

## Titration Lab (Partners)

Title

Purpose

Procedure

Data table → All trials in 1 table

Total ml added // pH

Graph each trial

Discussion - Explain Diff results

Apr 19-7:39 AM

- ⑧ ① Dissolves in  $H_2O$   $S \rightarrow aq$   $\oplus \Delta S$   
 $NH_4NO_3$
- ② Soln becomes cold → soln absorbs heat  
 $\ominus \Delta H$

Apr 19-7:54 AM

(20)  $E = E^{\circ} - \frac{RT}{nF} \ln \frac{N_i^{+2}}{S_n^{+2}}$  }  $S_n^{+2} + Ni \rightarrow Ni^{+2} + S_n$   
 $E^{\circ} = 0.09V$

$E^{\circ} = \frac{RT}{nF} \ln K$

$0.09 = \frac{8.314(298)}{2(96500)} \ln \frac{N_i^{+2}}{1}$

$N_i = 1108.6475 M$

Apr 19-8:00 AM

(21)  $H_2O + CN^- \rightarrow CNO^- + 2H^+ + 2e^-$   
 $2(e^- + Fe^{+3} \rightarrow Fe^{+2})$

(23)  $Ni(s) \rightarrow Ni^{+2}(aq)$  Find time

$\frac{1 \text{ mole } Ni}{2 \text{ mole } e^-}$ ,  $\frac{1 \text{ mole } Ni}{59g Ni}$ ,  $\frac{96500 \text{ cal}}{\text{sec}}$ ,  $100g Ni$ ,  $\frac{96500 \text{ cal}}{1 \text{ mole } e^-}$

(sec)	$\frac{96500 \text{ cal}}{1 \text{ mole } e^-}$	$\frac{2 \text{ mole } e^-}{1 \text{ mole } Ni}$	$\frac{1 \text{ mole } Ni}{59g Ni}$	$100g Ni$
$5 \text{ sec}$	$1 \text{ mole } e^-$	$1 \text{ mole } Ni$	$59g Ni$	

$65758.52 \text{ sec} = 1095.96 \text{ min}$   
 $18.266 \text{ hr}$   
 $0.761 \text{ day}$

Apr 19-8:03 AM

$$\textcircled{FC} \quad E^\circ = +2.20\text{V} \quad Q = \frac{[\text{I}^-]^6 (\text{Al}^{+3})^2}{1}$$

$$E = E^\circ - \frac{RT}{nF} \ln \left[ (\text{I}^-)^6 (\text{Al}^{+3})^2 \right]$$

$$E = 2.20 - \frac{8.314(298)}{6(96500)} \ln \left[ (0.15)^6 (4.5 \times 10^{-3})^2 \right]$$

$$E = 2.294\text{V}$$

Apr 19-8:10 AM

Grade

$$\frac{\textcircled{15}}{23} \rightarrow \frac{x}{20}$$

$$\frac{15(20)}{23} = \frac{\cancel{23}x}{\cancel{23}}$$

$$\boxed{13.1}$$

Apr 19-8:14 AM

Chap 21 - Nuclear G W Bush

Nuclear chem

Mass  $\rightarrow 19$   $\leftarrow$  Ox#  
 At#  $\rightarrow 9$  nuclear charge

Nucleus  $\rightarrow$  Protons  $\oplus$  , P ,  $H^+$   
 At#

Neutrons  $\ominus$  ,  $n$  ,  $Q$  neutral

${}^1_0n \rightarrow {}^1_1H^+ + {}^{-1}_0e^-$

Apr 19-8:16 AM

Radioactive - Spont. releasing energy

Apr 19-8:23 AM