Electrolysis

Electrolytic cell- uses electricity to produce a chemical change that would otherwise NOT occur spontaneously

Coulomb(C)- unit of electric charge equal to 6 x 10^{19} electrons

Current (*I*) - the rate of the flow of charge, measured in amperes (A) I **= # coulombs/time**
1A = 1C/sec

Faraday(F)- charge on one mole of electrons **1F = 96485 C/mole of electrons**

Electrolysis Practice Problems

1. For how many minutes must the electrolysis of a solution of $CuSO_4$ be carried out with a current of 2.25 A, to deposit 1.00 g of Cu(s) at the cathode?

2. When $AgNO_3$ is electrolyzed for 21 mins and 12 seconds, 2.175 g of Ag(s) is deposited on the cathode. What is the amount of charge in Coulombs passing through the cell? What is the magnitude of the current in Amps?

3. What is the redox reaction that takes place when a solution of NaCl is electrolyzed?