

GUIDELINE FOR LC-MS USERS

Liquid chromatography–mass spectrometry (LC-MS, or alternatively 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). LC-MS is a powerful technique that has very high sensitivity and selectivity and so is useful in many applications.

*SAIF CSIR-CDRI, Lucknow is providing only small molecule **qualitative analysis** service to our SAIF Users.*

Stepwise experiments

1. **HPLC/LC-MS Method development and analysis:** 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 analysis:** **Liquid chromatography-mass spectrometry (LC-MS)** as a widely used technique for identification and quantification of molecules/compounds/analytes separated by liquid chromatography.
It provides separation of compounds and detection by MS (provide molecular weight of compounds).
3. **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.

Note-The charges will be for acquiring and providing you the data, not for data analysis.

User can submit samples under **1-3 options one by one** and charges will be calculated by software.

1. Register on www.saiflucknow.org
2. Login in your account.
3. Go for Submit sample.
4. Select/ SAIF-Liquid Chromatography–Mass Spectrometry (LC-ESI or APCI-MS)
5. Fill the necessary information and calculate the charges for selected analysis.
6. GSTIN (Goods and Services Tax Identification Number) of your college/university/institute/industry while submitted your sample for analysis in additional information box.

LC-MS/MS Instrument



Developed for integrated UPLC MS/MS qualitative and quantitative applications, the Waters ACQUITY® TQD features the highest levels of tandem quadrupole MS selectivity, robustness, speed, and accuracy.

Specification:

1. ZSpray™ dual-orthogonal API source
2. Mass scan range: m/z 50-2000 Th
3. Acquisition speed: 10 scan/second
4. Polarity switching(ES+/ ES-): 20 ms
5. ESCi mode switching: 20 ms
6. MRM Sensitivity : 1 pico gram (Reserpine S/N 2000:1)

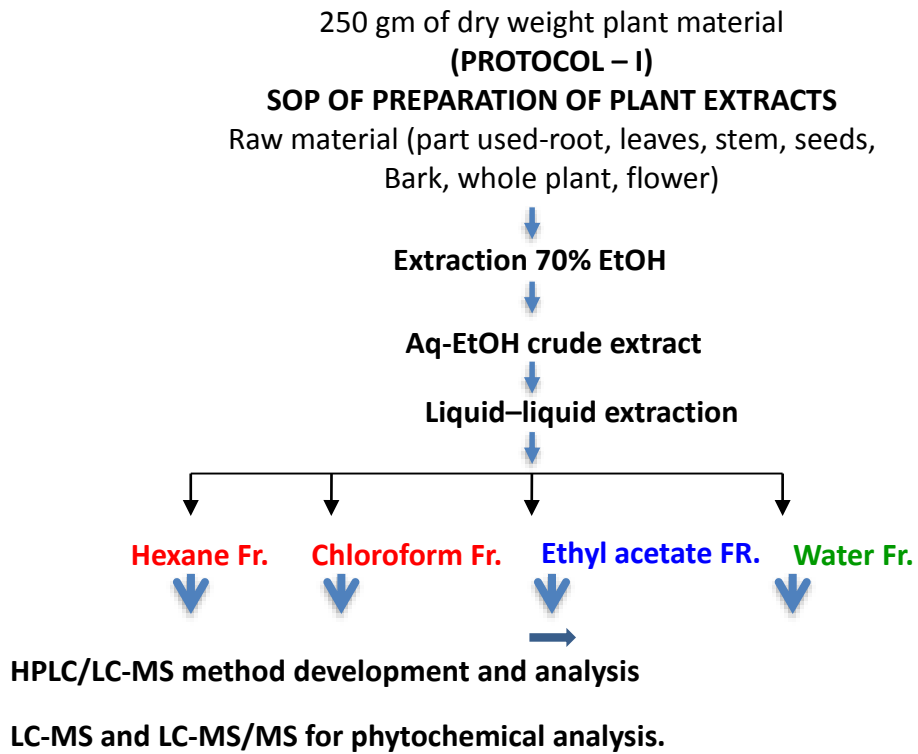
INFORMATION REQUIREMENTS FOR ANALYSIS

S.NO.	Analysis	Information require for analysis
1.	HPLC/LC-MS Method development and analysis	Nature of sample: plant extracts/chemical reaction products/pure isolated compound from column Or Fraction of plant extract: like hexane, chloroform, ethyl acetate etc. Solubility: Acetonitrile, Methanol or water Expected : Molecular weight of analytes
2.	Liquid chromatography- mass spectrometry (LC-MS)	SAIF/ Lot Number (previously HPLC/LC-MS Method developed)
3.	[LC-ESI-MS/MS] analysis or Liquid chromatography- mass spectrometry (LC-MS/MS)	SAIF/ Lot Number (previous LC-MS Analysis) 2. Peak list: which required (MS/MS fragmentation) Retention time: 3.51 min (m/z 395) 5.43 min (m/z 275) 6.86 min (m/z 520)

Note- without require information analysis can't be performed

Example: sample preparation

Keywords: [Extraction](#); [Liquid-liquid extraction](#);

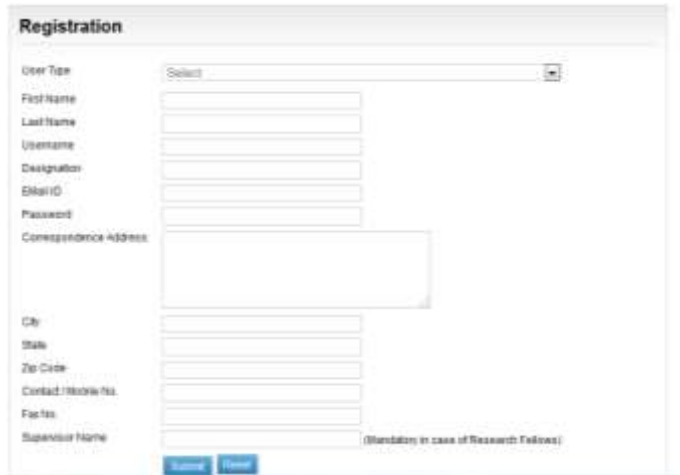


1. Weight out 10 mg of solvent free plant extract's fraction in eppendorf tube.
2. Label with sample code and properly packed in a thermocol box.
3. Send for analysis along with all necessary details.

How to submit online information through www.saiflucknow.org

Register in Website

Registration Form



The screenshot shows a registration form titled "Registration". It contains the following fields: User Type (dropdown menu), First Name, Last Name, Username, Designation, Email ID, Password, Correspondence Address (text area), City, State, Zip Code, Contact / Mobile No., Fax No., and Supervisor Name (with a note: "(Mandatory in case of Research Fellows)"). There are "Submit" and "Cancel" buttons at the bottom.

Login by Username and Password



Click on Submit sample



Select facility and No. Of samples

SAIF User Control Panel
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 Monday, February 24th, 2014, 10:55:36 AM

Radio active samples shall be accepted only after prior approval of HOD, SAIF and he

Actions

- My Profile
- Submit Sample
- View List
- Draft Delete
- Global Search
- Send Mail
- Change Password
- Logout

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Helpdesk

Submit Sample

Facility

Select the facility and number of samples for the desired analysis

Facility

You are viewing 1 - 5 of 5 records

Sl. No.	Facility	No. of Samples	View
1	SAIF-Elemental Analysis	-Select-	<input type="button" value="View"/>
2	SAIF-High Resolution Mass Spectrometry (HRMS)	-Select-	<input type="button" value="View"/>
3	SAIF-IR Spectroscopy	-Select-	<input type="button" value="View"/>
4	SAIF-Liquid Chromatography-Mass Spectrometry (LC-MS or AP/MS)	-Select-	<input type="button" value="View"/>
5	SAIF-NMR Spectroscopy	-Select-	<input type="button" value="View"/>

Fill the application form

Submit Sample

Enter sample code and select the options as per the facility

You are viewing 1 - 1 of 1 records

Sl. No.	Facility	Sample Code	Instrument	Analysis	Solubility	Quantity in mg	Scan Mass Range
1	SAIF-Liquid Chromatography-Mass Spectrometry (LC-MS or AP/MS)	ABC	Waters UPLC-TQD Mass spectrometer	LC-MS-MS LC-MS Analysis Form	Metformin	10	150-1000

Note:- To avoid unnecessary delay, kindly fill the proper information

HPLC Method details

Kindly fill and select required information

Mandatory Field

Type of samples *
 Name of column *
 Wavelength *
 Flow rate *
 Solvent System (A) *
 Solvent System (B) *

Bacterial extracts
 CTR 250 I 4.8, Sun
 254 (range 200-650 nm)
 1.0 (ml/min)
 Acetonitrile (Organic Solvent)
 AcOH:H₂O (Aqueous solvent)

Gradient programs/isocratic HPLC Method *

Data Save Successfully!

1. Fill the flow rate
 2. Fill the percentage value
 3. Click on Addflow button to add the data

Flow Rate *	% Solvent B *	Flow Solvent	% (range 1-100)	Addflow	Clear
0.25	50	SAIF Solvent			
0.25	50	SAIF Solvent			
0.50	50	SAIF Solvent			
0.50	50	SAIF Solvent			

Note:- Before submitting, make sure the information given by you is correct

Submit sample

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Monday, February 28th, 2016, 10:12:16 AM

Radio-active samples shall be accepted only after prior

Submit Sample

You are viewing 1 - 1 of 1 records

S.No.	Facility	Sample Code	Instrument	Analysis	Isotopicity	Quantity in mg	Scan Name Range	Charges (in Rs.)	solvent Charges	Tax	Total
1	SAIF-Liquid Chromatography-Mass Spectrometry (LC-MS or APO-MS)	ABC	Waters UPLC-TQD Mass spectrometer	LC-ESI-MS	Methanol	10	100-1000	400	0	10,62,505.00	10,62,505.00
Total								400	0	10,62,505.00	10,62,505.00

Back Submit

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Fill draft details and Submit lot

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Monday, February 28th, 2016, 10:12:16 AM

Radio-active samples shall be accepted only after prior

Submit Sample

Submit Lot

Add Draft

Initial Calculated Amount: 500

Draft No.:

Base Name:

Branch Name:

Draft Date:

Draft Amount: 500

Note: Please make draft in favour of the Director, Central Drug Research Institute, Lucknow-226001.

Feedback

First Time User? Yes No

Feedback of Services: Good Satisfactory Not Satisfactory

Do you acknowledge the services of SAIF, in your publications, thesis, reports etc? Yes No

Have you submitted the list of publications and thesis completed in the last year (January-December)? Yes No

Radio-active samples? Yes No

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After submit lot, please view lot status or check your email to view lot details.