

Faraday's Laws Example - Time

How much time is needed to deposit 15.8g Ag using a 25.0 A current?

$$1. \quad 15.8 \cancel{\text{g Ag}} \times \frac{1 \cancel{\text{mol Ag}}}{107.87 \cancel{\text{g}}} = 0.146 \text{ mol Ag}$$



$$0.146 \cancel{\text{mol Ag}} \times \frac{1 \cancel{\text{mole e}^-}}{1 \cancel{\text{mol Ag}}} = 0.146 \text{ mole e}^-$$

$$3. \quad 0.146 \cancel{\text{mole e}^-} \times \frac{96500 \cancel{\text{C}}}{1 \cancel{\text{mole}}} = 14135 \text{ C}$$

also 14135 A-s

$$4. \quad \frac{14135 \cancel{\text{A-s}}}{25.0 \cancel{\text{A}}} = 565 \text{ sec.}$$

p. 793 #22-time
#23-A