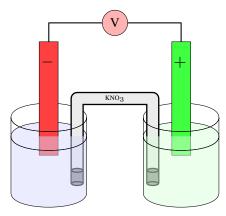
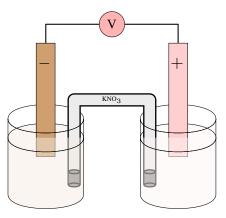
CHAPTER 0

INTRODUCTION TO GALVANIC CELLS

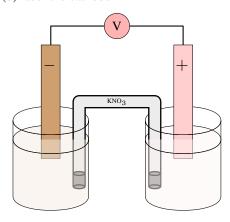
0.1 For the galvanic cell below, indicate: (a) the direction of flow of electrons (b) the direction of flow of cations (c) the direction of flow of anions



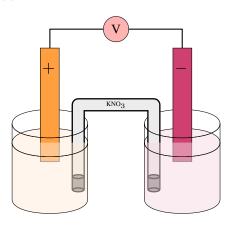
0.2 For the galvanic cell below, indicate: (a) the direction of flow of electrons (b) the direction of flow of cations (c) the direction of flow of anions



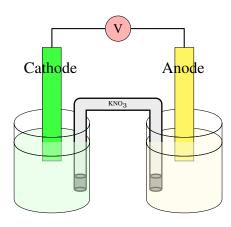
0.3 For the galvanic cell below, indicate: (a) label the anode (b) label the cathode



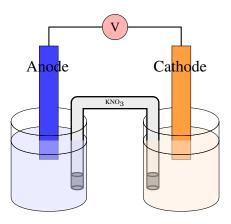
0.4 For the galvanic cell below, indicate: (a) label the anode (b) label the cathode



0.5 For the galvanic cell below, indicate: (a) label the sign(-or +) of each electrode (b) identify the flow of electrons



0.6 For the galvanic cell below, indicate: (a) label the sign(-or +) of each electrode (b) identify the flow of electrons



STANDARD REDUCTION POTENTIALS

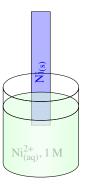
0.7 Sketch a semi-cell for the semi reaction below, indicate if the electrode is a solid-liquid electrode or gasliquid electrode. Assume standard conditions:

$$Ni_{(aq)}^{2+} + 2e^- \Longrightarrow Ni_{(s)}$$

0.8 Sketch a semi-cell for the semi reaction below, indicate if the electrode is a solid-liquid electrode or gasliquid electrode. Assume standard conditions:

$$MnO_4^- + 8 H^+ + 5 e^- \rightleftharpoons Mn_2^+ + 4 H_2O$$

Answers 0.1 (a) left to right (b) left to left side of salt bridge (c) right to right side of salt bridge 0.2 (a) right to left (b) right to right side of salt bridge (c) left to left side of salt bridge 0.3 (a) left (b) right 0.4 (a) right (b) left 0.5 (a) left +, right - (b) from right to left 0.6 (a) right +, left - (b) from left to right 0.7 A solid-liquid electrode



0.8 A solid-liquid electrode

