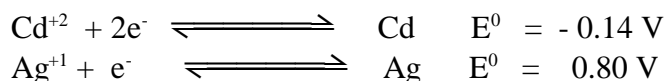
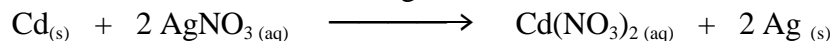


## Quiz: Electrochemical Cells

An electrochemical cell is to be assembled using the overall reaction:



- A) What is oxidized in this process?
- B) Write the equation for that half-reaction which is an *oxidation process*.
- C) Do the negative ions serve any useful purpose in the operation of the cell? Explain.
- D) Diagram the half-cell in which oxidation occurs. Label the electrode and the solution around it. (It will be convenient here to use the porous cup as a container for the half-cell).
- E) What is the electrode called which is undergoing oxidation?
- F) Write the equation for that half-reaction which is a *reduction process*. Diagram the half-cell for this process and identify the material used for the electrode and the compound dissolved in the solution.
- G) What is the name of the electrode in the half-cell where reduction is occurring?
- H) Combine the half-cells of parts (D) and (F) to give a complete cell; then indicate the *direction of electron flow* in the external circuit. Indicate the direction of *movement of positive ions* in the cell. Indicate the direction of *movement of negative ions* in the cell. Which half-cell electrode would be labelled negative?
- I) Suppose 2 moles of silver atoms were deposited. How many moles of cadmium atoms would dissolve? How many grams of Cd would dissolve if 2.0 g of silver metal plated out?
- J) Write the cell diagram ( using standard cell notation) for this cell, including the net cell voltage.
- K) As the cell operates, what will happen to each of the electrodes?
- L) What is the function of the porous pot?