SARDAR PATEL UNIVERSITY
Vallabh Vidyanagar

Centre for Interdisciplinary Studies in Science and Technology (CISST)
Under the auspices of DST-PURSE Programme
organizes a Workshop
on
LIQUID CHROMATOGRAPHY-
MASS SPECTROMETRY
(LC-MS/MS)

21st-22nd January 2015
10 am to 5 pm

Patron
Prof. Harish Padh
Hon. Vice-Chancellor, SPU

Chairman
Prof. Dr. N. V. Sastry
Nodal Officer, DST-PURSE, SPU

Organizing Secretary
Ms. Mili B. Vyas
DST-PURSE, SPU

Organizing Committee
Dr. Deep A. Shah (Assistant Professor, CISST)
Dr. Rupal A. Vasant (Assistant Professor, CISST)
Dr. Rakesh V. Patel (Assistant Professor, CISST)
Dr. Mihir D. Oza (Research Associate, DST-PURSE)
Ms. Swati K. Kurtkoti (Research Assistant, DST-PURSE)
Ms. Anjali B. Thakkar (Research Assistant, DST-PURSE)
Mr. Hetul J. Suthar (Research Assistant, DST-PURSE)
Mr. Dharmesh Parmar (Research Assistant, DST-PURSE)
Ms. Pooja A. Trivedi (Research Assistant, DST-PURSE)
Ms. Monica J Noronha (Research Assistant, DST-PURSE)

Important Date
Last Date of Registration: 15th January, 2015

Registration Fees
Research Students/Faculty: Rs. 800/-
Industry Person: Rs. 1500/-

Registration fees to be paid by Demand Draft should be drawn in favour of Registrar, Sardar Patel University, Payable at Vallabh Vidyanagar or Anand

Venue
CENTRE FOR INTERDISCIPLINARY STUDIES IN SCIENCE AND TECHNOLOGY (CISST)
Sardar Patel University
B/H University Administrative building
Vallabh Vidyanagar-388120

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Sardar Patel University

Sardar Patel University, a University in the state of Gujarat named after the iron man Sardar Vallabhbhai Patel, is considered as one of the best in India for higher education. SPU is one of the largest (student strength ~40,000) university in Gujarat. It has a long standing tradition of commitment to teaching and research in higher education in different disciplines of Science, Commerce and Arts.

About CISST

The university has established a Center for Interdisciplinary Studies in Science and Technology (CISST) with a view to promote teaching and research programmes of multidisciplinary nature, in particular, for implementation of DST-PURSE Programme. This is an innovative joint venture of all the Basic Science Departments of the University. Besides promoting multidisciplinary research programs, The CISST also offers M.Sc. program in the fields of:

1. Biomedical Science
2. Defence Science
3. Earth Science

The Department of Science and Technology (DST) of the Government of India, has selected Sardar Patel University under prestigious PURSE (Promotion of University Research and Scientific Excellence) programme. The University has created a central experimental facility under the said program.

The following equipments have been installed and are functional at DST-PURSE Central facility: Ultra Fast Triple Quadrupole Liquid Chromatography and Mass Spectrometer (LC-MS), Spectrofluorophotometer, Research rotator and oscillatory Rheometer, Millipore water purification system, Karl fisher titrator, Particle size analyzer and zeta potential measuring system, 7-station diffusion cell apparatus combined with Microplate reader, Isothermal titration calorimeter, RT-PCR and Semiconductor characterization system. The cell-culture laboratory has been also set-up at DST-PURSE Central Facility with following equipments: Inverted Fluorescent Phase Contrast Microscope, Microplate reader, Laminar Air-flow, CO₂ Incubator, Cold storage freezer, Autoclave, Water bath with stirrer, Digital balance, Cyclomixer and Centrifuge.

About the Workshop

Liquid Chromatography/Mass Spectrometry (LC/MS) is a rapid developing tool for liquid chromatographers. It is a powerful analytical technique that combines the resolving power of liquid chromatography with the detection specificity of mass spectrometry. Liquid chromatography (LC) separates the sample components and then introduces them to the mass spectrometer (MS). The MS creates and detects charged ions. The LC/MS data may be used to provide information about the molar mass, structure, identity and quantity of specific sample components.

LC/MS is suitable for many applications, from pharmaceutical development to environmental analysis. The ability to detect a wide range of compounds has made API techniques popular with scientists in a variety of fields. LC-MS/MS is widely used in Pharmacokinetics, Proteomic based drug development and Metabolomics, determination of pesticides in environmental samples, food samples in simple as well as complex matrix.

With the aim of spreading the knowledge about the latest advanced developments in chromatographic techniques, DST-PURSE PROGRAMME, CISST has planned a workshop on Liquid Chromatography/Mass Spectrometry (LC/MS) for the benefit of industries and young researchers from academic institutions.

The main focus of the workshop will be on the following basic and applied aspects:

- **Classification of chromatography**
- **Basic Principles of LC-MS-MS.**
- **Different analysis modes using liquid chromatography-triple quadrupole mass spectrometry.**
- **Applications of triple quadrupole in qualitative and quantitative analysis.**

The course consists of daily lectures by expert faculty drawn from academia and industries. This will be followed by hands on experience on the instrument for qualitative and quantitative analysis.