

WEEKLY SCHEDULE OF CLASSICAL EXPERIMENTS IN 2016/17

Week 1 (20th February)

1. Introduction to the Quantitative Analytical Chemistry Laboratory. Laboratory Safety Information.
2. Review of lab equipment.
3. Preparation of $\sim 0.1 \text{ mol/dm}^3$ HCl titrant (250 cm^3). (in Manual: site 1, part *a*)
4. Determination of the exact concentration of the HCl titrant solution using KHCO_3 stock solution. (in Manual: site 1, part *b*)
5. Determination of **HgO** in a HgO-KCl mixture /**unknown sample**/ (in Manual: site 4)

Week 2 (27th February)

1. Preparation of $\sim 0.1 \text{ mol/dm}^3$ NaOH titrant by the Sørensen method (500 cm^3) and determination of its exact concentration. (in Manual: site 1, part *a* and *b*)
2. Determination of **oxalic acid** /**unknown sample**/ (in Manual: site 3)
3. Simultaneous determination of **sulfuric acid and boric acid** in a mixture /**unknown sample**/ (in Manual: site 3-4)
4. Preparation of 0.02 mol/dm^3 KMnO_4 titrant (250.0 cm^3). (in Manual: site 7, part *a*)

Week 3 (6th March)

1. Preparation of 0.05 mol/dm^3 $\text{Na}_2(\text{COO})_2$ solution (100.0 cm^3)
2. Determination of the exact concentration of the KMnO_4 titrant solution using $\text{Na}_2(\text{COO})_2$ stock solution. (in Manual: site 7, part *b*)
3. Determination of **ferrous oxalate** /**unknown sample**/. (in Manual: site 9)
4. Determination of **hydrogen peroxide** /**unknown sample**/. (in Manual: site 9)

Week 4 (13th, March)

1. Preparation of 0.02 mol/dm^3 $\text{Na}_2\text{S}_2\text{O}_3$ titrant (250.0 cm^3) and determination of its exact concentration using 0.003 mol/dm^3 KIO_3 stock solution. (in Manual: site 10-11)
2. Determination of **copper(II)** /**unknown sample**/. (in Manual: site 11)
3. Determination of **iodide ion** /**unknown sample**/. (in Manual: site 11-12)

Week 5 (20th, March)

1. Preparation of 0.02 mol/dm^3 KBrO_3 titrant (250.0 cm^3). (in Manual: site 9-10)
2. Determination of **ascorbic acid** active ingredient content of vitamin C tablet /**unknown sample**/ (in Manual: site 10)
3. Preparation of 0.05 mol/dm^3 AgNO_3 titrant (250.0 cm^3). (in Manual: site 15)
4. Argentometric determination of the composition of a **NaCl-KBr** mixture /**unknown sample**/. (in Manual: site 15)

Week 6 (27th March)

1. Preparation of 0.01 mol/dm^3 Na_2EDTA titrant solution (250.0 cm^3). (in Manual: site 16)
2. Simultaneous determination of **Ca²⁺ and Mg²⁺ ions** /**unknown sample**/. (in Manual: site 16)
3. Determination of **Al(III)** /**unknown sample**/. (in Manual: site 17)
4. Lab equipment return