

NEW ICP-MS NATIONAL FACILITY AT NGRI, HYDERABAD

A new ICP-MS facility funded by DST and CSIR was installed very recently at the Geochemical Laboratory of the National Geophysical Research Institute, Hyderabad.

The ICP-MS installed at NGRI is a quadrupole mass spectrometer with state-of-the-art features, such as Dynamic Reaction Cell (DRC) and performance enhancing axial field technology. These features result in extremely low background noise, better sensitivity and striking improvements in measurement precision. This lowers the detection limits for most of the elements in the periodic table to pg/ml (ppt) and fg/ml (ppq) levels and make interference-free and accurate estimation possible in a variety of geological and environmental materials for various R&D applications. When coupled with appropriate sample preparation techniques, ICP-MS can be effectively utilised for the following:

- Accurate and precise estimation of rare earth elements (REE) and several other trace elements of importance in geochemical, cosmochemical, marine and hydrogeochemical studies;
- When combined with appropriate fire-assay technique (Pb or NiS), ICP-MS can be used for accurate determination of extremely low concentrations of

platinum group elements (PGE), and gold in exploration geochemistry;

- ICP-MS is best suited method of analysis for the estimation of elements such as Cr, Ni, As, Se, Pb, Zn, Hg and a host of other trace elements in a variety of materials for environmental monitoring and research;
- The semi-quantitative analysis by ICP-MS provides a means for rapid (90 sec.) multi-element determination of about 70 elements (Li - U) in a variety of geological and environmental samples with a precision <20% with comparable accuracy. This feature is extremely useful in rapid scanning of a wide spectrum of elements in mineral exploration and environmental appraisal as a first approximation.

Active research groups or individual scientists/research students who are interested in using this facility at NGRI may get in touch with the Director, National Geophysical Research Institute, Hyderabad - 500 007; Tel. 040-27170141; Fax: 040-27170491 or 040-27171564; Email: dimrivp@rediffmail.com. For more details visit our website at: www.ngri.org.in.

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ADVANCES AND LATEST TRENDS IN ENGINEERING GEOLOGY AND GEOTECHNOLOGY

A two-week short-term training programme on "Advances and Latest Trends in Engineering Geology and Geotechnology" sponsored by AICTE-ISTE was organized in the Geology Section, Department of Civil Engineering, National Institute of Technology Karnataka (NITK), Surathkal from 31-12-2002 to 12-1-2003. Mr. G.J. Rao, Dy. Chairman, NMPT in his inaugural address invited the participants to acquire sound knowledge about different topics from the training programme. Dr. T. N. Venugopal, Dy. Director, DMG, released the lecture volume of the STTP. During his address, he stressed that engineering geology and geotechnology play a major role in nation building. The inaugural function was presided over by Prof. H. R. Sreekantiah, Dept. of Civil Engineering, NITK, Surathkal. Participants from various parts of the country attended the

training programme. They included faculty from various engineering colleges and polytechnics and engineers from various industries.

Various external and internal resource persons presented papers in the programme. The course mainly highlighted the latest trends in the concerned topics. Dr. J. Dattatri, consultant in coastal engineering; Sri. P. Balakrishnan, Director, GSI Marine Wing, Mangalore; Sri M.M. Kamath, consultant engineer; Prof. K. R. Subrahmanya and Dr. R. Shankar, both from Marine Geology Dept., Mangalore University; Dr. Nazimuddin, Head, Groundwater Division, CWRDM, Kozhikode; Dr. S. K. Prasad, SJCE, Mysore; Dr. S. N. N. Sharma, Geologist, Dr. B. Ravindra, Geologist, both from DMG, Mangalore were the prominent external resource persons who presented their ideas before the