

# INDIAN INSTITUTE OF TECHNOLOGY MADRAS

## Department of Civil Engineering [EWRE]

Chennai-600 036

### Requisition Form for ICP-OES Analysis (Internal / External Users)

#### Sample Submission

- The users should fill up the form (given below) and submit it with the sample
- Each sample has to be listed separately.
- External samples will be analysed in que at a fixed rate Payments
- External users, please call and confirm the status of the instrument and then

#### Sample required

Sample required is about 10-20mg for solids and approximately 25ml for liquids. Samples should be non-explosive and non-corrosive.

S.No	ICP-OES	Industry	R&D	Institution
1	External	Rs.250,per measurement additional element Rs.500	Rs.2500 per measurement additional element Rs.250	Rs.400 per measurement additional element Rs.100
2	Internal		Students	Project Students
			Rs.400 per measurement additional element Rs.100	Rs.400 per measurement additional element Rs.100

- Microwave digestion charges extra, per sample (up to 5 sample's) Rs.650

## Department of Civil Engineering (EWRE)



**Indian Institute of Technology Madras-36**

### **Requisition Form for ICP-OES**

Name & Roll No	
Internal / External	
ICP-OES	
No of Samples	
Academic / Industry /R&D	
Email.ID	
Institution Name	
Bill Claiming Address	
Mobile No	
Your Signature	
Required Elements:	
Guide signature & seal (In case of students/ research scholars)	

## **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<sub>3</sub>, H<sub>2</sub>SO<sub>4</sub> and aqua regia 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. 15 ml of sample solution is necessary for analysing 2 elements with 3 replicates.
7. An appropriate blank solution (50ml) is also necessary.
8. Store the sample solutions preferably in plastic containers. Glass will absorb metal ions on storage.

### **Contact:**

**In-Charge / Prof.Indumathi M nambi**

**Operator: Dr.P.Selvam    MOB :- 9940156183**

**ICP-OES Lab**

**Department of Civil Engineering, IIT Madras Chennai 600 036**