

Standard Reduction Potentials



Standard Reduction Potentials	E°(V)	Standard Reduction Potentials	E°(V)
$F_2(aq) + 2e^- \rightarrow 2F^-(aq)$	+2.87	$2H^+(aq) + 2e^- \rightarrow H_2(g)$	0.00
$S_2O_8^{2-}(aq) + 2e^- \rightarrow 2SO_4^{2-}(aq)$	+2.01	$Pb^{2+}(aq) + 2e^- \rightarrow Pb(s)$	-0.13
$H_2O_2(aq) + 2H^+(aq) + 2e^- \rightarrow 2H_2O(l)$	+1.78	$Sn^{2+}(aq) + 2e^- \rightarrow Sn(s)$	-0.14
$MnO_4^-(aq) + 4H^+(aq) + 3e^- \rightarrow MnO_2(s) + 2H_2O(l)$	+1.68	$Ni^{2+}(aq) + 2e^- \rightarrow Ni(s)$	-0.26
$MnO_4^-(aq) + 8H^+(aq) + 5e^- \rightarrow Mn^{2+}(aq) + 4H_2O(l)$	+1.51	$Co^{2+}(aq) + 2e^- \rightarrow Co(s)$	-0.28
$BrO_3^-(aq) + 6H^+(aq) + 6e^- \rightarrow Br^-(aq) + 3H_2O(l)$	+1.42	$Cd^{2+}(aq) + 2e^- \rightarrow Cd(s)$	-0.40
$Cl_2(aq) + 2e^- \rightarrow 2Cl^-(aq)$	+1.36	$Fe^{2+}(aq) + 2e^- \rightarrow Fe(s)$	-0.45
$Cr_2O_7^{2-}(aq) + 14H^+(aq) + 6e^- \rightarrow 2Cr^{3+}(aq) + 7H_2O(l)$	+1.23	$Cr^{3+}(aq) + 3e^- \rightarrow Cr(s)$	-0.74
$O_2(g) + 4H^+(aq) + 4e^- \rightarrow 2H_2O(l)$	+1.23	$Zn^{2+}(aq) + 2e^- \rightarrow Zn(s)$	-0.76
$Br_2(aq) + 2e^- \rightarrow 2Br^-(aq)$	+1.09	$2H_2O(l) + 2e^- \rightarrow H_2(g) + 2OH^-(aq)$	-0.83
$NO_3^-(aq) + 4H^+(aq) + 3e^- \rightarrow NO(g) + 2H_2O(l)$	+0.96	$SO_4^{2-}(aq) + 2H^+(aq) + 2e^- \rightarrow SO_3^{2-}(aq) + H_2O(l)$	-0.93
$Ag^+(aq) + e^- \rightarrow Ag(s)$	+0.80	$Al^{3+}(aq) + 3e^- \rightarrow Al(s)$	-1.66
$Fe^{3+}(aq) + e^- \rightarrow Fe^{2+}(aq)$	+0.77	$Mg^{2+}(aq) + 2e^- \rightarrow Mg(s)$	-2.37
$MnO_4^-(aq) + e^- \rightarrow MnO_4^{2-}(aq)$	+0.56	$Na^+(aq) + e^- \rightarrow Na(s)$	-2.71
$I_2(aq) + 2e^- \rightarrow 2I^-(aq)$	+0.54	$Ca^{2+}(aq) + 2e^- \rightarrow Ca(s)$	-2.87
$Cu^{2+}(aq) + 2e^- \rightarrow Cu(s)$	+0.34	$K^+(aq) + e^- \rightarrow K(s)$	-2.93
${}^1CO_2(aq) + 6H^+(aq) + 6e^- \rightarrow CH_3OH(aq) + H_2O(l)$	+0.02	$Li^+(aq) + e^- \rightarrow Li(s)$	-3.04

All standard state, 25 °C, 1 M, 1 bar (written to 2 decimal places).

Lide, David R., Ed., Handbook of Chemistry and Physics, 84th ed.; CRC Press: Boca Raton FL, 2003, 8-23 to 8-33.

¹Scott, K., Taama, W.M., Argyropoulos, P, "Material Aspects of the Liquid Feed Direct Methanol Fuel Cell", J. Appl. Electrochem. 28, 1998, 1389.

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