Nebuliser attachment for mass spectrometry

A nebuliser attachment for mass spectrometry which allows for continuous flow measurements of samples, reducing runtime from 45 minutes to 1 minute.

The Nebuliser attachment for mass spectrometry is an innovative add-on unit designed to enable continuous flow measurements of samples.

By reducing sample run times from 45 minutes to just 1 minute, this technology enables unique applications of mass spectrometry in which measurement times are critical, such as in the chemical analysis of Antarctic ice cores. The technology may likewise be of high value in clinical diagnostics, food contamination detection, drug testing and discovery, environmental testing, isotope ratio determination, protein identification, and carbon dating.

Technology overview

Mass spectrometry is a powerful analytical technique used to measure the mass-to-charge ratio of ions, and is widely used in chemistry, biology, and environmental science, to identify and quantify compounds in complex mixtures. However, traditional mass spectrometry methods often face challenges such as long sample run times, solvent-based interferences, and limited sensitivity for certain analytes.

Long run times are a particular challenge in time sensitive measurements such as the study of Antarctic ice cores, where each layer of the ice core contains information from specific time periods stretching back 1.5 million years. As samples are continuously melted during measurements, long run times result in the loss of key information.

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The Nebuliser attachment for mass spectrometry addresses this challenge by allowing for continuous flow analysis, reducing sample run times from 45 minutes to just 1 minute. Beyond environmental studies, this technology is likely to have a major impact in fields such as drug testing and discovery, food contamination detection, pesticide residue analysis, isotope ratio determination, protein identification, and carbon dating.

Benefits

- Direct injection of aqueous samples.
- Reduction in sample run time from 45 minutes to 1 minute

Opportunity

A licensing opportunity

Founders

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