|  |  |  |
| --- | --- | --- |
| 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 followingequation: 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: ………………………………**