Function of the lc-ms interface

Overview

Overall, the interface is a mechanically simple part of the LC–MS system that transfers the maximum amount of analyte, removes a significant portion of the mobile phase used in LC and preserves the chemical identity of the chromatography products (chemically inert). Coupled chromatography–MS systems are popular in chemical. Therefore, it is crucial to have an interface to connect the LC outlet to the MS inlet that can efficiently transfer the LC mobile phase to gas and at the same time ionize the analytes. Various interfaces for LCMS were developed, but issues with sensitivity, stability and user-friendliness were. The basic components of a LC unit consist of: (4) Detector - for the analysis of the separated components in a sample. Examples of common MS detectors are electron multiplier and. Liquid chromatography/mass spectrometry (LC/MS) is an analytical technique that combines the separation power of liquid chromatography with the direct mass measurement of a mass spectrometer as the detector.

Article Content

Jun 13, 2026

Direct electron ionization liquid chromatography–mass spectrometry ...

The direct-EI LC-MS interface provides access to well-characterized electron ionization data for a variety of LC applications and readily interpretable spectra from electronic libraries for environmental, food

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Interfaces for LC-MS : Shimadzu (Deutschland)

Therefore, it is crucial to have an interface to connect the LC outlet to the MS inlet that can efficiently transfer the LC mobile phase to gas and at the same time

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LC–MS Interfaces

Abstract Liquid chromatography (LC) coupled to mass spectrometry (MS) is a well-established analytical technique (LC-MS) that has opened the door to many challenging applications.

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Lecture 14: LC-MS

The thermospray interface overcame many of the problems encountered with the moving-belt and direct-liquid-introduction interfaces and with the advent of this, LC–MS became a routine analytical tool in a

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Basic instrumentation of LC-MS : Shimadzu SOPS

The basic components of a LC unit consist of: (1) Pump - delivers the mobile phase at a required flow rate, (2) Autosampler - injects the samples, (3) Column - for

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Basics of LC/MS

Learn about the basics of liquid chromatography mass spectrometry. With a focus on the fundamentals of LC/MS, this primer explains the basic principle of operation,

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LC-MS: Definition, Instrumentation, Applications

Principle of LC-MS Mass spectrometry detection with liquid chromatography Liquid chromatography Mass spectrometry Parts of the LC-MS

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Interfaces for LC–MS

The moving-belt interface separates the condensed liquid-phase side of the LC from the high vacuum of the MS and uses a belt to transport the analytes from one to the other.

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Basic instrumentation of LC-MS

2D-LCMS combines two chromatography modes to improve separation selectivity. It enables better cleanup and pre-concentration of samples, or switching mobile phases for MS compatibility. This

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(PDF) LC-MS-MS System

This study investigates the fundamental principles of LC-MS/MS, such as chromatographic separation mechanisms, mass spectrometry ionisation

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LC-MS and LC-MS/MS

LC-MS instruments are basically HPLC units with a mass spectrometry detector attached to it whereas LC-MS/MS is HPLC with two mass spectrometry detectors. The LC in LC-MS stands for liquid

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LC-MS: Definition, Instrumentation, Applications

The interface, also known as the ion source, serves as the coupling mechanism between the LC MS system and the mass spectrometers. The LC is

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Basic instrumentation of LC-MS : Shimadzu (Deutschland)

The ion guide, mass analyzer and detector are all housed in a vacuum in the MS. By holding it in a vacuum, the generated ions are able to be introduced, analyzed and detected in the MS with minimal

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Basics of LC/MS (5988-2045EN)

Earlier LC/MS systems used interfaces that either did not separate the mobile phase molecules from the analyte molecules (direct liquid inlet, thermospray) or did so before ion-ization (particle beam). The

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Chapter 2 Integrating LC and MS

Integrating LC and MS Chapter 2 introduces the detailed configuration of the LCMS instrumentation. It generally consists of a LC separating system, a mass analyzer and the LCMS interface API unit.

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PowerPoint Presentation

The thermospray interface overcame many of the problems encountered with the moving-belt and direct-liquid-introduction interfaces and with the advent of this, LC–MS became a routine analytical tool in a

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LC-MS (Liquid Chromatography-Mass spectrometry)

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Basic instrumentation of LC-MS : Shimadzu (Europe)

Examples of common MS detectors are electron multiplier and microchannel plate (MCP) where they operate by the secondary electron emission process. Together with the LC chromatogram, the

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Interfaces for LC-MS

Therefore, it is crucial to have an interface to connect the LC outlet to the MS inlet that can efficiently transfer the LC mobile phase to gas and at the same time

Oct 11, 2025

Basics of LC/MS

Why is LC used with mass spectrometry (MS)? A wide variety of detector types can be integrated into an LC system. The most common are based on absorption,

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LC-MS – What Is LC-MS, LC-MS Analysis and LC

In this article, we consider how LC-MS works, what it tells us and highlight some of the technique''s strengths and weaknesses.

Jan 12, 2026

Liquid Chromatography Mass Spectrometry (LCMS):

Liquid Chromatography-Mass Spectrometry (LC-MS) is the integration of the two systems, HPLC and MS, through an LC-MS interface. The function of

Aug 22, 2025

Choose the Right Interface for LC/MS Success

Table 1: Selecting LC/MS Interfaces for Different Analytes. XX: primary method, likely to give good results. x: secondary choice, may give

Contact Us

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