

Physical Properties

$$P = \underline{\underline{.65-.75}} \text{ atm}$$

Equilibrium

$$\text{Solubility} = \underline{\underline{0.0170 \text{ M}}}$$

NO CREDIT FOR 0.0150 M

Electrochemistry

$$K_{\text{sp}} = \underline{\underline{4.21 \times 10^{-8}}}$$

HARD PACKET 2

KEY

Physical Properties

$$P = \underline{20.9} \text{ torr}$$

Thermodynamics

$$[\text{O}_2] = \underline{0.3078\text{M}}$$

$$[\text{O}] = \underline{0.5671\text{M}}$$

$$[\text{U}] = \underline{1.11053\text{M}}$$

Chemical Reactions

$$\underline{0.00005} \text{ g}$$

KEY

KEY

Acid/Base

pH = 7.6

Thermodynamics

7 or 8 (accept both) astronauts

Kinetics

15.6 minutes

Thermodynamics

$$\underline{48.76} \text{ kJ/g}$$

Electrochemistry

$$\text{Work} = \underline{0} \text{ kJ}$$
$$\Delta H = \underline{-44.15} \text{ kJ}$$

Kinetics

$$\text{pH} = \underline{6.34}$$

HARD PACKET 5

KEY

Equilibrium

$$K_{sp} = \underline{2.34 \times 10^{-4}}$$

Electrochemistry

85.144 amps
(next time remember your foil!!!!)

Acid/Base

$$\text{H}_2\text{SiF}_6 = \underline{2.35 \times 10^{-3}} \text{ g}$$
$$\text{NaOH} = \underline{4.695} \text{ mL}$$

KEY

KEY

Physical Properties

$$\underline{3.70 \times 10^{-6}} \text{ } ^\circ\text{C}$$

Equilibrium

$$K_4 = \underline{3.9 \times 10^{-2}}$$

Favors: (~~T-conformation~~) / (R-conformation)

Kinetics

$$k_2^3 = k_1$$

Equilibrium

$$Q_c = \underline{9.55 \cdot 10^6}$$

Acid/Base

$$\text{pH} = \underline{2.68}$$
$$\text{pOH} = \underline{8.62}$$

Kinetics

$$\underline{2.74 : 1}$$

Tumor Cell : Regular Cell

+/- 0.1 acceptable range

HARD PACKET 8

KEY

Equilibrium

- a) Name: Lithium tribromotrichlorocuprate Charge: -2 or -1
- b) Name: Calcium tetraoxalatoplatinate Charge: -2 or 0
- c) Name: Tetraamminediaquasilver chloride Charge: 0 or +1
- d) Name: Sodium dicyanodihydroxoferrate Charge: -1 or 0

Equilibrium

$$[\text{Ba}^{2+}] = \underline{7} \text{ ppm}$$

Acid/Base

$$\underline{2.612175 \times 10^{-7}} \text{ moles}$$

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Thermodynamics

$$\Delta H^\circ = \text{Range: } \underline{-880 \text{ to } -900} \text{ kJ/mol}$$

Acid/Base

4,550 mL

Kinetics

1 : 0.004234