

# MASS SPECTROMETRY FACILITY

## CSIR-CDRI, Lucknow

### Charges & Sample Requirement

| SL NO. | Analysis   | Requirements  | Charges in INR./hr./ Spectrum (18% GST will be extra)  |
|--------|--|---|--|
| 1.     | ESI-MS analysis of purified compound only  | 1-2 mg sample. (Solubility: Methanol, waters or acetonitrile)   | <b>450/- per sample</b>  |
| 2.     | ESI-MS/MS analysis of purified compound only   | 1-2 mg sample. (Solubility: Methanol, waters or acetonitrile)   | <b>900/- per sample</b>  |
| 3.     | ESI-HRMS analysis of purified compound only  | 1-2 mg sample. (Solubility: Methanol, waters or acetonitrile)   | <b>900/- per sample</b>  |
| 4.     | ESI-HRMS/MS analysis of purified compound only   | 1-2 mg sample. (Solubility: Methanol, waters or acetonitrile)   | <b>900/- per sample</b>  |
| 5.     | Qualitative LC/ESI-MS method development and sample analysis.  | 5-10 mg sample with information about Nature of sample and solubility (in Methanol, waters or acetonitrile)   | 1350/- per sample/hr (Minimum: 3 hour experiment; $1350 \times 3 =$ <b>4050/- per sample</b> )   |
| 6.     | Qualitative LC/ESI-MS sample analysis. (Previously developed analysis method at CDRI facility)                       | 5-10 mg sample with information about Nature of sample and solubility (in Methanol, waters or acetonitrile)   | 450/- per sample/hr (Minimum: 2 hour experiment; $450 \times 2 =$ <b>900/- per sample</b> )  |
| 7.     | Relative quantitative LC/MS method development, validation, and analysis. (only for maximum five targeted compounds) | 20 mg each sample along with minimum 2 and maximum 6 samples for relative quantitative analysis. Information about Nature of sample/matrix and solubility (Methanol, waters or acetonitrile). | 1350/- per hrs (Total: 8 hours experiment; $1350 \times 8 =$ <b>10800/- per batch</b> )  |
| 8.     | Quantitative LC/MS method development and validation.  | 5-10 mg sample along with 1-2 mg standard (reference compound). Information about Nature of sample/matrix and solubility (Methanol, waters or acetonitrile) for 1-3 compounds                 | <b>1350/- per sample/hrs</b><br><b>(Option A, 40 hrs)</b><br><b>(Option B, 16 hrs)</b><br><b>(Option C, 8 hrs)</b><br>Pl. see page no. 4 |
| 9.     | Quantitative LC/MS sample analysis. (Previously developed analysis method at CDRI facility)                          | 5 mg sample along with 1 mg standard (reference compound). Information about Nature of sample/matrix and solubility (Methanol, waters or acetonitrile).                                       | <b>1350/- per sample/hrs</b>   |
| 10.    | Qualitative LC-MS/MRM Based targeted analytes analysis.  | 5 mg sample along with 1 mg standard (reference compound). Information about Nature of sample/matrix and solubility (Methanol, waters or acetonitrile).                                       | 900/- per sample/hr (Minimum: 2 hour experiment; $900 \times 2 =$ <b>1800/- per sample</b> )   |

**Note- The above charges are for acquiring and providing the data only.**

## Terms and conditions:

1. As per government rules, GST (18%) will be charged extra on the analysis charges.
2. The analytical data/spectra are provided only for research/development purposes. These can't be used as certificates in legal disputes.
3. Analytical service charges are payable in advance by **National Electronic Funds Transfer (NEFT)** in favour of the Director, Central Drug Research Institute, Lucknow-226031.
4. Samples and payment details should be sent preferably in the same cover.
5. Separate samples should be sent for different analysis.
6. Maximum 5 samples per lot for any type of analysis are accepted at a time.
7. Please send the samples in quantity as mentioned in the above brochure. Samples are not recovered unless a special request is made.
8. Radio-active, unstable and explosive compounds are not accepted for analysis.
9. Interpretation of spectra/data is not undertaken normally. In special cases, this service can be provided as a sponsored project on payment of extra charges.
10. **In case of electronic payment, transaction details must be mention in correspondence letter.**

## All correspondence should be address to:

### Facility In-charge,

Mass Spectrometry Unit,

Sophisticated Analytical Instrument Facility & Research

CSIR- Central Drug Research Institute, B.S. 10/1 Sector-10, Jankipuram Extension, Sitapur Road, Lucknow-226031 (U.P.) Phone-+91-522-2772450, Ext. 4510,

## For technical enquiry/guidance

E-mail: [sanjeev\\_kanojiya@cdri.res.in](mailto:sanjeev_kanojiya@cdri.res.in),

Mobile: +91-9935146775 (only Monday to Friday, between 10 AM to 12.30 PM)

## Electronic payment by NEFT:

**Name of A/C Holder:** Director CDRI, Lucknow

**Account number:** 30269374557

**Name of Bank:** State Bank of India, **Branch:** CDRI, **IFSC code:** SBIN0010174

**Place:** Lucknow 226031



सत्यमेव जयते

GSTIN

09AAATC2716R8Z6

Legal Name

COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH

Trade Name, if any

CENTRAL DRUG RESEARCH INSTITUTE

## GUIDELINE FOR LC-MS FACILITY USERS

**Liquid chromatography–mass spectrometry (LC-MS, or HPLC-MS)** is an analytical chemistry technique that combines the physical separation capabilities of liquid chromatography (or HPLC) with the mass analysis capabilities of mass spectrometry (MS).

### Stepwise experiments

1. HPLC/LC-MS Method development: The **method** is the collection of conditions in which the HPLC and MS operates for a given analysis Or **Method development** is the process of determining what conditions are adequate and/or ideal for the analysis required.
2. LC-ESI-MS/MS analysis: **Liquid Chromatography-Tandem Mass Spectrometry (LC-MS/MS)** is technique in which fragmentation of molecules/compounds/analytes use to identify/ confirm the chemical structure.

## INFORMATION REQUIREMENTS FOR LC-MS ANALYSIS

| S.NO. | Analysis  | Information require for analysis  |
|-------|---|---|
| 1.    | HPLC/LC-MS Method development & analysis.   | Nature of sample: plant extracts/chemical reaction products/pure isolated compound from column Or<br>Fraction of plant extract: like hexane, chloroform, ethyl acetate etc.<br>Solubility: Acetonitrile, Methanol or Water<br>Expected: Molecular weight of analytes  |
| 2.    | [LC-MS/MS] analysis or Liquid chromatography- Tandem mass spectrometry (LC-MS/MS) | 1. Column:<br>2. Mobile Phase:<br>3. HPLC Program:<br>4. Flow Rate:<br>5. Injection Volume:<br>6. Concentration of sample:<br>7. MS Ionization Mode:<br>8. UV absorption:<br>9. Peak list:<br>10. Total ion chromatogram: Retention time of peaks (with their m/z value): example 3.51 min (m/z 395), 5.43 min (m/z 275) and 6.86 min (m/z 520) |

**Note-** Analysis can't be performed without required information. After determination of molecular weight of analyte from LC-MS data analysis. It is advice to send your sample for LC-ESI-MS/MS analysis.

## **QUANTITATIVE ANALYSIS (BY LC-MS/MS)**

### **Option A [ Minimum 40 hrs experiment]**

1. Sample preparation
2. HPLC/LC-MS/MS Method development
3. HPLC/LC-MS/MS Method validation (ICH guide lines)
  - a. Linearity b. Detection Limit c. Quantitation Limit d. Precision e. Accuracy
4. Data acquisition and processing
5. Data analysis
6. Report generation

### **Option B [ Minimum 16 hrs experiment]**

1. Sample preparation
2. HPLC/LC-MS/MS Method development
3. Data acquisition and processing
4. Report generation

### **Option C [ Minimum 8 hrs experiment]**

1. Sample preparation
2. HPLC/LC-MS/MS Method development
3. Data acquisition and processing
4. Processed data (only)

**Note- Charges may vary depending upon complexity of sample or actual time taken in experiment/analysis.**