

Standard Reduction Potentials at 25°C

Half-Reaction	E° (V)
$\text{Ag}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})}$	+0.799
$\text{AgBr}_{(\text{s})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})} + \text{Br}^-_{(\text{aq})}$	+0.095
$\text{AgCl}_{(\text{s})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})} + \text{Cl}^-_{(\text{aq})}$	+0.222
$\text{Ag}(\text{CN})_2^-_{(\text{aq})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})} + 2\text{CN}^-_{(\text{aq})}$	-0.310
$\text{Ag}_2\text{CrO}_4_{(\text{s})} + 2\text{e}^- \rightarrow 2\text{Ag}_{(\text{s})} + \text{CrO}_4^{2-}_{(\text{aq})}$	+0.446
$\text{AgI}_{(\text{s})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})} + \text{I}^-_{(\text{aq})}$	-0.151
$\text{Ag}(\text{S}_2\text{O}_3)_2^{3-}_{(\text{aq})} + \text{e}^- \rightarrow \text{Ag}_{(\text{s})} + 2\text{S}_2\text{O}_3^{2-}_{(\text{aq})}$	+0.010
$\text{Al}^{3+}_{(\text{aq})} + 3\text{e}^- \rightarrow \text{Al}_{(\text{s})}$	-1.660
$\text{H}_3\text{AsO}_4_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_3\text{AsO}_3_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+0.559
$\text{Ba}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Ba}_{(\text{s})}$	-2.900
$\text{BiO}^+_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + 3\text{e}^- \rightarrow \text{Bi}_{(\text{s})} + \text{H}_2\text{O}_{(\text{l})}$	+0.320
$\text{Br}_2_{(\text{l})} + 2\text{e}^- \rightarrow 2\text{Br}^-_{(\text{aq})}$	+1.065
$\text{BrO}_3^-_{(\text{aq})} + 6\text{H}^+_{(\text{aq})} + 5\text{e}^- \rightarrow \text{Br}_2_{(\text{l})} + 3\text{H}_2\text{O}_{(\text{l})}$	+1.520
$2\text{CO}_2_{(\text{g})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_2\text{C}_2\text{O}_4_{(\text{aq})}$	-0.490
$\text{Ca}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Ca}_{(\text{s})}$	-2.870
$\text{Cd}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Cd}_{(\text{s})}$	-0.403
$\text{Ce}^{4+}_{(\text{aq})} + \text{e}^- \rightarrow \text{Ce}^{3+}_{(\text{aq})}$	+1.610
$\text{Cl}_2_{(\text{g})} + 2\text{e}^- \rightarrow 2\text{Cl}^-_{(\text{aq})}$	+1.359
$\text{HClO}_{(\text{aq})} + \text{H}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{Cl}_2_{(\text{g})} + \text{H}_2\text{O}_{(\text{l})}$	+1.630
$\text{ClO}^-_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} + 2\text{e}^- \rightarrow \text{Cl}^-_{(\text{aq})} + 2\text{OH}^-_{(\text{aq})}$	+0.890
$\text{ClO}_3^-_{(\text{aq})} + 6\text{H}^+_{(\text{aq})} + 5\text{e}^- \rightarrow \text{Cl}_2_{(\text{g})} + 3\text{H}_2\text{O}_{(\text{l})}$	+1.470
$\text{Co}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Co}_{(\text{s})}$	-0.277

$\text{Co}^{3+}_{(\text{aq})} + \text{e}^- \rightarrow \text{Co}^{2+}_{(\text{aq})}$	+1.842
$\text{Cr}^{3+}_{(\text{aq})} + 3\text{e}^- \rightarrow \text{Cr}_{(\text{s})}$	-0.740
$\text{Cr}^{3+}_{(\text{aq})} + \text{e}^- \rightarrow \text{Cr}^{2+}_{(\text{aq})}$	-0.410
$\text{Cr}_2\text{O}_7^{2-}_{(\text{aq})} + 14\text{H}^+_{(\text{aq})} + 6\text{e}^- \rightarrow 2\text{Cr}^{3+}_{(\text{aq})} + 7\text{H}_2\text{O}_{(\text{l})}$	+1.330
$\text{CrO}_4^{2-}_{(\text{aq})} + 4\text{H}_2\text{O}_{(\text{l})} + 3\text{e}^- \rightarrow \text{Cr}(\text{OH})_3_{(\text{s})} + 5\text{OH}^-_{(\text{aq})}$	-0.130
$\text{Cu}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Cu}_{(\text{s})}$	+0.337
$\text{Cu}^{2+}_{(\text{aq})} + \text{e}^- \rightarrow \text{Cu}^+_{(\text{aq})}$	+0.153
$\text{Cu}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{Cu}_{(\text{s})}$	+0.521
$\text{CuI}_{(\text{s})} + \text{e}^- \rightarrow \text{Cu}_{(\text{s})} + \text{I}^-_{(\text{aq})}$	-0.185
$\text{F}_2_{(\text{g})} + 2\text{e}^- \rightarrow 2\text{F}^-_{(\text{aq})}$	+2.870
$\text{Fe}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Fe}_{(\text{s})}$	-0.440
$\text{Fe}^{3+}_{(\text{aq})} + \text{e}^- \rightarrow \text{Fe}^{2+}_{(\text{aq})}$	+0.771
$\text{Fe}(\text{CN})_6^{3-}_{(\text{aq})} + \text{e}^- \rightarrow \text{Fe}(\text{CN})_6^{4-}_{(\text{aq})}$	+0.360
$2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_2_{(\text{g})}$	0.000
$2\text{H}_2\text{O}_{(\text{l})} + 2\text{e}^- \rightarrow \text{H}_2_{(\text{g})} + 2\text{OH}^-_{(\text{aq})}$	-0.830
$\text{HO}_2^-_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})} + 2\text{e}^- \rightarrow 3\text{OH}^-_{(\text{aq})}$	+0.880
$\text{H}_2\text{O}_2_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow 2\text{H}_2\text{O}_{(\text{l})}$	+1.776
$\text{Hg}_2^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow 2\text{Hg}_{(\text{l})}$	+0.789
$2\text{Hg}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Hg}_2^{2+}_{(\text{aq})}$	+0.920
$\text{Hg}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Hg}_{(\text{l})}$	+0.854
$\text{I}_2_{(\text{s})} + 2\text{e}^- \rightarrow 2\text{I}^-_{(\text{aq})}$	+0.536
$\text{IO}_3^-_{(\text{aq})} + 6\text{H}^+_{(\text{aq})} + 5\text{e}^- \rightarrow \text{I}_2_{(\text{s})} + 3\text{H}_2\text{O}_{(\text{l})}$	+1.195
$\text{K}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{K}_{(\text{s})}$	-2.925
$\text{Li}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{Li}_{(\text{s})}$	-3.050
$\text{Mg}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Mg}_{(\text{s})}$	-2.370

$\text{Mn}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Mn}_{(\text{s})}$	-1.180
$\text{MnO}_{2(\text{s})} + 4\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Mn}^{2+}_{(\text{aq})} + 2\text{H}_2\text{O}_{(\text{l})}$	+1.230
$\text{MnO}_4^-_{(\text{aq})} + 8\text{H}^+_{(\text{aq})} + 5\text{e}^- \rightarrow \text{Mn}^{2+}_{(\text{aq})} + 4\text{H}_2\text{O}_{(\text{l})}$	+1.510
$\text{MnO}_4^-_{(\text{aq})} + 2\text{H}_2\text{O}_{(\text{l})} + 3\text{e}^- \rightarrow \text{MnO}_{2(\text{s})} + 4\text{OH}^-_{(\text{aq})}$	+0.590
$\text{HNO}_{2(\text{aq})} + \text{H}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{NO}_{(\text{g})} + \text{H}_2\text{O}_{(\text{l})}$	+1.000
$\text{N}_{2(\text{g})} + 4\text{H}_2\text{O}_{(\text{l})} + 4\text{e}^- \rightarrow 4\text{OH}^-_{(\text{aq})} + \text{N}_2\text{H}_{4(\text{aq})}$	-1.160
$\text{N}_{2(\text{g})} + 5\text{H}^+_{(\text{aq})} + 4\text{e}^- \rightarrow \text{N}_2\text{H}_5^+_{(\text{aq})}$	-0.230
$\text{NO}_3^-_{(\text{aq})} + 4\text{H}^+_{(\text{aq})} + 3\text{e}^- \rightarrow \text{NO}_{(\text{g})} + 2\text{H}_2\text{O}_{(\text{l})}$	+0.960
$\text{Na}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{Na}_{(\text{s})}$	-2.710
$\text{Ni}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Ni}_{(\text{s})}$	-0.280
$\text{O}_{2(\text{g})} + 4\text{H}^+_{(\text{aq})} + 4\text{e}^- \rightarrow 2\text{H}_2\text{O}_{(\text{l})}$	+1.230
$\text{O}_{2(\text{g})} + 2\text{H}_2\text{O}_{(\text{l})} + 4\text{e}^- \rightarrow 4\text{OH}^-_{(\text{aq})}$	+0.40
$\text{O}_{2(\text{g})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_2\text{O}_{2(\text{aq})}$	+0.68
$\text{O}_3_{(\text{g})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{O}_{2(\text{g})} + \text{H}_2\text{O}_{(\text{l})}$	+2.07
$\text{Pb}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Pb}_{(\text{s})}$	-0.126
$\text{PbO}_{2(\text{s})} + \text{HSO}_4^-_{(\text{aq})} + 3\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{PbSO}_{4(\text{s})} + 2\text{H}_2\text{O}_{(\text{l})}$	+1.685
$\text{PbSO}_{4(\text{s})} + \text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Pb}_{(\text{s})} + \text{HSO}_4^-_{(\text{aq})}$	-0.356
$\text{PtCl}_4^{2-}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Pt}_{(\text{s})} + 4\text{Cl}^-_{(\text{aq})}$	+0.73
$\text{S}_{(\text{s})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_2\text{S}_{(\text{g})}$	+0.141
$\text{H}_2\text{SO}_3_{(\text{aq})} + 4\text{H}^+_{(\text{aq})} + 4\text{e}^- \rightarrow \text{S}_{(\text{s})} + 3\text{H}_2\text{O}_{(\text{l})}$	+0.45
$\text{HSO}_4^-_{(\text{aq})} + 3\text{H}^+_{(\text{aq})} + 2\text{e}^- \rightarrow \text{H}_2\text{SO}_3_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+0.17
$\text{Sn}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Sn}_{(\text{s})}$	-0.136
$\text{Sn}^{4+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Sn}^{2+}_{(\text{aq})}$	+0.154
$\text{VO}_2^+_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + \text{e}^- \rightarrow \text{VO}^{2+}_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+1.00
$\text{Zn}^{2+}_{(\text{aq})} + 2\text{e}^- \rightarrow \text{Zn}_{(\text{s})}$	-0.763