

Answer on Question #78558 - Chemistry - Physical Chemistry

Question:

Estimate potential of the electrode $\text{NiCO}_3/\text{Ni},\text{CO}_3^{2-}$ relatively to standard hydrogen electrode.
 $E_{\text{NiCO}_3/\text{Ni},\text{CO}_3^{2-}} = 0.45 \text{ V}$, $[\text{CO}_3^{2-}] = 0.01 \text{ M}$.

Solution:

$$E = E_0 + (0.059/n) \lg([\text{Ox}]/[\text{Red}]);$$

$$E = 0.45 - (0.059/2) \lg[\text{CO}_3^{2-}];$$

$$E = 0.45 + 2 = 2.45.$$

Answer: 2.45.

Answer provided by AssignmentExpert.com