OC P 416: INORGANIC CHEMISTRY PRACTICALS-I

Course Outcome

- Students will have hands on experience on the analysis of Hematite Dolomite, Pyrolusite, Solder.
- Analysis of halide mixture, Colorimetric determination and Gravimetric determinations
- To understand complexometric determination and hardness of water.
- It enables the students to learn statistical analysis of data.

1. Analysis of Hematite-insoluble residue by gravimetry and Iron by volumetry using Ce^{4+}.
2. Analysis of Dolomite - insoluble residue by gravimetry and Ca, Mg by complexometry.
3. Pyrolusite - Insoluble residue by gravimetry and manganese content by oxalate method.
4. Analysis of solder - Pb and Sn by EDTA method.
5. Complexometric determination of Mn, Ca, Mg, Cu, Ni and Fe-Cr mixture.
6. Hardness of water.
7. Analysis of halide mixture - Iodide by KIO_3 and total halide by gravimetrically.
8. Colorimetric determination of Iron by thiocyanate and Cu by aqueous ammonia.
9. Gravimetric determinations of Mn, Ni, Mo, Pb/Cr, sulphide, thiocyanate.
10. Preparation of Chrome alum/Chrome red/Lithopone/Mohr's salt.
11. Statistical analysis of data.

References

1. Vogel's Text Book of Quantitative Chemical Analysis, 5th edn., G. H. Jeffrey, J. Bassette, J. Mendham and R. C. Denny, Longman (1999).
2. Quantitative Analysis, 5th edn., R. A. Day and A. L. Underwood, Prentice Hall (1998).
3. Vogel's Qualitative Inorganic Analysis, 7th edn., G. Svehla, Longman (2001).
4. Advanced Practical Inorganic Chemistry, 28th edn., G. Raj, Goel Publishing House (2019).
5. Practical Inorganic Chemistry, Shika N Gulati, J L Sharma and Shagun Manocha, CBS Publishers & Distributors (2017).