

AP Chemistry Daily Videos

9.10 Electrolysis and Faraday's Law

Video #1

1. Identify each variable in the equation, what it means, and the units.

$$I = q/t$$

2. Try the problem on your own. Then evaluate your work and identify any errors you may have made.

A solution of copper (II) nitrate, $\text{Cu}(\text{NO}_3)_2$, is electrolyzed to plate an object with solid copper. A current of 1.2 A is applied for 10. minutes. Determine the mass of copper plated.

3. Try the problem on your own. Then evaluate your work and identify any errors you may have made.

A coin is plated with 0.125 g gold, Au, by electrolyzing a solution of gold (III) nitrate, $\text{Au}(\text{NO}_3)_3$, using a steady current of 0.800 A. Determine the time required for this process.

4. Try the problem on your own. Then evaluate your work and identify any errors you may have made.

In the electroplating of nickel, 0.200 faraday of electrical charge is passed through a solution of NiSO_4 . What mass of nickel is deposited?

- a. 2.94 g
- b. 5.87 g
- c. 11.7 g
- d. 58.7 g