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Fe(II)

Equilibrium	Baes and Mesmer, 1976	Brown and Ekberg, 2016
$Fe(OH)_2(s) + 2\ H^+ = Fe^{2+} + 2\ H_2O$		12.27 ± 0.88
$1/3\ Fe_3O_4 + 2\ H^+ + 1/3\ H_2 = Fe^{2+} + 1{\cdot}1/3\ H_2O$	12.02 ± 0.2	11.77 ± 0.22
$Fe^{2+} + H_2O = Fe(OH)^+ + H^+$	-9.5 ± 0.1	–9.43 ± 0.20
$Fe^{2+} + 2\ H_2O = Fe(OH)_{2(aq)} + 2\ H^+$	-20.6 ± 1	-20.52 ± 0.08
$Fe^{2+} + 3\ H_2O = Fe(OH)^-_3 + 3\ H^+$	–31 ± 1.5	–32.68 ± 0.15
$Fe^{2+} + 4\ H_2O = Fe(OH)_4^{2-} + 4\ H^+$	–46 ± 0.3	

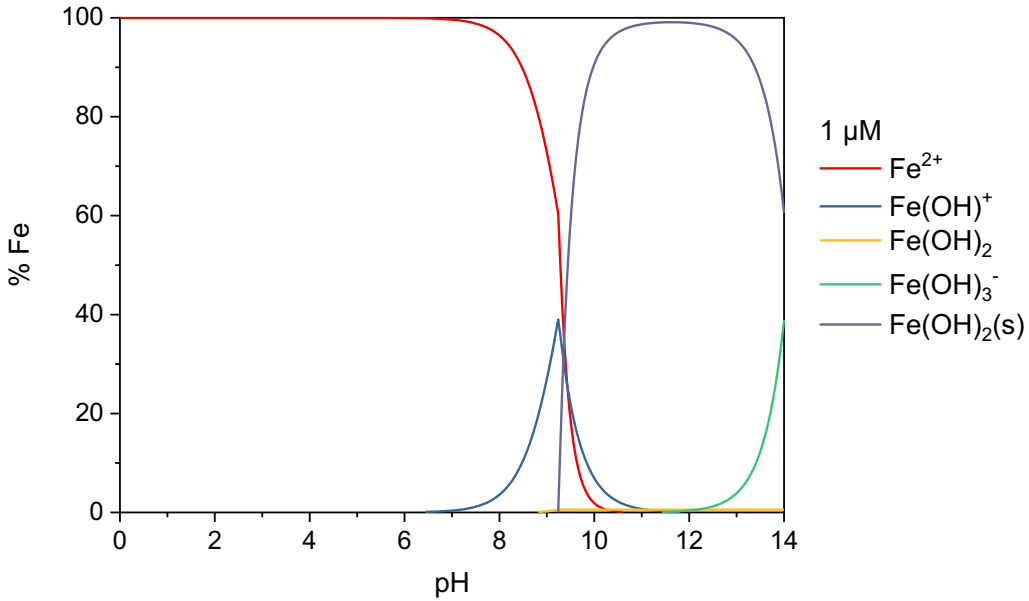
C.F. Baes and R.E. Mesmer, The Hydrolysis of Cations. Wiley, New York, 1976.

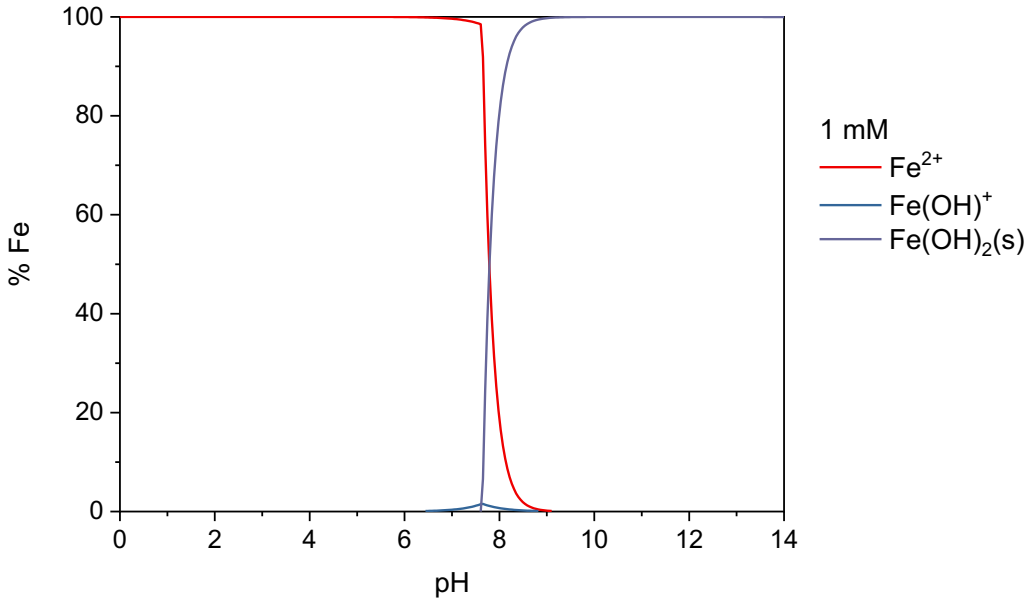
P.L. Brown and C. Ekberg, Hydrolysis of Metal Ions. Wiley, 2016, pp. 135-145.

Log file

24/04/2021 xxx. first compilation of values

25/10/2023 Bretti revision




100
80
60
40
20
0
% Fe
0
2
4
6
8
10
12
14
pH
1 mM
Fe2+
Fe(OH)+
Fe(OH)2(s)