Compact and Portable Mass Spectrometers:

Don't wait for answers

Mass Spectrometry Designed for Anyone, Anywhere.

Portability™ MS

Features: *Portable, field-analysis, results in seconds, rapid start, MS/MS capability*
Detection Limit: *< 10 ppb*
Mass Range: *50 – 650 amu*
Weight: *10 kg*
Dimensions: *33cm x 23cm x 41cm*

Applications

Biomedical Analysis

Peptides & Proteins

Drugs: Pharmaceutical & Illicit, Paraphernalia

Environmental Studies

Food Safety

Consumer Product Safety

Industrial Production Lines

Military, Police, Homeland Security, Counter-Terrorism

Research Laboratories

Continuity™ MS

Features: *Compact, high sensitivity, large mass range, results in seconds, MS/MS capability*
Detection Limit: *< 100 ppt*
Mass Range: *50 – 900 amu*
Weight: *20 kg*
Dimensions: *33cm x 33cm x 43cm*

Compact Mass Spectrometry: Bringing the Laboratory to the Samples

Mass spectrometers have long been considered the gold-standard for chemical analysis because of their high precision; however, the nature of mass spectrometer instrumentation brings inherent obstacles that have been difficult to overcome. MS analysis requires a laboratory with a large amount of space, highly trained individuals to operate and maintain the instrumentation, and is a time-consuming process that creates long lead times for results. To overcome these obstacles, a new way of approaching analysis is needed as well as the technological innovation to support the approach without compromising quality. The solution would require on-site instrumentation with a small footprint, timely results, and limited sample preparation and training.

BaySpec has developed such a solution with its revolutionary compact and portable mass spectrometer line, which includes the Portability™ and Continuity™ mass spectrometers. With Portability™ and Continuity™, BaySpec has transformed the approach to MS analysis by making it assessable to anyone, anywhere. Using core technology that was developed from laboratory-based instruments, BaySpec is able to bring convenience, affordability, efficiency, and ease of use in a compact form without sacrificing quality.

Features that are Second-to-None

Portability™ and Continuity™ bring laboratory quality analysis out of the lab and *to* the sample. Flexibility and ease of use is paramount in creating a unit designed to be compact and portable. Portability™ and Continuity™ are self-contained, all-in-

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one units operated by embedded touchscreen PCs and require little-to-no maintenance. The instruments can be rapidly deployed and ready for analysis in minutes and requires minimal sample preparation. Upon sample introduction, results appear in real-time within seconds. Each unit can be combined with optional sample ionization sources such as TD-ESI, APCI, DESI, or DART modules. Ionization sources can also be customizable according to customer designation. Portability™ and Continuity™ are not only compact and easy to use, but are the most sensitive portable devices on the market.

Technology Behind the Innovation

BaySpec is able to achieve the revolutionary compact design due to state-of-the-art linear ion trap technology. By using a linear ion trap and utilizing its high tolerance for low vacuum and high pressure, the mass spectrometers can be designed using smaller and more economical pumps. Being able to utilize the miniaturized pumps enables the size of the compact mass spectrometers to be reduced ten-times that of a traditional mass spectrometer. Additionally, Portability™ and Continuity™ both use ambient air, eliminating the need for cumbersome gas tanks, making the systems truly compact and portable.

Application Possibilities Virtually Endless

With sensitivity as low as <100 ppt and the ability to be used benchtop or deployed in the field, the application possibilities with Portability™ and Continuity™ are almost limitless. Application areas have included detection of explosives, pesticides, peptides, mycotoxins, controlled substances, and plasticizers to name a few.

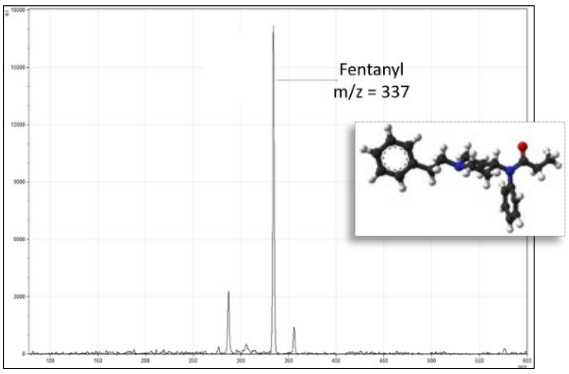

Figure 1: Fentanyl mass spectra from acquired data.

About BaySpec

BaySpec was founded in 1999 by optical and laser engineers on the premise of manufacturing rugged, reliable and high-performance spectral devices. With 100% manufacturing in the USA and located in the heart of Silicon Valley in San Jose, California, BaySpec designs and manufactures all instrumentation on site at its 48,000 square foot facility. BaySpec has a rich history in miniaturization brought to fruition with the concept of "bringing the lab to the samples" from Raman to hyperspectral imaging to mass spectrometry. BaySpec continues to forge the path of innovation with the vision of making laboratory quality analysis accessible to anyone, anywhere.

Please contact BaySpec for additional information including instrument specifications and application notes.

Figure 2: Applications include chemical warfare agents, oil & gas, biological analysis, drug detection such as fentanyl and cannabinoids, explosives, and pesticide, fungi, and plasticizers related to food and consumer safety.

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