text{Er(OH)}_3(\text{c}) + \text{OH}^- \rightleftharpoons \text{Er(OH)}_4^-$	-3.6 ± 0.5	
$\text{Er(OH)}_3(\text{c}) \rightleftharpoons \text{Er(OH)}_3$	~ -9.2	

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 295–297.