Analytical Components & Systems

New at PittCon 2002

a product of AddMS

Sensitive OEM mass detector 1-50 AMU

The sensitivity of a helium leak detector with the mass range of a residual gas analyzer

- Detects a large variety of compounds
- Compact, lightweight design
- Low power consumption
- Patented* magnetic sector, TOF, and electronic optic technologies

Introduction

Our detector is not like other permanently tuned HLDs. It can be used to detect a large variety of compounds (from mass 1 to 50). In the case of a helium leak application, the ability to scan a wider mass range reduces the cost of the test. One can monitor air peaks prior using helium to check for a leak.

Our detector's size (15 x 10 x 6 cm), light weight (2Kg), and low power consumption (10W), make it a perfect candidate for the design of a sensitive and portable mass spectrometer. But don't think that the reduction in size was achieved at the expense of sensitivity; the large ionization volume of the source gives our detector the sensitivity of some of the best HLDs.

Our detector cell is no more complicated to manufacture and assemble than a magnetic HLD. The targeted price, including electronics and software, will be comparable to what is offered on the OEM market today. The end-user will not have to be charged for the increased performance.t

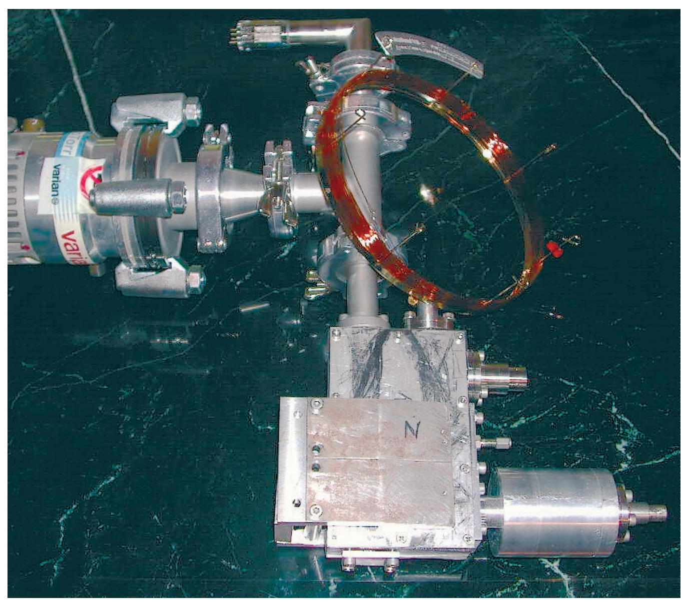

Figure 1: AddMS 1-50 AMU Prototype

Basic Specifications

Mass range:	1 - 50 AMU
Dimension:	15 x 10 x 6 cm
Weight:	2 Kg
Power requirement:	10 W

* Patented in Europe; patent pending in USA

About AddMS

AddMS was created 2 years ago to develop our patented* mass detector technology. Our detector may be used for insitu process monitoring, leak detection, environmental monitoring, food industry, etc., and is offered to innovative industry leaders who desire to lower their costs and expand the current scope of their business.

The development of AddMS prototypes into final products will be conducted with the help of VICI here in Houston.

Data

The data presented here is shown to give an idea of the actual performance of the prototypes. Mass resolution can be improved, mass range can be increased, and fine tuning can be made according to the targeted application. To understand the sensitivity of our detector, please refer to figure 3. A poster with more information will be displayed at Pittcon 2002.

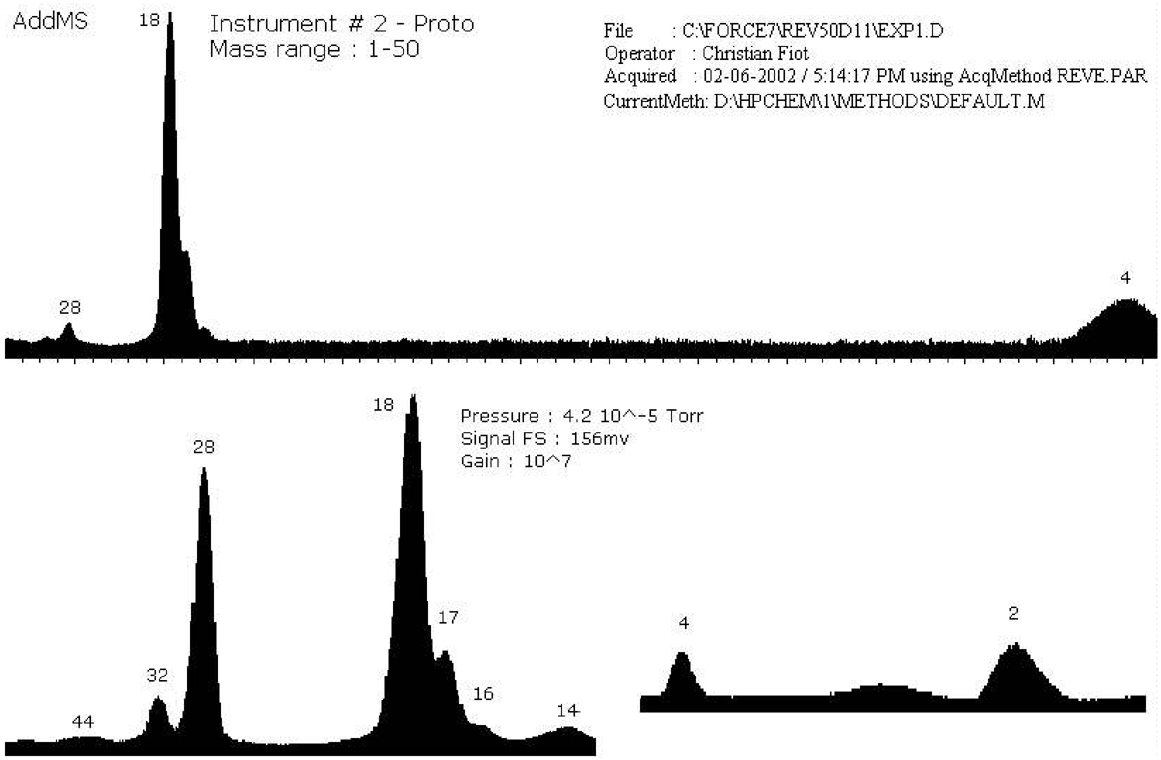

Figure 2: AddMS 1-50 AMU prototype

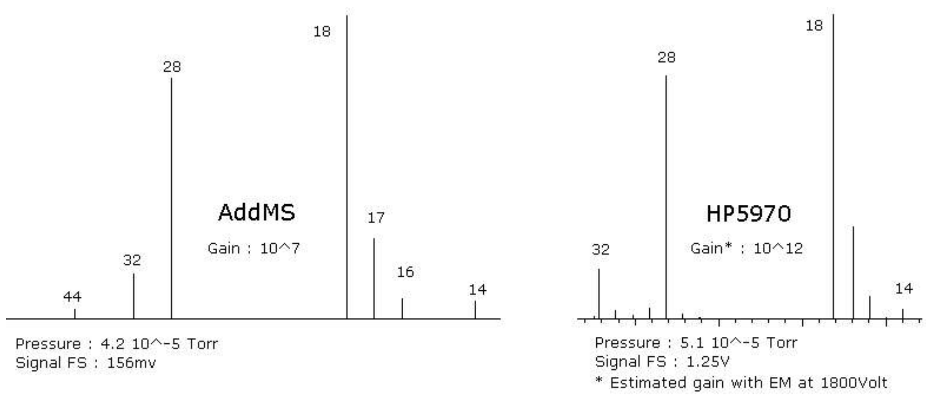

Figure 3: AddMS prototype compared with HP5970

Technical data for the prototype:

Vacuum gauge: 59822A gauge controller (Hewlett Packard)
Vacuum system: Turbo 70 (Varian)
Column: VICI Gig Harbor Group Inc.
Data Acquisition system: Force7 (Acquisition Solutions k)

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Inventor: Dr. Robert Evrard (AddMs consultant)
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