

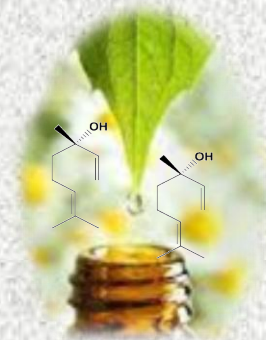
Central Instrumentation Facility

Jawaharlal Nehru Tropical Botanic Garden and Research Institute (KSCSTE-JNTBGRI)
Palode, Thiruvananthapuram 695 562, Kerala

Sophisticated instrumentation facility has a vital role in R&D sectors, as well as herbal technology sectors. The Central Instrumentation Facility was established at JNTBGRI with a mission to promote R&D activities related to plant sciences through high end instrumentation techniques. In addition to analytical services, CIF-JNTBGRI organizes regular workshops internships and dissertation programmes on various aspects of plant sciences, extending the expertise and instrumentation at JNTBGRI. Welcome to CIF-JNTBGRI to explore the possibilities in plant science research.

Prof. K.P Sudheer
Director, JNTBGRI and Chairman
CIF Committee, JNTBGRI

Dr. Rameshkumar K. B.
Principal Sc &
Sc i/c CIF, JNTBGRI



Major Instruments at CIF

Liquid Chromatograph-Mass Spectrometer

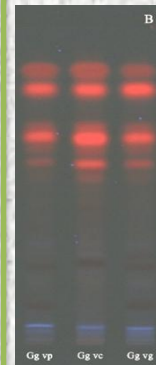
Shimadzu; LC-MS-2050 Single Quadrupole with Heated Dual Ion Source (ESI and APCI), and Advanced i-Series HPLC

Gas Chromatograph-Mass Spectrometer

Shimadzu; QP2020C NX GC-MS with FID, EI/CI ionisations, Head Space HS-20, Direct Insertion (DI) Probe

Real Time PCR

Bio Rad; CFX 96 Real Time PCR-1855196



Services offered

Analyses, Internships, Workshops on

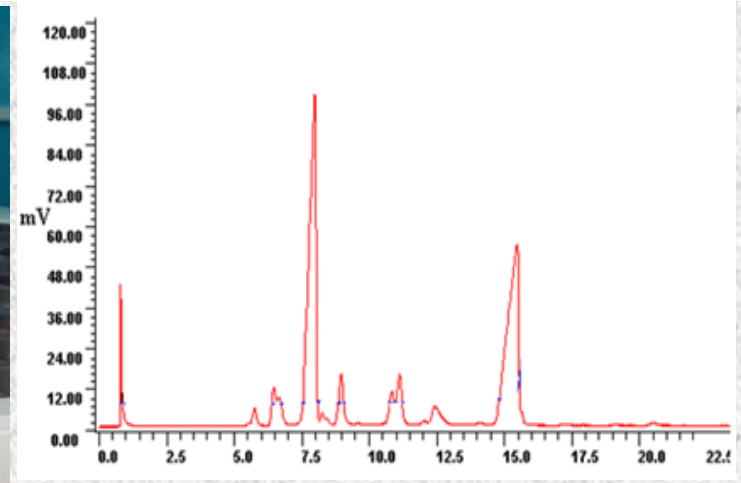
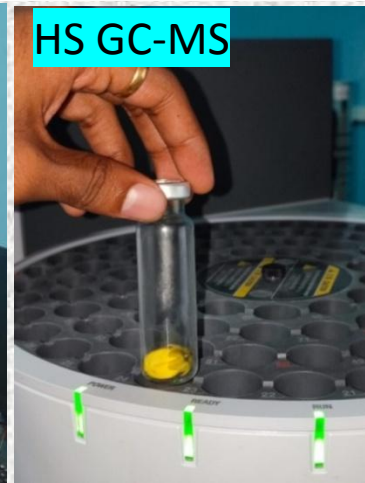
- GC-MS
- LC-MS
- RT- PCR
- Phytochemical Techniques
- Plant Mol. Biol. Techniques



GC-MS

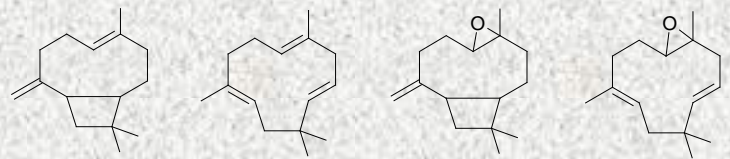
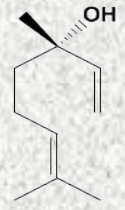


HS GC-MS

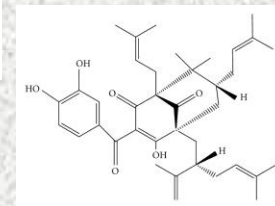
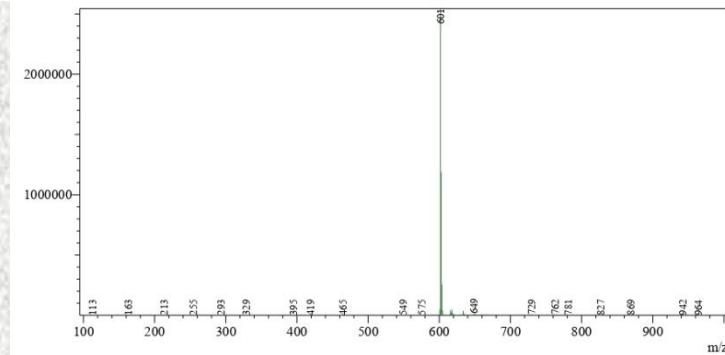


GC-MS: Services Offered

- Essential oil analysis
- Fixed oil (FAME) analysis
- Headspace volatile analysis
- Polar/Non-polar columns
- Chiral column- Enantiomeric analysis
- Retention index
- GC-FID
- EI/CI ionizations
- EI/CI MS of solid compounds
- Workshops
- Internships



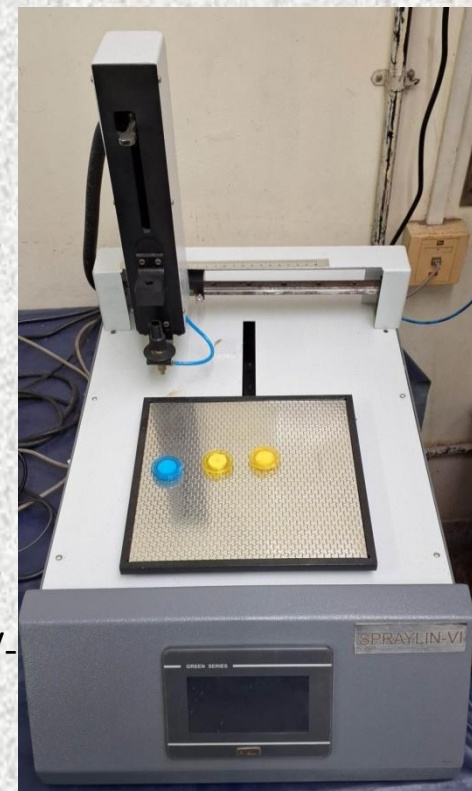
LC-MS



Flash Chromatograph



HPTLC



LC-MS: Services Offered

- HPLC PDA profiling
- HPLC PDA estimation
- LC-MS Single quadrupole profiling
- LC-MS single quadrupole estimation
- LC-MS ESI/APCI dual mode
- LC-MS positive/negative mode
- MW based isolation from extracts
- Workshops
- Internships

GC-MS and LC-MS Analyses Charges

- In-house samples: Rs.1180/-
- Educational Institutions/
Government R&D Institutions: Rs.2360/-
- Industry: Rs.3540/-

Internship fee: Rs.5000/month

RT-PCR

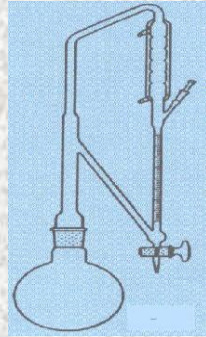


Workshops/Internships



RT-PCR: Services Offered

- DNA bar coding
- Gene Expression studies
- Genetic diversity analysis
- Development of markers for variety, cultivars and gender
- Primer designing and validation
- Workshops/internships on PCR techniques



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