SAIF,IIT Madras,Chennai-36

Instructions to users for ICP-OES analysis

1. This technique is specifically used to quantify metals and metalloids present in the sample at trace, minor and major concentrations.
2. Mineral acids such as HCl, HNO_3, H_2SO_4 and aquaregia can be used for dissolution of samples. Use very minimum quantity say (1-5 ml) of the acid.
3. Pl.do not use HF for dissolution as we do not have HF resistant nebulisers, spray chambers and torch tube.
4. Highly acidic/ highly alkaline solutions will extinguish the Argon plasma.
5. After dissolution make up the samples to a known volume with de-ionized water and filter it thoroughly using Whatmann41 filter paper and submit only clear aqueous solutions for analysis.
6. Enormous dilution will introduce dilution error.
7.10-50 mg of the sample is required for analysis.
8. 10 ml of sample solution isnecessary for analysing 2 elements with 3 replicates.
9. An appropriate blank solution (50ml) is also necessary.
10. Store the sample solutions preferably in plastic containers. Glass will absorb metal ions on storage .
11.Download the ICP-OES requisition form from saif website (saif.iitm.ac.in) fill all the necessary information it should be submitted in the SAIF office along with DD and samples.
12.After registration samples will be sent to ICP lab for analysis
13. Elements of interest and weight and volume of the liquid samples should be specified in the requisition form
14.For biological samples fix up a prior appointment for analysis
15. Unless instructed the remaining samples will be discarded after use.
16. Please contact our ICP lab at 091-044-22575927 for any clarifications
17. Kindly adhere to these instructions to enable the analyst to end up with accurate results for your samples.