

Potenciales Estándar de Reducción

Apéndice E

Semi-reacción	E° (Volt)
$\text{Ag}^+_{(\text{ac})} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})}$	+0,799
$\text{AgBr}_{(\text{s})} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})} + \text{Br}^-_{(\text{ac})}$	+0,095
$\text{AgCl}_{(\text{s})} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})} + \text{Cl}^-_{(\text{ac})}$	+0,222
$\text{Ag}(\text{CN})_2^-_{(\text{ac})} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})} + 2 \text{CN}^-_{(\text{ac})}$	-0,31
$\text{Ag}_2\text{CrO}_4_{(\text{s})} + 2 \text{e}^- \rightleftharpoons 2 \text{Ag}_{(\text{s})} + \text{CrO}_4^{2-}_{(\text{ac})}$	+0,446
$\text{AgI}_{(\text{s})} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})} + \text{I}^-_{(\text{ac})}$	-0,151
$\text{Ag}(\text{S}_2\text{O}_3)_2^{3-} + \text{e}^- \rightleftharpoons \text{Ag}_{(\text{s})} + 2 \text{S}_2\text{O}_3^{2-}_{(\text{ac})}$	+0,01
$\text{Al}^{3+}_{(\text{ac})} + 3 \text{e}^- \rightleftharpoons \text{Al}_{(\text{s})}$	-1,66
$\text{H}_3\text{AsO}_4_{(\text{ac})} + 2 \text{H}^+_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{H}_3\text{AsO}_3_{(\text{ac})} + \text{H}_2\text{O}_{(\text{l})}$	+0,559
$\text{Ba}^{2+}_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{Ba}_{(\text{s})}$	-2,90
$\text{BiO}^+_{(\text{ac})} + 2 \text{H}^+_{(\text{ac})} + 3 \text{e}^- \rightleftharpoons \text{Bi}_{(\text{s})} + \text{H}_2\text{O}_{(\text{l})}$	+0,32
$\text{Br}_{2(\text{l})} + 2 \text{e}^- \rightleftharpoons 2 \text{Br}^-_{(\text{ac})}$	+1,065
$\text{BrO}_3^-_{(\text{ac})} + 6 \text{H}^+_{(\text{ac})} + 5 \text{e}^- \rightleftharpoons 1/2 \text{Br}_{2(\text{l})} + 3 \text{H}_2\text{O}_{(\text{l})}$	+1,52
$2 \text{CO}_2_{(\text{g})} + 2 \text{H}^+_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{C}_2\text{O}_4_{(\text{ac})}$	-0,49
$\text{Ca}^{2+}_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{Ca}_{(\text{s})}$	-2,87
$\text{Cd}^{2+}_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{Cd}_{(\text{s})}$	-0,403
$\text{Ce}^{4+}_{(\text{ac})} + \text{e}^- \rightleftharpoons \text{Ce}^{3+}_{(\text{ac})}$	+1,61
$\text{Cl}_{2(\text{g})} + 2 \text{e}^- \rightleftharpoons 2 \text{Cl}^-_{(\text{ac})}$	+1,359
$\text{HClO}_{(\text{ac})} + \text{H}^+_{(\text{ac})} + \text{e}^- \rightleftharpoons 1/2 \text{Cl}_{2(\text{g})} + \text{H}_2\text{O}_{(\text{l})}$	+1,63
$\text{ClO}^-_{(\text{ac})} + \text{H}_2\text{O}_{(\text{l})} + 2 \text{e}^- \rightleftharpoons \text{Cl}^-_{(\text{ac})} + 2 \text{OH}^-_{(\text{ac})}$	+0,89
$\text{ClO}_3^-_{(\text{ac})} + 6 \text{H}^+_{(\text{ac})} + 5 \text{e}^- \rightleftharpoons 1/2 \text{Cl}_{2(\text{g})} + 3 \text{H}_2\text{O}_{(\text{l})}$	+1,47
$\text{Co}^{2+}_{(\text{ac})} + 2 \text{e}^- \rightleftharpoons \text{Co}_{(\text{s})}$	-0,277

$\text{Co}^{3+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Co}^{2+}_{(\text{ac})}$	+1,842
$\text{Cr}^{3+}_{(\text{ac})} + 3 \text{e}^{-} \rightleftharpoons \text{Cr}_{(\text{s})}$	-0,74
$\text{Cr}^{3+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Cr}^{2+}_{(\text{ac})}$	-0,41
$\text{Cr}_2\text{O}_7^{2-}_{(\text{ac})} + 14 \text{H}^{+}_{(\text{ac})} + 6 \text{e}^{-} \rightleftharpoons 2 \text{Cr}^{3+}_{(\text{ac})} + 7 \text{H}_2\text{O}_{(\text{l})}$	+1,33
$\text{CrO}_4^{2-}_{(\text{ac})} + 4 \text{H}_2\text{O}_{(\text{l})} + 3 \text{e}^{-} \rightleftharpoons \text{Cr}(\text{OH})_3_{(\text{s})} + 5 \text{OH}^{-}_{(\text{ac})}$	-0,13
$\text{Cu}^{+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Cu}_{(\text{s})}$	+0,337
$\text{Cu}^{2+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Cu}^{+}_{(\text{ac})}$	+0,153
$\text{Cu}^{+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Cu}_{(\text{s})}$	+0,521
$\text{CuI}_{(\text{s})} + \text{e}^{-} \rightleftharpoons \text{Cu}_{(\text{s})} + \text{I}^{-}_{(\text{ac})}$	-0,185
$\text{F}_{2(\text{g})} + 2 \text{e}^{-} \rightleftharpoons 2 \text{F}^{-}_{(\text{ac})}$	+2,87
$\text{Fe}^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Fe}_{(\text{s})}$	-0,440
$\text{Fe}^{3+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Fe}^{2+}_{(\text{ac})}$	+0,771
$\text{Fe}(\text{CN})_6^{3-}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Fe}(\text{CN})_6^{4-}_{(\text{ac})}$	+0,36
$2 \text{H}^{+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{H}_{2(\text{g})}$	0,000
$2 \text{H}_2\text{O}_{(\text{l})} + 2 \text{e}^{-} \rightleftharpoons \text{H}_{2(\text{g})} + 2 \text{OH}^{-}_{(\text{ac})}$	-0,83
$\text{HO}_2^{-}_{(\text{ac})} + \text{H}_2\text{O}_{(\text{l})} + 2 \text{e}^{-} \rightleftharpoons 3 \text{OH}^{-}_{(\text{ac})}$	+0,88
$\text{H}_2\text{O}_{2(\text{ac})} + 2 \text{H}^{+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons 2 \text{H}_2\text{O}_{(\text{l})}$	+1,776
$\text{Hg}_2^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons 2 \text{Hg}_{(\text{l})}$	+0,789
$2 \text{Hg}^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Hg}_2^{2+}_{(\text{ac})}$	+0,920
$\text{Hg}^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Hg}_{(\text{l})}$	+0,854
$\text{I}_{2(\text{s})} + 2 \text{e}^{-} \rightleftharpoons 2 \text{I}^{-}_{(\text{ac})}$	+0,536
$\text{IO}_3^{-}_{(\text{ac})} + 6 \text{H}^{+}_{(\text{ac})} + 5 \text{e}^{-} \rightleftharpoons 1/2 \text{I}_{2(\text{s})} + 3 \text{H}_2\text{O}_{(\text{l})}$	+1,195
$\text{K}^{+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{K}_{(\text{s})}$	-2,925
$\text{Li}^{+}_{(\text{ac})} + \text{e}^{-} \rightleftharpoons \text{Li}_{(\text{s})}$	-3,05
$\text{Mg}^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Mg}_{(\text{s})}$	-2,37
$\text{Mn}^{2+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Mn}_{(\text{s})}$	-1,18
$\text{MnO}_{2(\text{s})} + 4 \text{H}^{+}_{(\text{ac})} + 2 \text{e}^{-} \rightleftharpoons \text{Mn}^{2+}_{(\text{ac})} + 2 \text{H}_2\text{O}_{(\text{l})}$	+1,23

$\text{MnO}_4^- (\text{ac}) + 8 \text{H}^+ (\text{ac}) + 5 \text{e}^- \rightleftharpoons \text{Mn}^{2+} (\text{ac}) + 4 \text{H}_2\text{O}(\text{l})$	+1,51
$\text{MnO}_4^- (\text{ac}) + 2 \text{H}_2\text{O}(\text{l}) + 3 \text{e}^- \rightleftharpoons \text{MnO}_2(\text{s}) + 4 \text{OH}^- (\text{ac})$	+0,59
$\text{HNO}_2(\text{ac}) + \text{H}^+ (\text{ac}) + \text{e}^- \rightleftharpoons \text{NO}(\text{g}) + \text{H}_2\text{O}(\text{l})$	+1,00
$\text{N}_2(\text{g}) + 4 \text{H}_2\text{O}(\text{l}) + 4 \text{e}^- \rightleftharpoons 4 \text{OH}^- (\text{ac}) + \text{N}_2\text{H}_4(\text{ac})$	-1,16
$\text{N}_2(\text{g}) + 5 \text{H}^+ (\text{ac}) + 4 \text{e}^- \rightleftharpoons \text{N}_2\text{H}_5^+ (\text{ac})$	-0,23
$\text{NO}_3^- (\text{ac}) + 4 \text{H}^+ (\text{ac}) + 3 \text{e}^- \rightleftharpoons \text{NO}(\text{g}) + 2 \text{H}_2\text{O}(\text{l})$	+0,96
$\text{Na}^+ (\text{ac}) + \text{e}^- \rightleftharpoons \text{Na}(\text{s})$	-2,71
$\text{Ni}^{2+} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Ni}(\text{s})$	-0,28
$\text{O}_2(\text{g}) + 4 \text{H}^+ (\text{ac}) + 4 \text{e}^- \rightleftharpoons 2 \text{H}_2\text{O}(\text{l})$	+1,23
$\text{O}_2(\text{g}) + 2 \text{H}_2\text{O}(\text{l}) + 4 \text{e}^- \rightleftharpoons 4 \text{OH}^- (\text{ac})$	+0,40
$\text{O}_2(\text{g}) + 2 \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{O}_2(\text{ac})$	+0,68
$\text{O}_3(\text{g}) + 2 \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{O}_2(\text{g}) + \text{H}_2\text{O}(\text{l})$	+2,07
$\text{Pb}^{2+} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Pb}(\text{s})$	-0,126
$\text{PbO}_2(\text{s}) + \text{HSO}_4^- (\text{ac}) + 3 \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{PbSO}_4(\text{s}) + 2 \text{H}_2\text{O}(\text{l})$	+1,685
$\text{PbSO}_4(\text{s}) + \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Pb}(\text{s}) + \text{HSO}_4^- (\text{ac})$	-0,356
$\text{PtCl}_4^{2-} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Pt}(\text{s}) + 4 \text{Cl}^- (\text{ac})$	+0,73
$\text{S}(\text{s}) + 2 \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{S}(\text{g})$	+0,141
$\text{H}_2\text{SO}_3(\text{ac}) + 4 \text{H}^+ (\text{ac}) + 4 \text{e}^- \rightleftharpoons \text{S}(\text{s}) + 3 \text{H}_2\text{O}(\text{l})$	+0,45
$\text{HSO}_4^- (\text{ac}) + 3 \text{H}^+ (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{H}_2\text{SO}_3(\text{ac}) + \text{H}_2\text{O}(\text{l})$	+0,17
$\text{Sn}^{2+} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Sn}(\text{s})$	-0,136
$\text{Sn}^{4+} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Sn}^{2+} (\text{ac})$	+0,154
$\text{VO}_2^+ (\text{ac}) + 2 \text{H}^+ (\text{ac}) + \text{e}^- \rightleftharpoons \text{VO}^{2+} (\text{ac}) + \text{H}_2\text{O}(\text{l})$	+1,00
$\text{Zn}^{2+} (\text{ac}) + 2 \text{e}^- \rightleftharpoons \text{Zn}(\text{s})$	-0,763