

# TABLE OF STANDARD REDUCTION POTENTIALS

(modified from Wikipedia)

Half-reaction	$E^\circ$ (V)
$\text{Li}^+ + e^- \leftrightarrow \text{Li}(s)$	-3.0401
$\text{K}^+ + e^- \leftrightarrow \text{K}(s)$	-2.931
$\text{Rb}^+ + e^- \leftrightarrow \text{Rb}(s)$	-2.924
$\text{Ba}^{2+} + 2e^- \leftrightarrow \text{Ba}(s)$	-2.912
$\text{Sr}^{2+} + 2e^- \leftrightarrow \text{Sr}(s)$	-2.899
$\text{Ca}^{2+} + 2e^- \leftrightarrow \text{Ca}(s)$	-2.868
$\text{Na}^+ + e^- \leftrightarrow \text{Na}(s)$	-2.71
$\text{La}^{3+} + 3e^- \leftrightarrow \text{La}(s)$	-2.379
$\text{Mg}^{2+} + 2e^- \leftrightarrow \text{Mg}(s)$	-2.372
$\text{Ce}^{3+} + 3e^- \leftrightarrow \text{Ce}$	-2.336
$\text{H}_2 + 2e^- \leftrightarrow 2\text{H}^-$	-2.23
$\text{Sc}^{3+} + 3e^- \leftrightarrow \text{Sc}(s)$	-2.077
$\text{Be}^{2+} + 2e^- \leftrightarrow \text{Be}$	-1.847
$\text{U}^{3+} + 3e^- \leftrightarrow \text{U}$	-1.798
$\text{Al}^{3+} + 3e^- \leftrightarrow \text{Al}(s)$	-1.662
$\text{Ti}^{2+} + 2e^- \leftrightarrow \text{Ti}(s)$	-1.63
$\text{Mn}^{2+} + 2e^- \leftrightarrow \text{Mn}(s)$	-1.185
$\text{Cr}^{2+} + 2e^- \leftrightarrow \text{Cr}(s)$	-0.90
$2\text{H}_2\text{O} + 2e^- \leftrightarrow \text{H}_2(g) + 2\text{OH}^-$	-0.8277
$\text{Zn}^{2+} + 2e^- \leftrightarrow \text{Zn}(s)$	-0.7618
$\text{Cr}^{3+} + 3e^- \leftrightarrow \text{Cr}(s)$	-0.74
$\text{U}^{4+} + e^- \leftrightarrow \text{U}^{3+}$	-0.52
$\text{Fe}^{2+} + 2e^- \leftrightarrow \text{Fe}(s)$	-0.44
$\text{Cr}^{3+} + e^- \leftrightarrow \text{Cr}^{2+}$	-0.42
$\text{Cd}^{2+} + 2e^- \leftrightarrow \text{Cd}(s)$	-0.40
$\text{PbSO}_4(s) + 2e^- \leftrightarrow \text{Pb}(s) + \text{SO}_4^{2-}$	-0.3588
$\text{Tl}^+ + e^- \leftrightarrow \text{Tl}(s)$	-0.34
$\text{Co}^{2+} + 2e^- \leftrightarrow \text{Co}(s)$	-0.28
$\text{H}_3\text{PO}_4(aq) + 2\text{H}^+ + 2e^- \leftrightarrow \text{H}_3\text{PO}_3(aq) + \text{H}_2\text{O}$	-0.276
$\text{Ni}^{2+} + 2e^- \leftrightarrow \text{Ni}(s)$	-0.25
$\text{Sn}^{2+} + 2e^- \leftrightarrow \text{Sn}(s)$	-0.13
$\text{Pb}^{2+} + 2e^- \leftrightarrow \text{Pb}(s)$	-0.13
$\text{Fe}^{3+} + 3e^- \leftrightarrow \text{Fe}(s)$	-0.04

More Active (Weak Oxidizing Agents/Strong Reducing Agents)

The values of standard electrode potentials are given in the table in volts relative to the standard hydrogen electrode and are for the following conditions:

- A temperature of 25 °C;
- An effective concentration of 1 mol/L for each aqueous species
- A partial pressure of 101.325 kPa (absolute) (1 atm, 1.01325 bar) for each gaseous reagent.

Legend: (s) – solid; (l) – liquid; (g) – gas; (aq) – aqueous (default for all charged species)

Half-reaction	$E^\circ$ (V)
$2\text{H}^+ + 2e^- \leftrightarrow \text{H}_2(\text{g})$	<b>0.0000</b>
$\text{Sn}^{4+} + 2e^- \leftrightarrow \text{Sn}^{2+}$	+0.15
$\text{Cu}^{2+} + e^- \leftrightarrow \text{Cu}^+$	+0.159
$\text{Bi}^{3+} + 3e^- \leftrightarrow \text{Bi}(\text{s})$	+0.308
$\text{Cu}^{2+} + 2e^- \leftrightarrow \text{Cu}(\text{s})$	+0.340
$\text{O}_2(\text{g}) + 2\text{H}_2\text{O} + 4e^- \leftrightarrow 4\text{OH}^-(\text{aq})$	+0.40
$\text{Cu}^+ + e^- \leftrightarrow \text{Cu}(\text{s})$	+0.520
$\text{I}_2(\text{s}) + 2e^- \leftrightarrow 2\text{I}^-$	+0.54
$\text{MnO}_4^- + 2\text{H}_2\text{O} + 3e^- \leftrightarrow \text{MnO}_2(\text{s}) + 4\text{OH}^-$	+0.59
$\text{O}_2(\text{g}) + 2\text{H}^+ + 2e^- \leftrightarrow \text{H}_2\text{O}_2(\text{aq})$	+0.70
$\text{Tl}^{3+} + 3e^- \leftrightarrow \text{Tl}(\text{s})$	+0.72
$\text{Fe}^{3+} + e^- \leftrightarrow \text{Fe}^{2+}$	+0.77
$\text{Ag}^+ + e^- \leftrightarrow \text{Ag}(\text{s})$	+0.7996
$\text{Hg}_2^{2+} + 2e^- \leftrightarrow 2\text{Hg}(\text{l})$	+0.80
$\text{NO}_3^-(\text{aq}) + 2\text{H}^+ + e^- \leftrightarrow \text{NO}_2(\text{g}) + \text{H}_2\text{O}$	+0.80
$\text{Hg}^{2+} + 2e^- \leftrightarrow \text{Hg}(\text{l})$	+0.85
$2\text{Hg}^{2+} + 2e^- \leftrightarrow \text{Hg}_2^{2+}$	+0.91
$\text{Pd}^{2+} + 2e^- \leftrightarrow \text{Pd}(\text{s})$	+0.915
$\text{Br}_2(\text{l}) + 2e^- \leftrightarrow 2\text{Br}^-$	+1.066
$\text{Br}_2(\text{aq}) + 2e^- \leftrightarrow 2\text{Br}^-$	+1.0873
$\text{Pt}^{2+} + 2e^- \leftrightarrow \text{Pt}(\text{s})$	+1.188
$\text{O}_2(\text{g}) + 4\text{H}^+ + 4e^- \leftrightarrow 2\text{H}_2\text{O}$	+1.229
$\text{Tl}^{3+} + 2e^- \leftrightarrow \text{Tl}^+$	+1.25
$\text{Cr}_2\text{O}_7^{2-} + 14\text{H}^+ + 6e^- \leftrightarrow 2\text{Cr}^{3+} + 7\text{H}_2\text{O}$	+1.33
$\text{Cl}_2(\text{g}) + 2e^- \leftrightarrow 2\text{Cl}^-$	+1.36
$\text{MnO}_4^- + 8\text{H}^+ + 5e^- \leftrightarrow \text{Mn}^{2+} + 4\text{H}_2\text{O}$	+1.51
$\text{Au}^{3+} + 3e^- \leftrightarrow \text{Au}(\text{s})$	+1.52
$\text{Pb}^{4+} + 2e^- \leftrightarrow \text{Pb}^{2+}$	+1.69
$\text{H}_2\text{O}_2(\text{aq}) + 2\text{H}^+ + 2e^- \leftrightarrow 2\text{H}_2\text{O}$	+1.78
$\text{Co}^{3+} + e^- \leftrightarrow \text{Co}^{2+}$	+1.82
$\text{Au}^+ + e^- \leftrightarrow \text{Au}(\text{s})$	+1.83
$\text{O}_3(\text{g}) + 2\text{H}^+ + 2e^- \leftrightarrow \text{O}_2(\text{g}) + \text{H}_2\text{O}$	+2.075
$\text{F}_2(\text{g}) + 2e^- \leftrightarrow 2\text{F}^-$	+2.87
$\text{F}_2(\text{g}) + 2\text{H}^+ + 2e^- \leftrightarrow 2\text{HF}(\text{aq})$	+3.05

Less Active (Strong Oxidizing Agents/Weak Reducing Agents)

