

**Table 2.2.** Standard oxidation-reduction potentials of respiratory chain components at pH 7.0 and 30°C

component	$E'_0$ (V)
$\text{NAD}^+ + 2\text{H}^+ + 2e^- \rightleftharpoons \text{NADH} + \text{H}^+$	-0.320
$\text{FAD} + 2\text{H}^+ + 2e^- \rightleftharpoons \text{FADH}_2$	-0.220
$\text{FMN} + 2\text{H}^+ + 2e^- \rightleftharpoons \text{FMNH}_2$	-0.190
fumarate + $2\text{H}^+ + 2e^- \rightleftharpoons$ succinate	+0.033
flavoproteins + $2\text{H}^+ + 2e^- \rightleftharpoons$ red. flavoproteins	-0.450-0.0
FeS-proteins + $2e^- \rightleftharpoons$ red. FeS-proteins	-0.400-+0.200 <sup>a</sup>
menaquinone + $2\text{H}^+ + 2e^- \rightleftharpoons$ red. menaquinone	-0.074
ubiquinone + $2\text{H}^+ + 2e^- \rightleftharpoons$ red. ubiquinone	+0.113
$2 \text{ cyt } b_{\text{ox}} + 2e^- \rightleftharpoons 2 \text{ cyt } b_{\text{red}}$	+0.070
$2 \text{ cyt } c_{\text{ox}} + 2e^- \rightleftharpoons 2 \text{ cyt } c_{\text{red}}$	+0.254
$2 \text{ cyt } a_{\text{ox}} + 2e^- \rightleftharpoons 2 \text{ cyt } a_{\text{red}}$	+0.384
$1/2\text{O}_2 + 2\text{H}^+ + 2e^- \rightleftharpoons \text{H}_2\text{O}$	+0.818

<sup>a</sup> Due to interaction of the prosthetic groups with the protein, the  $E'_0$  value of a certain flavoprotein or FeS-protein can be somewhere within this range.