MANGALORE UNIVERSITY

Department of Industrial Chemistry

ICP 456: INORGANIC CHEMISTRY PRACTICALS-II

Course Outcomes:

- Instrumental techniques used in inorganic practical such as colorimetry, flame photometry and analysis of ore and minerals.

1. Colorimetric determination of Ti (IV) and Zr (IV)
2. Simultaneous colorimetric determination of two metal ions – Mn and Cr.
3. Flame photometric determination of Na, K, Li and Ca individually and in mixtures.
4. Solvent extraction of Ni (II)
5. Estimation of iron in cement by colorimetically
6. Determination of composition of complexes: a) Job's method: Fe-1, 10-Phenanthroline complex b) Mole ratio method: Zr-Alizarin red S complex, c) Slope ratio method: Cu ethylenediamine complex, d) Limiting logarithmic method: Uranyl sulphosalicyclic acid complex.
7. Determination of stability constants-Turner Anderson method: Fe-Tiron system,
8. Cement analysis: i) SiO_2-Gravimetrically ii) Calcium, Volumetrically iii) Iron, Volumetrically iv) Magnesium, Complexometrically iv) Aluminium, Gravimetrically.
9. Determination of available chlorine in bleaching powder and residual chlorine in water samples.
10. Determination of Iron present in sulpha- drugs; colorimetrically.
11. Determination the percentage of phosphorus present in terms of P_2O_5 from a fertilizer sample volumetrically.
12. Any other experiment of interest-Determination of oxygen by Oslet method, Determination of elements by AAS method-demonstration only.
13. Any other interesting experiment.

References

1. Physicochemical Experiments, J. Rose.
2. Vogel's Text Book of Quantitative Chemical Analysis(5^{th} Ed), G.H.Jeffrey, J.Bassette, J.Mendham and R.C.Denny, Longman, 1999.