|  |  |  |
| --- | --- | --- |
| Description: http://3.bp.blogspot.com/_sHI1tz_SPvQ/TDl2vAHnimI/AAAAAAAAB6I/mWyQQqN3Q5M/s400/kolej+matriks.jpg | **EXPERIMENT 6**  **CHEMICAL EQUILIBRIUM** | **MARKS** |
|  |

|  |  |  |
| --- | --- | --- |
| **item** | **Scheme** | **Marks** |
| **Title** | Chemical equilibrium |  |
| **Objective** | 1.  2. |  |
| **Results** | 1. Effect of concentration in the formation of thiocyanoiron(III) complex ion.   Fe3+ (aq) + SCN- (aq) [Fe(SCN)2]+ (aq)  Yellowish brown blood-red     |  |  | | --- | --- | | Experiment | Observation | | I. Addition of 1 mL of  0.1 M Fe(NO3)3 |  | | II. Addition of 1 mL of  0.1 M KSCN |  | | III. Addition of 6-8 drops of 10% NaOH |  |      1. **Effect of temperature on equilibrium**   Co( H2O)62+ (aq) + 4Cl- (aq) CoCl42- (aq) + 6H2O(*l*)  pink blue   |  |  |  | | --- | --- | --- | | **Test** | **Condition** | **Observation** | | I | At room temperature |  | | II | 0oC  (in ice bath) |  | | III | 80 – 90oC |  |   When left at room temperature,  Test tube II:    Test tube III:  **(C) Determination of Equilibrium Constant**  The equilibrium involved is represented by the following equation:    SbCl3(aq) + H2O(*l*) SbOCl(s) + 2HCl(aq)  The range of volume titrated: \_\_\_\_\_\_\_\_\_\_\_\_**mL** |  |
| **Discussion**  **Calculation:** | (A) Effect of concentration in the formation of thiocyanoiron(III) complex ion.  Fe3+(aq) + SCN– (aq) Fe(SCN)2+(aq)  yellowish brown blood-red  **Test I:**  **Test II:**  **Test III:**  **(B) Effect of temperature on equilibrium**  Co( H2O)62+ + 4Cl –  CoCl42- + 6H2O  pink blue  **(C) Determination of Equilibrium Constant**    The equilibrium involved is represented by the following  equation:  SbCl3(aq) + H2O(*l*) SbOCl(s) + 2HCl(aq)  Moles of SbCl3 =  Final volume =  Thus, [SbCl3] =  Moles of HCl =  [HCl] =  Equilibrium constant, *Kc* = |  |
| **Conclusion** | 1.  2. |  |
| **Answer** |  |  |
| **Total marks** |  |  |



**KEDAH TECHNICAL MATRICULATION COLLEGE**

**PRACTICAL REPORT**

**CHEMISTRY ENGINEERING**

**NAME:…………………………………………….**

**MATRIC NO:…………………………………….**

**COURSE CODE: TK015**

**CLASS:…………………………………………….**

**EXPERIMENTAL NO:………………………….**

**TITLE:…………………………………………….**

**DATE OF EXP:……………………………………**

**PARTNER’S 1.………………………...**

**NAME: 2…………………………**

**3…………………………**

**4…………………………**

**LECTURER’S NAME: ………………………………**