

## Manganese(II)

Reaction	Perrin et al., 1969	Baes and Mesmer, 1976	Nordstrom et al., 1990	Hummel et al., 2002	Brown and Ekberg, 2016
$\text{Mn}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{MnOH}^+ + \text{H}^+$	-10.59	-10.59	-10.59	-10.59	$-10.58 \pm 0.04$
$\text{Mn}^{2+} + 2 \text{H}_2\text{O} \rightleftharpoons \text{Mn}(\text{OH})_2 + 2 \text{H}^+$		-22.2			$-22.18 \pm 0.20$
$\text{Mn}^{2+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Mn}(\text{OH})_3^- + 3 \text{H}^+$		-34.8			$-34.34 \pm 0.45$
$\text{Mn}^{2+} + 4 \text{H}_2\text{O} \rightleftharpoons \text{Mn}(\text{OH})_4^{2-} + 4 \text{H}^+$		-48.3			$-48.28 \pm 0.40$
$2 \text{Mn}^{2+} + \text{H}_2\text{O} \rightleftharpoons \text{Mn}_2\text{OH}^{3+} + \text{H}^+$		-10.56			
$2 \text{Mn}^{2+} + 3 \text{H}_2\text{O} \rightleftharpoons \text{Mn}_2(\text{OH})_3^+ + 6 \text{H}^+$		-23.90			

$\text{Mn(OH)}_2(\text{s}) + 2 \text{H}^+ \rightleftharpoons \text{Mn}^{2+} + 2 \text{H}_2\text{O}$	15.2	15.2	15.2		$15.19 \pm 0.10$
$\text{MnO}(\text{s}) + 2 \text{H}^+ \rightleftharpoons \text{Mn}^{2+} + \text{H}_2\text{O}$					$17.94 \pm 0.12$

C.F. Baes and R.E. Mesmer, *The Hydrolysis of Cations*. Wiley, New York, 1976, p. 226.

P.L. Brown and C. Ekberg, *Hydrolysis of Metal Ions*. Wiley, 2016, pp. 557–561.

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D.D. Perrin, International Union of Pure and Applied Chemistry. Commission on Electroanalytical Chemistry, *Dissociation constants of inorganic acids and bases in aqueous solutions*. Butterworths, 1969, p. 181.