Preparation of Electrolyte Solutions

In preparation for Lab 3 next week, calculate the mass required to prepare 100-mL of a 1.0 M solution of each unknown salt—M_1, M_2, and M_3.

1. Show calculation of the mass of M_1 required to prepare 100-mL of a 1.0 M solution. (Molar mass of $M_1 = 287.58$ g/mole.)

2. Show calculation of the mass of M_2 required to prepare 100-mL of a 1.0 M solution. (Molar mass of $M_2 = 331.21$ g/mole.)

3. Show calculation of the mass of M_3 required to prepare 100-mL of a 1.0 M solution. (Molar mass of $M_3 = 404.00$ g/mole.)

4. Investigation 3 (Electrochem) Prelab: Question 3

Sketch the **complete** voltaic cell from this problem using appropriate ion solutions for each half-cell. Label the anode and cathode. Indicate the half-reaction that occurs at each electrode. Indicate the direction of electron flow.