

**FINAL REPORT**  
**CSIR-NGRI, HUBSIGUDA, HYDERABAD**  
Program Dates :( 14<sup>th</sup> JUNE-20<sup>th</sup> JUNE)/2023

**Day 1:- 14/06/2023**

From 9 to 10 30 AM, The Theory Session on Thermal Ionization Mass Spectrometry in Earth Sciences Was taken up by D.Srinivasa Sarma (CSIR-NGRI), from 10 30 to 12 PM, ICP-OES Theory And Application was taken up by K.Rama Mohan (CSIR-NGRI), and from 12 to 1 PM, Theory session on X-ray Fluorescence spectroscopy (WD-XRF): Basic Concepts, Sample Preparation and Analysis was taken up by A.Keshav Krishna (CSIR-NGRI). In the afternoon 1 30 to 3 30 PM, a Theory session on HR-ICP-MS-Principle, instrumentation & analysis was taken up by M. Satyanarayanan (CSIR-NGRI), from 3 30 to 5 30 PM, Theory Session on An overview of analytical techniques in Earth and Environmental Sciences.

**Day 2:- 15/06/2023**

From 9 to 10 30 AM, The Theory Session on An overview of sample Digestion Techniques was taken up by K.S.V.Subramaniam (CSIR-NGRI), from 10 30 to 12 PM, Theory Session on Ion Chromatography was taken up by K.Rama Mohan (CSIR-NGRI), and from 12 to 1 PM, Ni-S Fire Assay for the estimation of PGE & Thermogravimetric Analyzer. In the afternoon 1 30 to 3 30 PM, the Batch A Lab demo on Wet Chemistry and Batch B Lab demo on WD-XRF was explained by K.S.V.Subramaniam (CSIR-NGRI), Batch A Lab demo on WD-XRF and Batch B Lab demo on Wet Chemistry was explained by A.Keshav Krishna (CSIR-NGRI) from 3 30 to 5 30 PM.

**Day 3:- 16/06/2023**

From 9 to 10 30 AM, The Theory session on Scanning Electron Microscopy and Applications in Earth and Environmental Sciences was taken up by D.Srinivasa Sarma (CSIR-NGRI), from 10 30 to 12 PM, Batch A Lab demo on HR-ICP-MS, Batch B Lab demo on SEM-EDS lab was explained by M. Satyanarayanan (CSIR-NGRI) and Batch A Lab demo on SEM-EDS lab, Batch B Lab demo on HR-ICP-MS was explained by D.Srinivasa Sarma (CSIR-NGRI) from 12 to 1 PM,. In the afternoon 1 30 to 3 30 PM, Batch A Lab demo on Fire Assay &TGA and Batch B Lab demo on Ion Chromatography was explained by K.S.V.Subramaniam (CSIR-NGRI), Batch A Lab demo on Ion Chromatography and Batch B Lab demo on Fire Assay &TGA was explained by K.Rama Mohan (CSIR-NGRI) from 3 30 to 5 30 PM.

**Day 4:- 17/06/2023**

From 9 to 10 30 AM, Theory Session on TL/OSL Applications in Earth Sciences was taken up by Devendar Kumar (CSIR-NGRI), and from 10 30 to 12 PM, a Theory Session on Isotope Ratio Mass Spectrometer Theory and Application was taken up by D V Reddy (CSIR-NGRI) and from 12 to 1 PM, The Theory session on Liquid Scintillation Spectrometer: Theory and Application was taken up by Devendar Kumar (CSIR-NGRI). In the afternoon 1 30 to 3 30 PM Batch A Lab demo on Isotope Ratio Mass Spectrometer and Batch B Lab demo on TL/OSL/LSS were explained by D V Reddy (CSIR-NGRI) and Batch A Lab demo on TL/OSL/LSS, Batch B Lab demo on Isotope Ratio Mass Spectrometer was explained by Devendar Kumar (CSIR-NGRI) from 3 30 to 5 30 PM.

**Day 5:- 18/06/2023**

From 9 to 10 30 AM, a Theory Session on Laser Ablation Principle and Applications in Earth Sciences was taken up by Sameer Ranjan (IIT Bombay), from 10 30 to 12 PM, Batch A Lab demo on Laser Ablation Analysis and Batch B Laser Ablation Sample Preparation was explained by Sameer Ranjan (IIT Bombay), and from 12 to 1 PM, Batch A Laser Ablation Sample Preparation Batch B Lab demo on Laser Ablation Analysis was explained by Ajay Kumar Singh (CSIR-NGRI). In the afternoon from 1 30 to 5 30 PM, Hands-on Training LA-ICP-MS was explained by M. Ram Mohan.

**Day 6:- 19/06/2023**

From 9 to 11 AM, Hands-on Training LA-ICP-MS was explained by M. Ram Mohan, and From 11 to 1 PM, Hands-on XRF was explained by A. Keshav Krishna (CSIR-NGRI). In the afternoon from 1 30 to 3 30 PM, Hands-on Training on Fire Assay &TGA was explained by K.S.V.Subramaniam (CSIR-NGRI), and from 3 30 to 5 30 PM, Data Processing XRF was explained by A.Keshav Krishna (CSIR-NGRI).

**Day 7:- 20/06/2023**

From 9 to 10 30 AM, Data processing (ICP-MS) was explained by M. Satyanarayanan (CSIR-NGRI), from 10 30 to 12 PM, Data processing (IC) was explained by K.Rama Mohan (CSIR-NGRI), and Data Processing Isotope Ratio Mass Spectrometer was explained by D V Reddy (CSIR-NGRI) from 12 to 1 PM. In the afternoon from 1 30 to 3 30 PM, Data Processing on Laser Ablation was explained by Sameer Ranjan (IIT Bombay) from 3 30 to 4 30 PM, Data Processing (TIMS) was explained by D.Srinivasa Sarma (CSIR-NGRI), and at end Valedictory and feedback Session.