
ANNEXE 10

POTENTIELS STANDARD D'ÉLECTRODE

à 298 K

Couple	Réaction	E_o [V]
Ag^+ / Ag	$\text{Ag}^+ + \text{e}^- \rightleftharpoons \text{Ag (s)}$	+ 0,799
$\text{Al}^{3+} / \text{Al}$	$\text{Al}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Al (s)}$	− 1,662
Au^+ / Au	$\text{Au}^+ + \text{e}^- \rightleftharpoons \text{Au (s)}$	+ 1,690
$\text{Au}^{3+} / \text{Au}$	$\text{Au}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Au (s)}$	+ 1,498
$\text{Ba}^{2+} / \text{Ba}$	$\text{Ba}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ba (s)}$	− 2,912
$\text{Be}^{2+} / \text{Be}$	$\text{Be}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Be (s)}$	− 1,850
$\text{Bi}^{3+} / \text{Bi}$	$\text{Bi}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Bi (s)}$	+ 0,215
$\text{Br}_2 / \text{Br}^-$	$\text{Br}_2 (\ell) + 2 \text{e}^- \rightleftharpoons 2 \text{Br}^-$	+ 1,066
$\text{BrO}_3^- / \text{Br}_2$	$2 \text{BrO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons \text{Br}_2 (\ell) + 6 \text{H}_2\text{O}$	+ 1,520
$\text{Ca}^{2+} / \text{Ca}$	$\text{Ca}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ca (s)}$	− 2,868
$\text{Cd}^{2+} / \text{Cd}$	$\text{Cd}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cd (s)}$	− 0,403
$\text{Cl}_2 / \text{Cl}^-$	$\text{Cl}_2 (\text{g}) + 2 \text{e}^- \rightleftharpoons 2 \text{Cl}^-$	+ 1,358
$\text{ClO}_3^- / \text{Cl}_2$	$2 \text{ClO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons \text{Cl}_2 (\text{g}) + 6 \text{H}_2\text{O}$	+ 1,470
$\text{Co}^{2+} / \text{Co}$	$\text{Co}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Co (s)}$	− 0,280
$\text{Co}^{3+} / \text{Co}^{2+}$	$\text{Co}^{3+} + \text{e}^- \rightleftharpoons \text{Co}^{2+}$	+ 1,808
$\text{Cr}^{2+} / \text{Cr}$	$\text{Cr}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cr (s)}$	− 0,910
$\text{Cr}^{3+} / \text{Cr}$	$\text{Cr}^{3+} + 3 \text{e}^- \rightleftharpoons \text{Cr (s)}$	− 0,744
$\text{Cr}_2\text{O}_7^{2-} / \text{Cr}^{3+}$	$\text{Cr}_2\text{O}_7^{2-} + 14 \text{H}^+ + 6 \text{e}^- \rightleftharpoons 2 \text{Cr}^{3+} + 7 \text{H}_2\text{O}$	+ 1,330
Cu^+ / Cu	$\text{Cu}^+ + \text{e}^- \rightleftharpoons \text{Cu (s)}$	+ 0,521
$\text{Cu}^{2+} / \text{Cu}$	$\text{Cu}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Cu (s)}$	+ 0,342
F_2 / F^-	$\text{F}_2 (\text{g}) + 2 \text{e}^- \rightleftharpoons 2 \text{F}^-$	+ 2,870

$\text{Fe}^{2+} / \text{Fe}$	$\text{Fe}^{2+} + 2 \text{e}^- \rightleftharpoons$	Fe (s)	$-0,440$
Couple	Réaction		$E_o [\text{V}]$
$\text{Fe}^{3+} / \text{Fe}$	$\text{Fe}^{3+} + 3 \text{e}^- \rightleftharpoons$	Fe (s)	$-0,037$
H^+ / H_2	$2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons$	$\text{H}_2 (\text{g})$	$0,000$
$\text{H}_2\text{O} / \text{H}_2$	$2 \text{H}_2\text{O} + 2 \text{e}^- \rightleftharpoons$	$\text{H}_2 (\text{g}) + 2 \text{OH}^-$	$-0,828$
$\text{H}_2\text{O}_2 / \text{H}_2\text{O}$	$\text{H}_2\text{O}_2 + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons$	$2 \text{H}_2\text{O}$	$+1,770$
$\text{Hg}^{2+} / \text{Hg}$	$\text{Hg}^{2+} + 2 \text{e}^- \rightleftharpoons$	Hg (s)	$+0,854$
$\text{Hg}_2^{2+} / \text{Hg}$	$\text{Hg}_2^{2+} + 2 \text{e}^- \rightleftharpoons$	2Hg (s)	$+0,788$
I_2 / I^-	$\text{I}_2 (\text{s}) + 2 \text{e}^- \rightleftharpoons$	2I^-	$+0,535$
$\text{IO}_3^- / \text{I}_2$	$2 \text{IO}_3^- + 12 \text{H}^+ + 10 \text{e}^- \rightleftharpoons$	$\text{I}_2 (\text{s}) + 6 \text{H}_2\text{O}$	$+1,196$
K^+ / K	$\text{K}^+ + \text{e}^- \rightleftharpoons$	K (s)	$-2,931$
Li^+ / Li	$\text{Li}^+ + \text{e}^- \rightleftharpoons$	Li (s)	$-3,040$
$\text{Mg}^{2+} / \text{Mg}$	$\text{Mg}^{2+} + 2 \text{e}^- \rightleftharpoons$	Mg (s)	$-2,372$
$\text{MnO}_4^- / \text{MnO}_4^{2-}$	$\text{MnO}_4^- + \text{e}^- \rightleftharpoons$	MnO_4^{2-}	$+0,564$
$\text{MnO}_4^- / \text{MnO}_2$	$\text{MnO}_4^- + 4 \text{H}^+ + 3 \text{e}^- \rightleftharpoons$	$\text{MnO}_2 (\text{s}) + 2 \text{H}_2\text{O}$	$+1,695$
$\text{MnO}_4^- / \text{MnO}_2$	$\text{MnO}_4^- + 2 \text{H}_2\text{O} + 3 \text{e}^- \rightleftharpoons$	$\text{MnO}_2 (\text{s}) + 4 \text{OH}^-$	$+0,588$
$^{(1)}\text{MnO}_4^- / \text{Mn}^{2+}$	$\text{MnO}_4^- + 8 \text{H}^+ + 5 \text{e}^- \rightleftharpoons$	$\text{Mn}^{2+} + 4 \text{H}_2\text{O}$	$+1,510$
Na^+ / Na	$\text{Na}^+ + \text{e}^- \rightleftharpoons$	Na (s)	$-2,713$
$\text{Ni}^{2+} / \text{Ni}$	$\text{Ni}^{2+} + 2 \text{e}^- \rightleftharpoons$	Ni (s)	$-0,257$
$\text{NO}_3^- / \text{NO}$	$\text{NO}_3^- + 4 \text{H}^+ + 3 \text{e}^- \rightleftharpoons$	$\text{NO (g)} + 2 \text{H}_2\text{O}$	$+0,960$
$^{(1)}\text{O}_2 / \text{H}_2\text{O}_2$	$\text{O}_2 (\text{g}) + 2 \text{H}^+ + 2 \text{e}^- \rightleftharpoons$	H_2O_2	$+0,695$
$^{(1)}\text{O}_2 / \text{H}_2\text{O}$	$\text{O}_2 (\text{g}) + 4 \text{H}^+ + 4 \text{e}^- \rightleftharpoons$	$2 \text{H}_2\text{O}$	$+1,229$
$^{(2)}\text{O}_2 / \text{OH}^-$	$\text{O}_2 (\text{g}) + 2 \text{H}_2\text{O} + 4 \text{e}^- \rightleftharpoons$	4OH^-	$+0,401$
$\text{Pb}^{2+} / \text{Pb}$	$\text{Pb}^{2+} + 2 \text{e}^- \rightleftharpoons$	Pb (s)	$-0,126$
$^{(3)}\text{Pb}^{2+} / \text{Pb}$	$\text{Pb}^{2+} + 2 \text{e}^- \rightleftharpoons$	Pb (s)	$-0,290$
$\text{PbO}_2 / \text{Pb}^{2+}$	$\text{PbO}_2 (\text{s}) + 4 \text{H}^+ + 2 \text{e}^- \rightleftharpoons$	$\text{Pb}^{2+} + 2 \text{H}_2\text{O}$	$+1,455$
S / S^{2-}	$\text{S (s)} + 2 \text{e}^- \rightleftharpoons$	S^{2-}	$-0,476$
$\text{S}_2\text{O}_8^{2-} / \text{SO}_4^{2-}$	$\text{S}_2\text{O}_8^{2-} + 2 \text{e}^- \rightleftharpoons$	2SO_4^{2-}	$+2,010$
$\text{S}_2\text{O}_6^{2-} / \text{S}_2\text{O}_3^{2-}$	$\text{S}_2\text{O}_6^{2-} + 2 \text{e}^- \rightleftharpoons$	$2 \text{S}_2\text{O}_3^{2-}$	$+0,080$

$\text{Sn}^{2+} / \text{Sn}$	$\text{Sn}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Sn (s)}$	$-0,136$
Couple	Réaction	$E_o [\text{V}]$
$\text{Sn}^{4+} / \text{Sn}$	$\text{Sn}^{4+} + 4 \text{e}^- \rightleftharpoons \text{Sn (s)}$	$+0,010$
$\text{Ti}^{2+} / \text{Ti}$	$\text{Ti}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Ti (s)}$	$-1,630$
$\text{Ti}^{3+} / \text{Ti}^{2+}$	$\text{Ti}^{3+} + \text{e}^- \rightleftharpoons \text{Ti}^{2+}$	$-0,369$
V^{2+} / V	$\text{V}^{2+} + 2 \text{e}^- \rightleftharpoons \text{V (s)}$	$-1,180$
$\text{V}^{3+} / \text{V}^{2+}$	$\text{V}^{3+} + \text{e}^- \rightleftharpoons \text{V}^{2+}$	$-0,256$
$\text{Zn}^{2+} / \text{Zn}$	$\text{Zn}^{2+} + 2 \text{e}^- \rightleftharpoons \text{Zn (s)}$	$-0,762$

⁽¹⁾en milieu acide

⁽²⁾en milieu basique

⁽³⁾dans H_2SO_4 1M