

Germanium(IV)

Reaction	Baes and Mesmer, 1976	Wood and Samson, 2006
$\text{Ge(OH)}_4 \rightleftharpoons \text{GeO(OH)}_3^- + \text{H}^+$	-9.31	-9.32 ± 0.05
$\text{Ge(OH)}_4 \rightleftharpoons \text{GeO}_2(\text{OH})_2^{2-} + 2 \text{H}^+$	-21.9	
$8 \text{Ge(OH)}_4 = \text{Ge}_8\text{O}_{16}(\text{OH})_3^{3-} + 13 \text{H}_2\text{O} + 3 \text{H}^+$	-14.24	
$\text{GeO}_2(\text{s, hexa}) + 2 \text{H}_2\text{O} \rightleftharpoons \text{Ge(OH)}_4$		-1.35
$\text{GeO}_2(\text{s, tetra}) + 2 \text{H}_2\text{O} \rightleftharpoons \text{Ge(OH)}_4$	-4.37	-5.02

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

S.A. Wood and I.M. Samson, *The aqueous geochemistry of gallium, germanium, indium and scandium*. *Ore Geol. Rev.*, 28, 57–102 (2006).