

Standard Reduction Potentials in Aqueous Solution at 25°C	
Acidic Solution	E° (V)
$F_2(g) + 2 e^- \longrightarrow 2 F^-(aq)$	+2.87
$Co^{3+}(aq) + e^- \longrightarrow Co^{2+}(aq)$	+1.82
$Pb^{4+}(aq) + 2 e^- \longrightarrow Pb^{2+}(aq)$	+1.8
$H_2O_2(aq) + 2 H^+(aq) + 2 e^- \longrightarrow 2 H_2O$	+1.77
$NiO_2(s) + 4 H^+(aq) + 2 e^- \longrightarrow Ni^{2+}(aq) + 2 H_2O$	+1.7
$PbO_2(s) + SO_4^{2-}(aq) + 4 H^+(aq) + 2 e^- \longrightarrow PbSO_4(s) + 2 H_2O$	+1.685
$Au^+(aq) + e^- \longrightarrow Au(s)$	+1.68
$2 HClO(aq) + 2 H^+(aq) + 2 e^- \longrightarrow Cl_2(g) + 2 H_2O$	+1.63
$MnO_4^-(aq) + 8 H^+(aq) + 5 e^- \longrightarrow Mn^{2+}(aq) + 4 H_2O$	+1.51
$Au^{3+}(aq) + 3 e^- \longrightarrow Au(s)$	+1.5
$ClO_3^-(aq) + 6 H^+(aq) + 5 e^- \longrightarrow 1/2 Cl_2(g) + 3 H_2O$	+1.47
$BrO_3^- + 6 H^+(aq) + 6 e^- \longrightarrow Br^-(aq) + 3 H_2O$	+1.44
$Cl_2(g) + 2 e^- \longrightarrow 2 Cl^-(aq)$	+1.358
$Cr_2O_7^{2-} + 14 H^+(aq) + 6 e^- \longrightarrow 2 Cr^{3+}(aq) + 7 H_2O$	+1.33
$MnO_2(s) + 4 H^+(aq) + 2 e^- \longrightarrow Mn^{2+}(aq) + 2 H_2O$	+1.23
$O_2(g) + 4 H^+(aq) + 4 e^- \longrightarrow 2 H_2O$	+1.229
$IO_3^-(aq) + 6 H^+(aq) + 5 e^- \longrightarrow 1/2 I_2(aq) + 3 H_2O$	+1.195
$ClO_4^-(aq) + 2 H^+(aq) + 2 e^- \longrightarrow ClO_3^-(aq) + H_2O$	+1.19
$Br_2(l) + 2 e^- \longrightarrow 2 Br^-(aq)$	+1.066
$AuCl_4^- + 3 e^- \longrightarrow Au(s) + 4 Cl^-(aq)$	+1
$NO_3^-(aq) + 4 H^+(aq) + 3 e^- \longrightarrow NO(g) + 2 H_2O$	+0.96
$NO_3^-(aq) + 3 H^+(aq) + 2 e^- \longrightarrow HNO_2(aq) + H_2O$	+0.94
$2 Hg^{2+}(aq) + 2 e^- \longrightarrow Hg_2^{2+}(aq)$	+0.92
$Hg^{2+}(aq) + 2 e^- \longrightarrow Hg(l)$	+0.855
$Ag^+(aq) + e^- \longrightarrow Ag(s)$	+0.7994
$Hg_2^{2+}(aq) + 2 e^- \longrightarrow 2 Hg(l)$	+0.789
$Fe^{3+}(aq) + e^- \longrightarrow Fe^{2+}(aq)$	+0.771
$SbCl_6^-(aq) + 2 e^- \longrightarrow SbCl_4^-(aq) + 2 Cl^-(aq)$	+0.75
$[PtCl_4]^{2-}(aq) + 2 e^- \longrightarrow Pt(s) + 4 Cl^-(aq)$	+0.73
$O_2(g) + 2 H^+(aq) + 2 e^- \longrightarrow H_2O_2(aq)$	+0.682
$[PtCl_6]^{2-}(aq) + 2 e^- \longrightarrow [PtCl_4]^{2-}(aq) + 2 Cl^-(aq)$	+0.68
$H_3AsO_4(aq) + 2 H^+(aq) + 2 e^- \longrightarrow H_3AsO_3(aq) + H_2O$	+0.58
$I_2(s) + 2 e^- \longrightarrow 2 I^-(aq)$	+0.535

$\text{TeO}_2(\text{s}) + 4 \text{H}^+(\text{aq}) + 4 \text{e}^- \longrightarrow \text{Te}(\text{s}) + 2 \text{H}_2\text{O}$	+0.529
$\text{Cu}^+(\text{aq}) + \text{e}^- \longrightarrow \text{Cu}(\text{s})$	+0.521
$\text{Cu}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Cu}(\text{s})$	+0.337
$\text{HgCl}_2(\text{s}) + 2 \text{e}^- \longrightarrow 2 \text{Hg}(\text{l}) + 2 \text{Cl}^-(\text{aq})$	+0.27
$\text{AgCl}(\text{s}) + \text{e}^- \longrightarrow \text{Ag}(\text{s}) + \text{Cl}^-(\text{aq})$	+0.222
$\text{SO}_4^{2-}(\text{aq}) + 4 \text{H}^+(\text{aq}) + 2 \text{e}^- \longrightarrow \text{SO}_2(\text{g}) + 2 \text{H}_2\text{O}$	+0.2
$\text{SO}_4^{2-}(\text{aq}) + 4 \text{H}^+(\text{aq}) + 2 \text{e}^- \longrightarrow \text{H}_2\text{SO}_3(\text{g}) + \text{H}_2\text{O}$	+0.17
$\text{Cu}^{2+}(\text{aq}) + \text{e}^- \longrightarrow \text{Cu}^+(\text{aq})$	+0.153
$\text{Sn}^{4+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Sn}^{2+}(\text{aq})$	+0.15
$\text{S}(\text{s}) + 2 \text{H}^+(\text{aq}) + 2 \text{e}^- \longrightarrow \text{H}_2\text{S}(\text{aq})$	+0.14
$\text{AgBr}(\text{s}) + \text{e}^- \longrightarrow \text{Ag}(\text{s}) + \text{Br}^-(\text{aq})$	+0.0713
$2 \text{H}^+(\text{aq}) + 2 \text{e}^- \longrightarrow \text{H}_2(\text{g})$ (reference electrode)	0
$\text{Pb}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Pb}(\text{s})$	-0.126
$\text{Sn}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Sn}(\text{s})$	-0.14
$\text{AgI}(\text{s}) + \text{e}^- \longrightarrow \text{Ag}(\text{s}) + \text{I}^-(\text{aq})$	-0.15
$\text{Ni}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Ni}(\text{s})$	-0.25
$\text{Co}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Co}(\text{s})$	-0.28
$\text{Tl}^+(\text{aq}) + \text{e}^- \longrightarrow \text{Tl}(\text{s})$	-0.34
$\text{PbSO}_4(\text{s}) + 2 \text{e}^- \longrightarrow \text{Pb}(\text{s}) + \text{SO}_4^{2-}(\text{aq})$	-0.356
$\text{Se}(\text{s}) + 2 \text{H}^+(\text{aq}) + 2 \text{e}^- \longrightarrow \text{H}_2\text{Se}(\text{aq})$	-0.4
$\text{Cd}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Cd}(\text{s})$	-0.403
$\text{Cr}^{3+}(\text{aq}) + \text{e}^- \longrightarrow \text{Cr}^{2+}(\text{aq})$	-0.41
$\text{Fe}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Fe}(\text{s})$	-0.44
$\text{Ga}^{3+}(\text{aq}) + 3 \text{e}^- \longrightarrow \text{Ga}(\text{s})$	-0.53
$\text{Cr}^{3+}(\text{aq}) + 3 \text{e}^- \longrightarrow \text{Cr}(\text{s})$	-0.74
$\text{Zn}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Zn}(\text{s})$	-0.763
$2\text{H}_2\text{O}(\text{l}) + 2 \text{e}^- \longrightarrow \text{H}_2(\text{g}) + 2\text{OH}^-(\text{aq})$	-0.8277
$\text{Cr}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Cr}(\text{s})$	-0.91
$\text{Mn}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Mn}(\text{s})$	-1.18
$\text{V}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{V}(\text{s})$	-1.18
$\text{Zr}^{4+}(\text{aq}) + 4 \text{e}^- \longrightarrow \text{Zr}(\text{s})$	-1.53
$\text{Al}^{3+}(\text{aq}) + 3 \text{e}^- \longrightarrow \text{Al}(\text{s})$	-1.66
$\text{H}_2(\text{g}) + 2 \text{e}^- \longrightarrow 2 \text{H}^-(\text{aq})$	-2.25
$\text{Mg}^{2+}(\text{aq}) + 2 \text{e}^- \longrightarrow \text{Mg}(\text{s})$	-2.37
$\text{Na}^+(\text{aq}) + \text{e}^- \longrightarrow \text{Na}(\text{s})$	-2.714

