

# Gallium

Reaction	Baes and Mesmer, 1976	NIST46	Brown and Ekberg, 2016
$\text{Ga}^{3+} + \text{H}_2\text{O} \rightleftharpoons \text{Ga}(\text{OH})^{2+} + \text{H}^+$	-2.6	-2.897	-2.74
$\text{Ga}^{3+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Ga}(\text{OH})_2^+ + 2 \text{H}^+$	-5.9	-6.694	-7.0
$\text{Ga}^{3+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Ga}(\text{OH})_3 + 3 \text{H}^+$	-10.3		-11.96
$\text{Ga}^{3+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Ga}(\text{OH})_4^- + 4 \text{H}^+$	-16.6	-16.588	-15.52
$\text{Ga}(\text{OH})_3(\text{s}) \rightleftharpoons \text{Ga}^{3+} + 3 \text{OH}^-$	$\approx -37$	-37.0	
$\text{GaO}(\text{OH})(\text{s}) + \text{H}_2\text{O} \rightleftharpoons \text{Ga}^{3+} + 3 \text{OH}^-$	-39.06	-39.1	-40.51

C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976, p.319.

P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 797–812.

NIST46, NIST Critically Selected Stability Constants of Metal Complexes: Version 8.0. Available at: [www.nist.gov/srd/nist46](http://www.nist.gov/srd/nist46)