

The table lists standard reduction potentials, E° values, at 298.15 K (25 °C), and at a pressure of 101.325 kPa (1 atm) (not the standard pressure of 1 bar). The activity of all soluble species is assumed to be 1.000 mol L⁻¹. This is in particular important when pH (H⁺ or OH⁻) take part in the equilibrium. The reliability of the potentials is not the same for all the data. Typically, the values with fewer significant figures have lower reliability. The values of reduction potentials, in particular those of less common reactions, are not definite; they are subject to occasional revisions.

Abbreviations: ac = acetate; bipy = 2,2'-dipyridine, or bipyridine; en = ethylenediamine; phen = 1,10-phenanthroline.

Reference: Rumble, J. *CRC Handbook of Chemistry and Physics*, 98th Edition, CRC Press LLC, 2017.

Reduction half-reaction	E° / V
$\text{Ag}^+ + \text{e}^- \rightleftharpoons \text{Ag}$	+0.7996
$\text{Ag}^{2+} + \text{e}^- \rightleftharpoons \text{Ag}^+$	+1.980
$\text{AgBr} + \text{e}^- \rightleftharpoons \text{Ag} + \text{Br}^-$	+0.071 33
$\text{AgCl} + \text{e}^- \rightleftharpoons \text{Ag} + \text{Cl}^-$	+0.222 33
$\text{Ag}_2\text{CrO}_4 + 2 \text{e}^- \rightleftharpoons 2 \text{Ag} + \text{CrO}_4^{2-}$	+0.4470
$\text{AgF} + \text{e}^- \rightleftharpoons \text{Ag} + \text{F}^-$	+0.779
$\text{AgI} + \text{e}^- \rightleftharpoons \text{Ag} + \text{I}^-$	-0.152 24
$\text{Al}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Al}$	-1.676
$\text{H}_3\text{AsO}_4 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{HAsO}_2 + 2 \text{H}_2\text{O}$	+0.560
$\text{Au}^+ + \text{e}^- \rightleftharpoons \text{Au}$	+1.692
$\text{Au}^{3+} + 2 \text{e}^- \rightleftharpoons \text{Au}^+$	+1.401
$\text{Au}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Au}$	+1.498
$\text{Ba}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ba}$	-2.912
$\text{Be}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Be}$	-1.847
$\text{Bi}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Bi}$	+0.308
$\text{Bi}_2\text{O}_3 + 3 \text{H}_2\text{O} + 6 \text{e}^- \rightleftharpoons 2 \text{Bi} + 6 \text{OH}^-$	-0.46
$\text{BiO}^+ + 2 \text{H}^+ + 3 \text{e}^- \rightleftharpoons \text{Bi} + \text{H}_2\text{O}$	+0.320
$\text{Br}_2 + 2 \text{e}^- \rightleftharpoons 2 \text{Br}^-$	+1.0873
$\text{BrO}^- + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{Br}^- + 2 \text{OH}^-$	+0.761
$2 \text{HBrO} + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{Br}_2 + 2 \text{H}_2\text{O}$	+1.574
$2 \text{BrO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons \text{Br}_2 + 6 \text{H}_2\text{O}$	+1.482
$\text{CO}_2 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{HCOOH}$	-0.199
$\text{Ca}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ca}$	-2.868
$\text{Cd}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cd}$	-0.4030
$\text{Cd}(\text{OH})_2 + 2 \text{e}^- \rightleftharpoons \text{Cd} + 2 \text{OH}^-$	-0.809
$\text{Ce}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Ce}$	-2.336
$\text{Ce}^{4+} + \text{e}^- \rightleftharpoons \text{Ce}^{3+}$	+1.72
$\text{Cl}_2 + 2 \text{e}^- \rightleftharpoons 2 \text{Cl}^-$	+1.358 27
$\text{ClO}^- + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{Cl}^- + 2 \text{OH}^-$	+0.81
$\text{ClO}_4^- + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{ClO}_3^- + \text{H}_2\text{O}$	+1.189
$\text{ClO}_4^- + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{ClO}_3^- + 2 \text{OH}^-$	+0.36
$2 \text{HClO} + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{Cl}_2 + 2 \text{H}_2\text{O}$	+1.611
$2 \text{ClO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons \text{Cl}_2 + 6 \text{H}_2\text{O}$	1.47
$\text{Co}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Co}$	-0.28
$\text{Co}^{3+} + \text{e}^- \rightleftharpoons \text{Co}^{2+}$	+1.92
$\text{Cr}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cr}$	-0.913
$\text{Cr}^{3+} + \text{e}^- \rightleftharpoons \text{Cr}^{2+}$	-0.407
$\text{Cr}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Cr}$	-0.744
$\text{Cr}_2\text{O}_7^{2-} + 14 \text{H}^+ + 6 \text{e}^- \rightleftharpoons 2 \text{Cr}^{3+} + 7 \text{H}_2\text{O}$	+1.36
$\text{CrO}_4^{2-} + 4 \text{H}_2\text{O} + 3 \text{e}^- \rightleftharpoons \text{Cr}(\text{OH})_3 + 5 \text{OH}^-$	-0.13
$\text{Cs}^+ + \text{e}^- \rightleftharpoons \text{Cs}$	-3.026
$\text{Cu}^+ + \text{e}^- \rightleftharpoons \text{Cu}$	+0.521
$\text{Cu}^{2+} + \text{e}^- \rightleftharpoons \text{Cu}^+$	+0.153
$\text{Cu}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cu}$	+0.3419
$\text{Cu}(\text{OH})_2 + 2 \text{e}^- \rightleftharpoons \text{Cu} + 2 \text{OH}^-$	-0.222
$\text{F}_2 + 2 \text{e}^- \rightleftharpoons 2 \text{F}^-$	+2.866
$\text{Fe}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Fe}$	-0.447
$\text{Fe}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Fe}$	-0.037
$\text{Fe}^{3+} + \text{e}^- \rightleftharpoons \text{Fe}^{2+}$	+0.771
$[\text{Fe}(\text{CN})_6]^{3-} + \text{e}^- \rightleftharpoons [\text{Fe}(\text{CN})_6]^{4-}$	+0.358
$[\text{Fe}(\text{bipy})_3]^{3+} + \text{e}^- \rightleftharpoons [\text{Fe}(\text{bipy})_3]^{2+}$	+1.03
$\text{Fe}(\text{OH})_3 + \text{e}^- \rightleftharpoons \text{Fe}(\text{OH})_2 + \text{OH}^-$	-0.56
$[\text{Fe}(\text{phen})_3]^{3+} + \text{e}^- \rightleftharpoons [\text{Fe}(\text{phen})_3]^{2+}$	+1.147
$\text{Ga}^{3+} + \text{e}^- \rightleftharpoons \text{Ga}$	-0.549
$\text{Ga}^+ + \text{e}^- \rightleftharpoons \text{Ga}$	-0.2
$2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{H}_2$	0

Reduction half-reaction	E° / V
$2 \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{H}_2 + 2 \text{OH}^-$	-0.8277
$\text{HO}_2^- + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons 3 \text{OH}^-$	+0.878
$\text{H}_2\text{O}_2 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons 2 \text{H}_2\text{O}$	+1.776
$\text{Hg}_2^{2+} + 2 \text{e}^- \rightleftharpoons 2 \text{Hg}$	+0.7973
$\text{Hg}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Hg}$	+0.851
$2 \text{Hg}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Hg}_2^{2+}$	+0.920
$\text{Hg}_2\text{Cl}_2 + 2 \text{e}^- \rightleftharpoons 2 \text{Hg} + 2 \text{Cl}^-$	+0.268 08
$\text{I}_2 + 2 \text{e}^- \rightleftharpoons 2 \text{I}^-$	+0.5355
$\text{I}_3^- + 2 \text{e}^- \rightleftharpoons 3 \text{I}^-$	+0.536
$2 \text{IO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons \text{I}_2 + 6 \text{H}_2\text{O}$	+1.195
$\text{In}^+ + \text{e}^- \rightleftharpoons \text{In}$	-0.14
$\text{In}^{2+} + \text{e}^- \rightleftharpoons \text{In}^+$	-0.40
$\text{In}^{3+} + \text{e}^- \rightleftharpoons \text{In}^{2+}$	-0.49
$\text{In}^{3+} + 2 \text{e}^- \rightleftharpoons \text{In}^+$	-0.443
$\text{In}^{3+} + 3 \text{e}^- \rightleftharpoons \text{In}$	-0.3382
$\text{K}^+ + \text{e}^- \rightleftharpoons \text{K}$	-2.931
$\text{La}^{3+} + 3 \text{e}^- \rightleftharpoons \text{La}$	-2.379
$\text{Li}^+ + \text{e}^- \rightleftharpoons \text{Li}$	-3.0401
$\text{Mg}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Mg}$	-2.372
$\text{Mn}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Mn}$	-1.185
$\text{Mn}^{3+} + \text{e}^- \rightleftharpoons \text{Mn}^{2+}$	+1.5415
$\text{MnO}_2 + 4 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{Mn}^{2+} + 2 \text{H}_2\text{O}$	+1.224
$\text{MnO}_4^- + \text{e}^- \rightleftharpoons \text{MnO}_4^{2-}$	+0.558
$\text{MnO}_4^- + 4 \text{H}^+ + 3 \text{e}^- \rightleftharpoons \text{MnO}_2 + 2 \text{H}_2\text{O}$	+1.679
$\text{MnO}_4^- + 8 \text{H}^+ + 5 \text{e}^- \rightleftharpoons \text{Mn}^{2+} + 4 \text{H}_2\text{O}$	+1.507
$\text{MnO}_4^- + 2 \text{H}_2\text{O} + 3 \text{e}^- \rightleftharpoons \text{MnO}_2 + 4 \text{OH}^-$	+0.595
$\text{HNO}_2 + \text{H}^+ + \text{e}^- \rightleftharpoons \text{NO} + \text{H}_2\text{O}$	+0.983
$2 \text{NO}_3^- + 4 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{N}_2\text{O}_4 + 2 \text{H}_2\text{O}$	+0.803
$\text{NO}_3^- + 4 \text{H}^+ + 3 \text{e}^- \rightleftharpoons \text{NO} + 2 \text{H}_2\text{O}$	+0.957
$\text{NO}_3^- + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{NO}_2^- + 2 \text{OH}^-$	+0.01
$\text{Na}^+ + \text{e}^- \rightleftharpoons \text{Na}$	-2.71
$\text{Ni}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ni}$	-0.257
$\text{O}_2 + 4 \text{H}^+ + 4 \text{e}^- \rightleftharpoons 2 \text{H}_2\text{O}$	+1.229
$\text{O}_2 + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{HO}_2^- + \text{OH}^-$	-0.076
$\text{O}_2 + 2 \text{H}_2\text{O} + 4 \text{e}^- \rightleftharpoons 4 \text{OH}^-$	+0.401
$\text{O}_2 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{O}_2$	+0.695
$\text{O}_3 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{O}_2 + \text{H}_2\text{O}$	+2.076
$\text{O}_3 + \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons \text{O}_2 + 2 \text{OH}^-$	+1.24
$\text{Pb}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Pb}$	-0.1262
$\text{PbO}_2 + \text{SO}_4^{2-} + 4 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{PbSO}_4 + 2 \text{H}_2\text{O}$	+1.6913
$\text{PbSO}_4 + 2 \text{e}^- \rightleftharpoons \text{Pb} + \text{SO}_4^{2-}$	-0.3588
$\text{Pt}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Pt}$	+1.18
$[\text{PtCl}_4]^{2-} + 2 \text{e}^- \rightleftharpoons \text{Pt} + 4 \text{Cl}^-$	+0.755
$\text{Pu}^{4+} + \text{e}^- \rightleftharpoons \text{Pu}^{3+}$	+1.006
$\text{Ra}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ra}$	-2.8
$\text{Rb}^+ + \text{e}^- \rightleftharpoons \text{Rb}$	-2.98
$\text{S} + 2 \text{e}^- \rightleftharpoons \text{S}^{2-}$	-0.476 27
$\text{S} + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{S}$	+0.142
$\text{H}_2\text{SO}_3 + 4 \text{H}^+ + 4 \text{e}^- \rightleftharpoons \text{S} + 3 \text{H}_2\text{O}$	+0.45
$\text{SO}_4^{2-} + 4 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{SO}_3 + \text{H}_2\text{O}$	+0.172
$\text{S}_2\text{O}_8^{2-} + 2 \text{e}^- \rightleftharpoons 2 \text{SO}_4^{2-}$	+2.010
$\text{Se} + 2 \text{e}^- \rightleftharpoons \text{Se}^{2-}$	-0.670
$\text{Sn}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Sn}$	-0.1375
$\text{Sn}^{4+} + 2 \text{e}^- \rightleftharpoons \text{Sn}^{2+}$	+0.151
$\text{Sr}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Sr}$	-2.899
$\text{Te} + 2 \text{e}^- \rightleftharpoons \text{Te}^{2-}$	-1.143
$\text{Ti}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ti}$	-1.628
$\text{Ti}^{3+} + \text{e}^- \rightleftharpoons \text{Ti}^{2+}$	-0.369
$\text{Tl}^+ + \text{e}^- \rightleftharpoons \text{Tl}$	-0.336
$\text{U}^{3+} + 3 \text{e}^- \rightleftharpoons \text{U}$	-1.66
$\text{U}^{4+} + \text{e}^- \rightleftharpoons \text{U}^{3+}$	-0.52
$\text{V}^{2+} + 2 \text{e}^- \rightleftharpoons \text{V}$	-1.175
$\text{V}^{3+} + \text{e}^- \rightleftharpoons \text{V}^{2+}$	-0.255
$\text{VO}_2^+ + 2 \text{H}^+ + \text{e}^- \rightleftharpoons \text{VO}^{2+} + \text{H}_2\text{O}$	+0.991
$\text{H}_4\text{XeO}_6 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons \text{XeO}_3 + 3 \text{H}_2\text{O}$	+2.42
$\text{Zn}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Zn}$	-0.7618