Quiz 5
Chem 311
Fall 2003

Suppose that electrons are forced to flow through the wires connecting two half cells. One of the half cells consists of a solution of Sn^{4+} and the electrons flowing at a current of 6.78 mA is causing the reduction of Sn^{4+} to Sn^{2+}. How long does it take to reduce 53.4 μmol of Sn^{4+}. ($F = 9.649*10^4$ C/mol)

$(53.4*10^{-6})*(2 \text{ mol e}/1 \text{ mol } Sn^{4+})*(9.649*10^4 \text{ C} / 1 \text{ mol e-})*(1 \text{ s} /6.78*10^{-3} \text{ C}) = 1520 \text{ s}$

$1.52*10^3$ s