MORE ELECTROLYSIS CALCULATIONS

1. During an electrolysis of silver nitrate solution using silver electrodes and a current of 0.250 amps for exactly 30 minutes, 0.504 g of silver was lost from the anode. A_r of Ag = 108

   a) Draw a simple sketch of the apparatus you would use, and describe how you would carry out the experiment.

   b) Write the anode equation.

   c) Work out the number of coulombs of electricity that flowed during the experiment.

   d) Work out the number of moles of silver lost from the anode.

   e) Use your answers to b), c) and d) to work the number of coulombs in 1 mole of electrons (1 faraday).

   f) If the charge on an electron is 1.60×10^{-19} coulombs, work out a value for the Avogadro constant.