

A Selection of Standard Electrode Potentials, E^\ominus/V

Electrode Potentials, E^\ominus				
	OXIDISED FORM	\rightleftharpoons	REDUCED FORM	E^\ominus/V
1	$\text{Li}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Li}_{(\text{s})}$	-3.03
2	$\text{K}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{K}_{(\text{s})}$	-2.92
3	$\text{Na}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Na}_{(\text{s})}$	-2.71
4	$\text{Mg}^{2+}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Mg}_{(\text{s})}$	-2.37
5	$\text{ZnO}_{(\text{s})} + \text{H}_2\text{O}_{(\text{l})} + 2\text{e}^-$	\rightleftharpoons	$\text{Zn}_{(\text{s})} + 2\text{OH}^-_{(\text{aq})}$	-1.28
6	$2\text{H}_2\text{O}_{(\text{l})} + 2\text{e}^-$	\rightleftharpoons	$2\text{OH}^-_{(\text{aq})} + \text{H}_2_{(\text{g})}$ (alkaline conditions)	-0.83
7	$2\text{Cd}(\text{OH})_{2(\text{s})} + 2\text{e}^-$	\rightleftharpoons	$\text{Cd}_{(\text{aq})} + 2\text{OH}^-_{(\text{aq})}$	-0.81
8	$\text{Zn}^{2+}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Zn}_{(\text{s})}$	-0.76
9	$\text{Fe}^{2+}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Fe}_{(\text{s})}$	-0.44
10	$\text{PbSO}_4_{(\text{s})} + 2\text{e}^-$	\rightleftharpoons	$\text{Pb}_{(\text{s})} + \text{SO}_4^{2-}_{(\text{aq})}$	-0.36
11	$\text{V}^{3+}_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{V}^{2+}_{(\text{aq})}$	-0.26
12	$\text{Sn}^{2+}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Sn}_{(\text{s})}$	-0.14
13	$\text{H}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\frac{1}{2}\text{H}_2_{(\text{g})}$ (acidic conditions)	0.00
14	$\text{S}_4\text{O}_6^{2-}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$2\text{S}_2\text{O}_3^{2-}_{(\text{aq})}$	+0.09
15	$\text{Cu}^{2+}_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Cu}^+_{(\text{aq})}$	+0.15
16	$2\text{MnO}_2_{(\text{s})} + \text{H}_2\text{O}_{(\text{l})} + 2\text{e}^-$	\rightleftharpoons	$\text{Mn}_2\text{O}_3_{(\text{s})} + 2\text{OH}^-_{(\text{aq})}$	+0.15
17	$\text{Cu}^{2+}_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Cu}_{(\text{s})}$	+0.34
18	$\text{VO}^{2+}_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{V}^{3+}_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+0.34
19	$\text{O}_2_{(\text{g})} + 2\text{H}_2\text{O}_{(\text{l})} + 2\text{e}^-$	\rightleftharpoons	$4\text{OH}^-_{(\text{aq})}$ (alkaline conditions)	+0.40
20	$2\text{NiOOH}_{(\text{s})} + 2\text{H}_2\text{O} + 2\text{e}^-$	\rightleftharpoons	$2\text{Ni}(\text{OH})_{2(\text{s})} + 2\text{OH}^-_{(\text{aq})}$	+0.49
21	$\text{Cu}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Cu}_{(\text{s})}$	+0.52
22	$\frac{1}{2}\text{I}_2_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{I}^-_{(\text{aq})}$	+0.54
23	$\text{O}_2_{(\text{g})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{H}_2\text{O}_2_{(\text{aq})}$	+0.68
24	$2\text{MnO}_2_{(\text{s})} + 2\text{NH}_4^+_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{Mn}_2\text{O}_3_{(\text{s})} + 2\text{NH}_3_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+0.75
25	$\text{Fe}^{3+}_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Fe}^{2+}_{(\text{aq})}$	+0.77
26	$\text{Ag}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{Ag}_{(\text{s})}$	+0.80
27	$\text{NO}_3^-_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\frac{1}{2}\text{N}_2\text{O}_4_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+0.80
28	$\text{VO}_2^+_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + \text{e}^-$	\rightleftharpoons	$\text{VO}^{2+}_{(\text{aq})} + \text{H}_2\text{O}_{(\text{l})}$	+1.00
29	$\frac{1}{2}\text{Br}_2_{(\text{l})} + \text{e}^-$	\rightleftharpoons	$\text{Br}^-_{(\text{aq})}$	+1.09
30	$\text{O}_2_{(\text{g})} + 4\text{H}^+_{(\text{aq})} + 4\text{e}^-$	\rightleftharpoons	$2\text{H}_2\text{O}_{(\text{l})}$ (acidic conditions)	+1.23
31	$\text{Cr}_2\text{O}_7^{2-}_{(\text{aq})} + 14\text{H}^+_{(\text{aq})} + 6\text{e}^-$	\rightleftharpoons	$2\text{Cr}^{3+}_{(\text{aq})} + 7\text{H}_2\text{O}_{(\text{l})}$	+1.33
32	$\frac{1}{2}\text{Cl}_2_{(\text{g})} + \text{e}^-$	\rightleftharpoons	$\text{Cl}^-_{(\text{aq})}$	+1.36
33	$\text{MnO}_4^-_{(\text{aq})} + 8\text{H}^+_{(\text{aq})} + 5\text{e}^-$	\rightleftharpoons	$\text{Mn}^{2+}_{(\text{aq})} + 4\text{H}_2\text{O}_{(\text{l})}$	+1.51
34	$\text{PbO}_2_{(\text{s})} + \text{SO}_4^{2-}_{(\text{aq})} + 4\text{H}^+_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$\text{PbSO}_4_{(\text{s})} + 2\text{H}_2\text{O}_{(\text{l})}$	+1.69
35	$\text{H}_2\text{O}_2_{(\text{aq})} + 2\text{H}^+_{(\text{aq})} + 2\text{e}^-$	\rightleftharpoons	$2\text{H}_2\text{O}_{(\text{l})}$	+1.77
36	$\frac{1}{2}\text{F}_2_{(\text{g})} + \text{e}^-$	\rightleftharpoons	$\text{F}^-_{(\text{aq})}$	+2.87

The colour pairs are well known $\frac{1}{2}$ cell pairings in common cells and redox titrations

- is the Daniell Cell
- is the typical non-rechargeable storage cell (Leclanché)
- is the rechargeable lead/acid cell
- is the rechargeable NiCd cell
- is the hydrogen fuel cell (acidic conditions)
- is the hydrogen fuel cell (alkaline conditions)