

CHEMICAL AND INSTRUMENTAL ANALYSIS



Liquid Chromatograph - Mass Spectrometer (Model: Quattro LC, Micromass, UK)

- Powder and single crystal X-ray Diffractometer
- Gas Chromatograph-Mass Spectrometer (low & high resolution)
- Liquid Chromatograph-Mass Spectrometer
- MALDI TOF-Mass Spectrometer
- Atomic Absorption Spectrophotometer
- HPLCs with Multiple Detectors (RI, UV-Vis, PDA, Electrochemical & Chiral)
- Gel Permeation Chromatograph



Matrix Assisted Laser Desorption Ionization Time of Flight (MALDI TOF) Mass Spectrometer (Model: TO-4X KOMPACT SEQ, KRATOS, UK)

- High Performance Capillary Electrophoresis
- HPTLC
- Elemental (C, H, N S) Analyzer

MAJOR CLIENTS

- Dabur Research Foundation, Uttar Pradesh
- Shasun Chemicals & Pharmaceuticals, Chennai
- Divi's Laboratory, Hyderabad
- Hetero Drugs, Hyderabad
- Shanta Biotech, Hyderabad
- GVK Biotech, Hyderabad
- AVRA Laboratories, Hyderabad
- Matrix Laboratories, Hyderabad
- Singareni Collieries Co Ltd, Hyderabad
- Irrigation Department, Government of Andhra Pradesh
- Excise Department, Government of Andhra Pradesh
- Neuland Laboratories, Hyderabad
- Reddy's Research Foundation, Hyderabad
- SVS Pharmaceuticals, Hyderabad



Atomic Absorption Spectrophotometer (Model: Analyst 300 Perkin-Elmer, USA)

CONTACT PERSON (Technical)

Dr. M. VAIRAMANI

Head, Chemical & Instrumental Analysis, IICT, Hyderabad.
Tel: +91-40-27193482 * Fax: +91-40-27160757, 27193943
e-mail: vairamani@iict.res.in

FOR BUSINESS ENQUIRIES:

Dr. J. S. YADAV, FNA

Director, IICT, Hyderabad.
Phone: 91-40-27193030 • Fax: 040-27160387
E-mail: yadav@iict.res.in

or

G. SAMPATH KUMAR

Head, Business Management, IICT, Hyderabad.
Phone/Fax: 91-40-27193943
E-mail: sampath@iict.res.in



CHEMICAL AND INSTRUMENTAL ANALYSIS

Indian Institute of Chemical Technology
Tarnaka, Uppal Road, Hyderabad 500 007, INDIA



VISION AND GOAL

- Keeping in pace with the emerging technological challenges, IICT has established state-of-art analytical facilities in the Analytical Chemistry Division. The facilities include sophisticated instruments such as Mass Spectrometers, Nuclear Magnetic Resonance Spectrometers, X-ray diffractometers, High Performance Liquid Chromatographs, etc. The vision and goal of the division is to keep up the high standards established in the respective disciplines and remain as a referral centers at national and international level. It would continue to provide high quality analytical support to various ongoing projects of the laboratory and produce technically skilled personnel in the respective areas which will contribute significantly to the scientific and technological advancement of the country.



500 MHz NMR Spectrometer (Model: Unity-Inova-500 Varian, Switzerland)

CORE COMPETENCIES AND ACTIVITIES

- Fundamental research in separation science, NMR spectroscopy, Mass spectrometry and X-ray crystallography
- Analytical support to inhouse R&D
- Consultancy service to pharma and agro industries
- Human resource development

CURRENT RESEARCH AREAS

- Study of structure and properties of nano materials, cyclic peptides and peptides with unusual aminoacids. Conformations and dynamics of soft solids, polymer and



Gas Chromatograph - Mass Spectrometer (Model: AUTOSPEC-M, Micromass, UK)

- biomolecular films at interfaces and nano scale confinements
- Measurement of thermo chemical properties of biological molecules
- Study of structure of elusive species
- Development of analytical methods for isolation & characterization of compounds of biological importance
- Polymorphism studies

SERVICES AVAILABLE

- ISO 9001-2000 Certified Analytical Service comprising of chemical analysis, elemental analysis, HPLC, HPTLC, Mass spectroscopy, NMR spectroscopy and X-ray diffraction studies
- Chemical equivalence data generation for agrochemicals
- Drug Master File as per USFDA or BP
- Impurity profiling of drugs & pharmaceuticals
- Polymorphism studies

INSTRUMENTS AVAILABLE

- FT-IR
- NMR Spectrometers (200, 300,400 and 500 MHz)



Powder X-ray Diffractometer



(Model: D-5000 Siemens, Germany)



Gas Permeation Chromatograph (Model: GPC-10 Avp Shimadzu, Japan)