Why Use a Continuous Flow Spectrometer

Overview

Continuous Flow is a type of assay used to easily measure the progress of a reaction at discrete time points and is commonly used for determining initial rates and inhibition values. In the simplest form of the technique, the solutions of two reactants are rapidly mixed by being forced. Flow chemistry, also known as continuous flow chemistry or continuous processing, begins with two or more streams of different reactants pumped at specific flow rates into a single chamber, tube, or microreactor. A reaction takes place, and the stream containing the resultant compound is collected. A stopped-flow instrument is a rapid kinetics technique used to follow chemical reactions in the milliseconds to seconds timescale. A stopped-flow can only mix liquids, and the complete stopped-flow system includes a detection instrument.

Article Content

Hot

Gas Analysis by Mass Spectrometry

In atile species, where larger molecules must use the category of continuous analysis, specific alternative vaporization-ionization methods. m/z values are monitored (when analytes are Because

Apr 06, 2026 Hot

Stopped Flow FAQs

Typically used to gain an understanding of reaction mechanisms, including drug-binding processes or following protein structural changes, stopped-flow

Jul 23, 2025 Hot

A Perspective on Continuous Flow Chemistry in the ...

The key advantages of continuous flow include faster and safer reactions, which can be more environmentally friendly, smaller footprint, better quality product, and critically, the ability to perform

Jun 07, 2026 Hot

Continuous Flow Technique

Continuous flow processing offers the potential to revolutionize the discovery, scale-up, and manufacturing of drug products. It offers safer handling and metering of hazardous materials, higher

Feb 13, 2026 Hot

13.4: Flow Injection Analysis

13.4.1 Theory and Practice Flow injection analysis (FIA) was developed in the mid-1970s as a highly efficient technique for the automated analyses of samples. 17

Jan 08, 2026 Hot

2.1.1: Continuous Flow

Continuous Flow is a type of assay used to easily measure the progress of a reaction at discrete time points and is commonly used for determining initial rates and inhibition values.

Aug 03, 2025 Hot

Experimental Setup and Standardization of a

We present here the experimental setup and standardization of a newly acquired stable isotope ratio mass-spectrometer (Isoprime 100, Isoprime® UK)

Oct 03, 2025 Hot

On-line Monitoring of Continuous Flow Chemical Synthesis Using a ...

The application of a portable mass spectrometer for on-line characterization of flow chemical synthesis has been evaluated by coupling a Microsaic 4000 MiD to the Future Chemistry

Jun 08, 2026 Hot

10: Introduction to Spectroscopy

INTRODUCTION Spectroscopy is the study of the interaction between matter and electromagnetic radiation. The types of electromagnetic radiation are often

Aug 08, 2025 Hot

What Is Spectral Flow Cytometry and How Does It Work?

Learn how spectral flow cytometry analyzes the full emission spectrum from each cell, enabling a more detailed characterization of complex biological systems.

Jun 23, 2026 Hot

Continuous flow isotope ratio mass spectrometer (CF-IRMS) and its ...

Stable isotope ratio mass spectrometers have been widely used to determine the isotopic ratios of light elements such as hydrogen, carbon, nitrogen, oxygen and sulphur. Continuous Flow

Feb 26, 2026 Hot

Continuous flow systems for rapid sample screening

As previously stated, continuous flow systems constitute a valuable, but as yet unexploited, alternative in sample-screening systems. The automated devices proposed in the

Sep 26, 2025 Hot

Continuous-flow analysis: the Auto-Analyzer

The ''continuous flow'' refers the flow of liquid term to continually pumped through the system while it is being analysed for particular components. Samples, standards, and reagents are injected...

Jul 02, 2025 Hot

Isotope ratio mass spectrometry

While continuous-flow IRMS instruments can achieve higher sample throughput and are more convenient to use than dual inlet instruments, the yielded data is of approximately 10-fold lower

Sep 08, 2025 Hot

Why Argon Gas is Used in Spectrometry Role in ICP-MS, AAS, and

In the world of today''s analytical chemistry, special methods like Atomic Absorption Spectroscopy (AAS), Inductively Coupled Plasma Mass Spectrometry (ICP-MS), and Optical Emission Spectroscopy

Dec 21, 2025 Hot

What are stopped-flows and how do they help chemists

Stopped-Flows are used across a wide range of academic and industrial applications including drug binding processes and protein stability.

Jan 05, 2026 Hot

Mass spectrometry in analytical research

Discover the applications of mass flow controllers in mass spectrometry, crucial in analytical research and biopharmaceutical studies.

Jul 27, 2025 Hot

Flow Chemistry | Benefits of Continuous Flow Chemistry

Continuous, real-time monitoring allows researchers to track steady-state conditions, quickly troubleshoot process deviations, and identify reactive intermediates.

Jan 20, 2026 Hot

Continuous flow mass spectrometer for isotope analysis

If i took thousands of discrete samples of mineral fragments in a field study using a specialized drill, what mass-spectrometry techniques/equipment would allow me to analyse the

Dec 23, 2025 Hot

Spectral Flow Cytometry Fundamentals

Spectral flow cytometry fundamentals for education in spectral flow cytometry instrumentation, spectral unmixing, linear unmixing, spectral flow cytometry analysis.

Jul 18, 2025 Hot

Continuous flow chemistry for molecular synthesis

Continuous flow techniques have become important tools for molecular synthesis, both in academia and across the fine chemicals industry.

Apr 09, 2026 Hot

What Is Fluorescence Spectroscopy? Principles Overview

What is fluorescence spectroscopy? Fluorescence spectroscopy is an analytical method used to examine the fluorescent characteristics of molecular compounds. It involves measuring the light that

Mar 18, 2026 Hot

CONTINUOUS SPES FLOW ANALYSIS (CFA-SPES)

This scheme is representative of analytical cases as, e.g., on-line / in-line monitoring of particle contamination during continuous flow processes and for measuring samples injected using an

Feb 08, 2026 Hot

Isotope Ratio Mass Spectrometry

Continuous Flow-Isotope Ratio Mass Spectrometry In the CF-IRMS technique, a solid or liquid biological sample is introduced into a high-temperature combustion chamber of an elemental analyzer, where it

Oct 13, 2025 Hot

Optimizing Conditions for GC/MS Analyses

Solvent blank – May contain contaminant peaks (for example, phthalates, siloxanes) Best practice: Use the same bottle of solvent that was used for any dilutions/extractions Known standard – GC/MS

Aug 15, 2025 Hot

Continuous flow isotope ratio mass spectrometer (CF-IRMS) and its ...

Continuous Flow Isotope Ratio Mass Spectrometry (CFIRMS) provides reliable data on nanomole amount of sample gas without the need for cryogenic trapping using cold fingers as in dual

Aug 29, 2025 Hot

What are the advantages of Continuous Flow Analysis?

Flow analysis has advantages over manual methods that include smaller sample volume and reagent consumption, greater reproducibility, and higher throughput. Typical continuous flow methods can

Mar 05, 2026 Hot

Conventional Flow Cytometry VS. Spectral Flow Cytometry

Novus flow cytometry panel builder tool comparing the spectra view readout of conventional flow cytometry (top) and spectral flow cytometry (bottom).

Oct 28, 2025

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://eedenmarketing.co.za
Email: info@moletenare-ew.co.za
Phone: +86 138 1658 3346
Address: Ningbo, China

This document is for informational purposes only. Specifications subject to change without notice.