

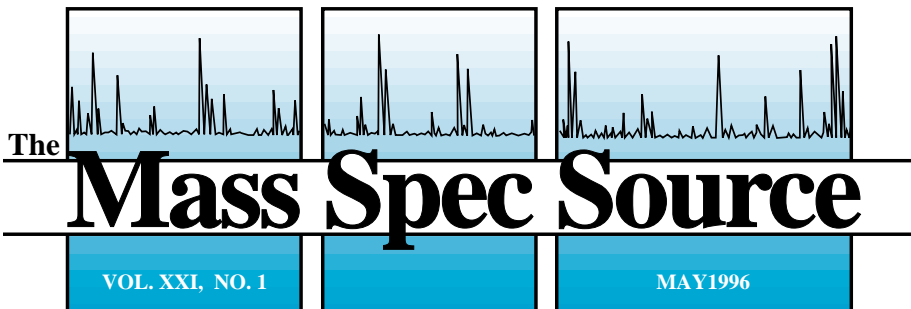
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For Users of Mass Spectrometers and Gas Chromatographs

ASMS 96 Meeting in Portland Oregon

Scientific Instrument Services will once again be present at this years ASMS meeting. The meeting will be held the week of May 12-16, 1996 at the Oregon Convention Center in Portland. Because this years meeting is being held in a convention center and attendees will be staying at a number of hotels the format of many of the meetings programs have been changed.

Hospitality Suites: Due to the location of the meeting and the use of multiple hotels for housing the members, the evening hospitality suites will not occur this year. A number of alternatives are being planned by the various Corporate members. SIS has reserved a room in the convention center, which will be open Monday and Tuesday during the meeting as follows:

continued on page 2

SIS Poster Presentations at ASMS 1996

SIS will be presenting the following posters at this years ASMS meeting. The complete poster presentation is available on our WEB site: <http://www.sisweb.com>

Manufacturers Poster Session - All Days

SIS on the World Wide WEB

John Manura, Christopher Baker, Steven Colby and Santford Overton

Monday - May 13, 1996

The Design of a New Direct Probe Inlet for a Mass Spectrometer

Christopher Baker and John Manos

Application of SIMION 6.0 to Filament Design for Mass Spectrometer Sources

Christopher Baker, Steven Colby and John Manura

Tuesday - May 14, 1996

Volatile Organic Composition in Blueberry

Santford Overton and John Manura

Thursday - May 16, 1996

Application of SIMION 6.0 to Problems in Time-of-Flight Mass Spectrometry

Steven Colby and John Manura

Delayed Extraction and Laser Desorption: Time-lag Focusing and Beyond

Steven Colby

The Influence of Pump Oil Purity on Roughing Pumps

Santford Overton and John Manura

SIS Meeting Room at ASMS Convention: Room A103

General Open Hours: Monday and Tuesday

This room will be open to all during the following hours as established by ASMS

12:30 pm to 2:00 pm

5:50 pm to 7:30 pm

In addition our meeting room will be open at other times for private conference meetings. If you would like to spend some time with the Staff of SIS, plan to stop by and see us during the general open hours listed above or give us a call to schedule a conference meeting to discuss any of our products or services or to discuss your particular requirements of SIS.

We look forward to the ASMS meeting each year. We get a lot of new ideas for new products as well as suggestions as to how we can better serve you. We appreciate the opportunity to meet with you either in our

meeting room or at one of the many posters that we will be presenting. We would be happy to discuss our capabilities and offer our expertise regarding custom instrument modifications or designs for new products. Our goal is to serve the needs of the mass spectrometer community.

One particular paper of importance to the mass spectrometer user is the poster presentation on Thursday by Sandy on Pump Oils for vacuum pumps. For this paper we ran 2 vacuum pumps with 2 different oils (Inland 19 & Invoil 45) for three months. Oil samples were removed every

week and analyzed via purge and trap GC/MS. The two pump oils were then compared to demonstrate the degradation of these oils and to show why pump oils should be changed frequently.

Steven Colby will also be presenting several posters to demonstrate the use of the SIMION 3D software in the design of mass spectrometer sources (Monday) and in Time-of-Flight Mass Spectrometers (Thursday). Additional applications of Simion can also be discussed with Steve at our hospitality suite.

Terms and Conditions

Scientific Instrument Services (S.I.S.) continues to supply "The Mass Spec Source" newsletter as a service to our customers. Printed six times a year, it includes articles and notes on new products and procedures of interest to mass spec and GC users. Papers from all fields of scientific inquiry in which mass spectrometry and gas chromatography can play a role will be considered and subject to review. However, S.I.S. reserves the right to reject any article that is in direct competition with S.I.S. products.

Articles and Application Notes

Editorials and reviews on new instrumentation and techniques for GC/MS will be considered for publication. These articles may be any length and our Graphics Department will aid you in any way you may need.

All articles and application notes in this publication are reviewed by two peer reviewers from the mass spectrometer community.

Mass Spec Tips

Any new ideas or tips that could benefit other mass spectroscopists can be submitted for inclusion in this section. Authors will be compensated \$100.00 for each tip published in this newsletter.

For Sale/Wanted

We advertise, for those looking to sell or buy, various mass spectrometers, leak detectors, gas chromatographs or other instrument parts. These parts may be new, used or reconditioned. Items are listed as described by the seller. If you wish to sell any mass spec parts or if you are looking for some particular part, please call Sandy Overton, editor (908) 788-5550. Be prepared to describe the item fully and indicate prices.

Laboratory Cartoons

S.I.S. will pay you for original cartoons related to the laboratory or GC/MS. We will consider cartoons related to GC/MS or any laboratory situation. Authors of cartoons printed in the Mass Spec Source will be paid \$50.00 for their contribution. Our Graphics department can aid you with illustrations.

For More Information

Anyone interested in writing in any of the areas above should contact Sandy Overton, the editor of the Mass Spec Source, at (908) 788-5550. We are always trying to improve this newsletter, if you have any suggestions please give us a call. Thanks for your continued support.

Warranty

S.I.S. does not warranty that the items described herein are usable or fit for a particular purpose. Our company makes no representation as to condition or character of the merchandise. S.I.S. will not be responsible for consequential or special damages.

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SIS on the World Wide Web

John J. Manura

Scientific Instrument Services, Inc. 1027 Old York Road, Ringoes, NJ 08551

Since SIS began our WEB pages in September of last year the response has been outstanding. Our pages on the Internet continue to receive expanded usage by our customer base. We have been quite pleased with the response by our customers and the new leads that this advertising medium has generated. We have finished installing the entire mass spec and desorption sections of our catalog. We are now working on the Vacuum section of the catalog which should be completed by the end of April.

The table below summarizes the use of our Internet pages. "Total Hits" refers to the total number of pages which were accessed by people visiting our sites. Each time a page is downloaded or read into someones computer it is counted. We presently have about 2000 pages on our system and most have been read at least once. About 25% of the Internet contacts are international sites.

What's NEW on the SIS WEB pages?

MS TOOLS

We have added several new features to our WEB pages. In addition to the popular MS LINKS pages we have added a new section called MS TOOLS. This section is being designed as a collection of reference aids and software tools of interest to the Mass Spectrometer user. One feature is the Periodic Chart of the elements with hyperlinks for each of the elements. On these element pages we have the general information of interest to the mass spectrometer user on each element including the exact masses of the isotopes of each element as well as the isotopic abundances both in table form as well as graphic chart form. Also included is a list of Software complete with hyperlinks relating to mass spec, much of which is available as Shareware for download-

ing on the Internet. Additional items are planned for the future including lists of mass spec neutral loss groups and common mass spec peaks. If you would like to contribute any of your ideas or software to this site, please give us a call. All authors will receive credit for their contributions.

Scientific Software

SIS recently added more than 2000 scientific software titles to our catalogs. A catalog describing all of the software is available if you give us a call or it is available on our WEB pages. The WEB pages have the advantage of being constantly updated with new software titles and the software can be organized by various means including alphabetically, by field of interest (i.e. mass spec) or by product manufacturer. In addition you can use our Search function on our WEB pages to quickly determine the availability of a product to serve your needs.

Check out the new **Mass Spec Software Section** for the complete list of software relating to mass spec. This includes not only software available for purchase from SIS, but also Shareware available for downloading on the Internet.

SIMION 3D - SIS is now the official dealer for the distribution of SIMION software, the industry standard for ion optics modeling and for mass spectrometer design. A complete description of the software, its features and other pertinent information is now available on our WEB pages. In addition a demo version of SIMION is available for free downloading from our pages.

NEW Products

As we introduce new products, they will be featured first on our Internet Home pages. Due to the speed of this method of documentation,

these new products can be listed and published faster than could be accomplished by other means of advertising or promotion. The following NEW Products available for SIS are now listed on our Internet pages.

Micro Cryo-Trap
Edwards Vacuum Pumps
SIMION 3D
Scientific Software

Our WEB pages are continually expanding. If you have any comments as to their contents or would like to suggest any improvements or new sections that should be included, we would like to hear from you. The following are a few of the many responses that we have recently received. We thank all of you who have responded. Your encouragement justifies our expansion of our WEB pages.

** I wanted to let you people know that I think you have a very well laid out web page with a wealth of mass spec information much of which is not directly related to your business. You are providing a service to the mass spectrometry community above and beyond what other companies (and many academic sites) offer over the internet.*

** Fantastic WWW site! Great graphical appearance and VERY comprehensive content. Other companies should follow your example. I'm sure I will be visiting often.*

** Occasionally, I travel to different Web sites of companies in this industry to see how they are presenting their products thru this medium. I just wanted to complement you on your web site. Of all the ones I've visited, yours appears to be the most informative. You manage to combine a soft sell approach with some real information on applications. This is where I believe that this particular communication medium shines.*

Summary of the Internet Use of Our Internet Pages

Total Hits	<u>Sept. 95</u>	<u>Oct. 95</u>	<u>Nov. 95</u>	<u>Dec. 95</u>	<u>Jan. 96</u>	<u>Feb. 96</u>	<u>Mar. 96*</u>
	10,400	13,084	35,500	37,097	44,978	66,357	75,000

* Projected

Micro Cryo-Trap

New - Programmable Micro Cryo-Trap for the Cryo-focusing of Volatiles and Semi-volatiles at the Head of GC Columns

Features

- Only 1.0" long- uses minimum amount of cooling gas.
- Reduction of CO₂ or LN₂ use by 97% as compared to cooling the entire oven.
- Dual programmable cryo cooling and heating cycles.
- Remote input connector for switching between cryo-cooling and heating cycle via GC, Desorption System or manually.
- Rapid heating up to 400°C at >1000°C per minute.
- Clamp Mounts onto GC Injection Port

Applications

- Thermal Desorption Sample Trapping
- Purge and Trap Systems
- GC Headspace Sample Analysis
- Multi-dimensional GC Applications

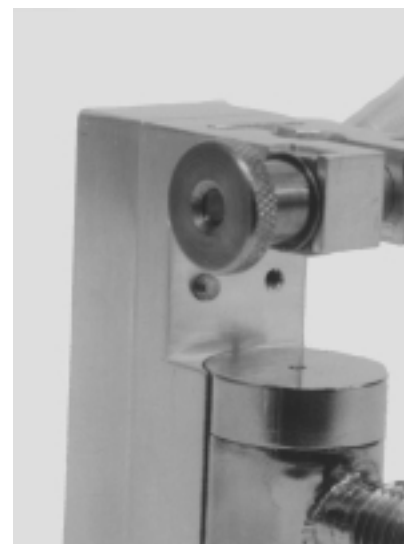
The Cryo-Trap consists of a small heating/cooling chamber which is 3/4" in diameter and 1.0" long and mounts to the bottom of the GC injection port just inside the GC oven. In the center of the chamber is a small stainless steel capillary through which the capillary column freely passes. Capillary columns up to megabore (0.53mm I.D.) diameters can be used. Around the stainless steel capillary tube a heating coil is wound to provide for the rapid heating of the capillary tube. A thermocouple provides accurate measurement of the cryo-trap temperatures. Either Liquid CO₂ or Liquid Nitrogen for cooling is introduced into the Cryo-Trap (Cooling Gas In), and is exhausted through the outlet. The exhaust can either be vented into the GC Oven or a tube can be attached to vent the cooling gas external to the GC.

The control of the Cryo-Trap is provided via an independent Cryo-Trap Controller provided with the system. Both the Cryo-Cooling and heating temperatures are set via this digital temperature controller. The system can be used either manually to switch between cooling and heating or can be operated automatically via an input

Visit our Web Home Page

<http://www.sisweb.com>
for further information and application notes.

**Cryo-Trap
Only
1.0 Inch
Long**



For the cooling operation, the cooling gas is pulsed into the chamber. Liquid CO₂ (Model 971) will cool down to -70 degrees C. Liquid Nitrogen (Model 981) will cool down to -180 deg. C. The cooling temperature can be set to any temperature between room temperature and the lower limits of the cooling gas. The temperature controller will pulse the cooling gas into the chamber to accurately control the temperature to the value you set. The thermocouple provides the feedback to both regulate the temperature as well as display the GC Cryo-Trap temperature on the display of the temperature controller.

Model 971 Micro Cryo-Trap for use with Liquid CO₂

The Model 971 Micro Cryo-Trap is designed for use with liquid CO₂ tanks with a DIP tube. The minimum cooling temperature is -70°C.

Part #	Description	Price
971001	Micro Cryo-Trap for use with liquid CO ₂ on HP Gas Chromatographs.	\$2695.00
971002	Micro Cryo-Trap for use with liquid CO ₂ on Varian Gas Chromatographs.	\$2495.00
971003	Micro Cryo-Trap for use with liquid CO ₂ on Shimadzu Gas Chromatographs	\$2495.00

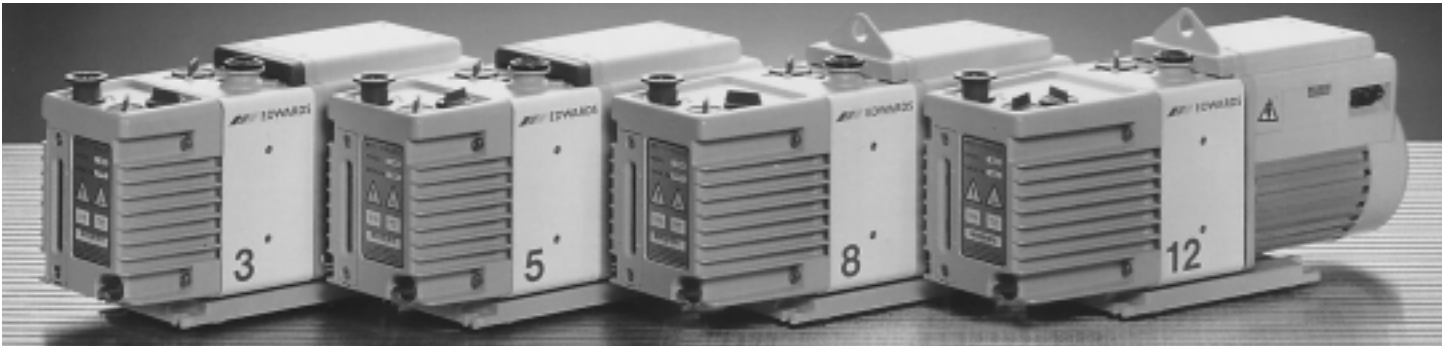
Model 981 GC Cryo-Trap for use with Liquid Nitrogen

The Model 981 GC Cryo-Trap is designed for use with liquid nitrogen tanks (low pressure). The minimum cooling temperature is 180°C.

Part #	Description	Price
981001	Micro Cryo-Trap for use with liquid LN ₂ on HP Gas Chromatographs	\$2695.00
981002	Micro Cryo-Trap for use with liquid LN ₂ on Varian Gas Chromatographs.	\$2495.00
981003	Micro Cryo-Trap for use with liquid LN ₂ on Shimadzu Gas Chromatographs.	\$2495.00

Edwards Vacuum Pumps

Edwards RV Dual-Mode Vacuum Pumps



The Edwards RV pumps conform to the following standards: IEC 1010; EN1012; IP44; CSA; CE; manufacturing unit certified to ISO9001 (BS5750).

- **Selectable dual mode**
 - high vacuum for best pressure
 - high throughput mode for continuous inlet pressure above 50 mbar
- **Easy to use gas ballast**
- **ON-OFF switch on pump**
- **Low Noise Level: 48 dbA**
- **All pumps factory tested and certified**
- **Easy to service and maintain**
- **High torque, dual voltage, dual frequency motor**

To meet the requirements for high throughputs with low ultimate vacuum, Edwards has developed a totally new concept in rotary vacuum pumps. The world's first dual-mode pump.

The unique dual-mode action allows you to easily configure the unit to pump very high gas loads and also achieve excellent vacuum - all from a single pump. In most cases it increases performance at significantly reduced noise levels.

This radical operation is matched by innovative design features including a cartridge based pumping mechanism incorporating advanced new materials, a fully featured Edwards motor and a fast acting inlet valve to seal the pump for suck-back protection.

The pumps are easy to install, use and maintain with superior built quality to give lowest cost of ownership.

To build a pump this advanced, Edwards has invested heavily in state-of-the-art manufacturing and assembly technology in a dedicated ISO9001 factory.

To meet the stringent requirements for ever quieter environments we have built into the Edwards RV range the results of an extensive program of noise research into the Pump, drive train and motor. This has reduced both overall noise levels and improved the subjective quietness by "tuning out" those frequencies which are both intrusive and irritating. Before shipment each pump is tested in a quiet room using a noise spectrum analyser.

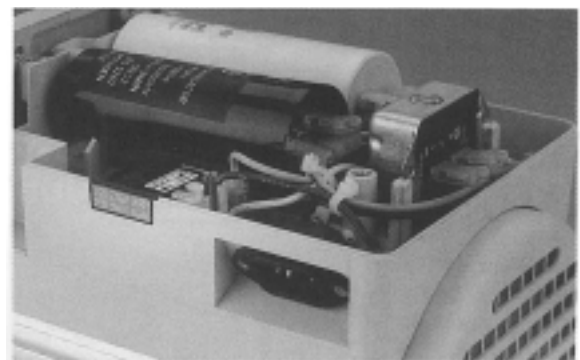
Edwards RV - easy to install, use and maintain

Installation is easy as all Edwards RV pumps feature a special dual voltage, dual frequency motor with an IEC mains input socket. Simply plug in the appropriate cable. No need for hard wiring. An on/off switch controls the pump.

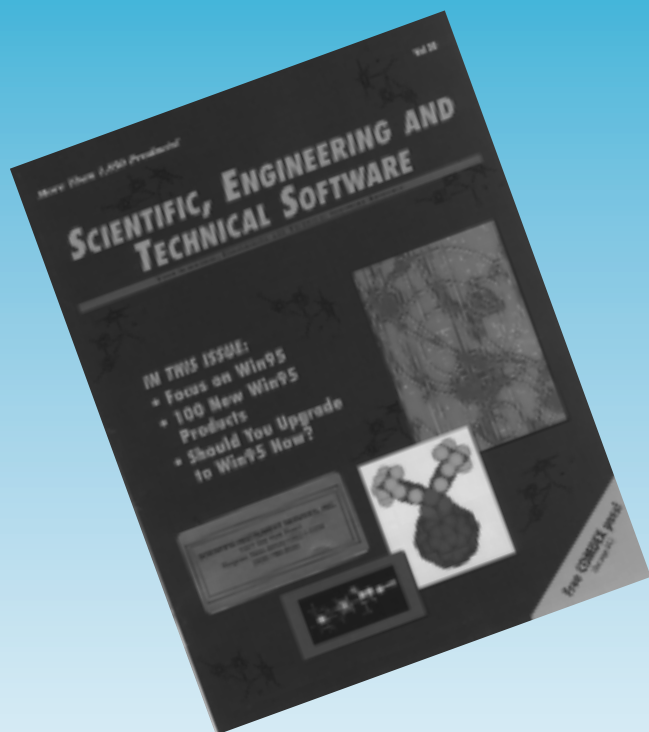
Motor voltage is determined by a simple rocker switch, enabling the pump to be easily configured for use internationally.

All controls are clearly marked and have large finger grips for ease of use. Inlet and outlet are both fitted with standard NW25 flanges.

No special tools are required for servicing. The shaft seal can be changed or repositioned without dismantling the pump. Easy dismantling for cleaning is a feature. In addition, we provide service kits of guaranteed Edwards parts.



Part No.	Description	Displacement (m ³ /h)	Price
RV3	Edwards Model RV3	4.5	\$1550.00
RV5	Edwards Model RV5	5.8	\$1695.00
RV8	Edwards Model RV8	9.7	\$1850.00
RV12	Edwards Model RV12	14.2	\$2175.00



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PC AND MAC SOFTWARE
PRODUCTS**

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Mass Spec Software from SIS

(More products available on the WEB)

MassSpec by Infinity Software

Eliminate time-consuming and error-prone methods of correlating structure fragments to peaks observed in a mass spectrum. EXT version has the same features as MassSpec, but with a database of higher order than the elements. Instead of drawing the structures for a peptide you enter its amino acid residue designation. Additional databases may be added.

Product #	Platform	Description	Price	Demos available
28362	DOS	MassSpec	\$125.00	No
39000	DOS EXT	MassSpec	\$150.00	No
B39000	Brochure			

MacSpec by Spire Software

Tools for correlation of structure and mass spectra. Analysis and simulation of complex peak patterns, determination of fragment structure and formulation from low-resolution spectra and analysis of metastable ions. MacSpec ConvertIt converts any ASCII file of mass spectral data from a word processor application, scanner with OCR, or mass spectrometer data system into a MACSpec file.

Product #	Platform	Description	Price	Demos available
25084	MAC	MacSpec	\$295.00	Yes
25410	MAC	ConvertIt	\$85.00	No
B25084		Brochure MacSpec		
B25410		Brochure ConvertIt		
D25410		Demo MAC MacSpec		

EXTEND MS By ProLab Resources



This product contains over 20 feature enhancements that "layer" over the standard MS ChemStation and MS ChemStation with EnviroQuant software to greatly improve its productivity and performance. A number of enhancements target the useability of the MS ChemStation software, eliminate the number of steps required to perform a specific action. Other features improve productivity by supplying completely new capabilities, such as integrated QA./QC tracking and extended LSC reporting. All have been designed to reduce data processing and turn-around times, while improving information flow and reliability.

Product #	Platform	Description	Price	Demos available
EXTENDMS	Win	Extend MS by ProLab	\$495.00	Yes

Wiley Registry Version 6.0 from Wiley Intersciences John Wiley & Sons with Wiley AccessPac by Palisade Software

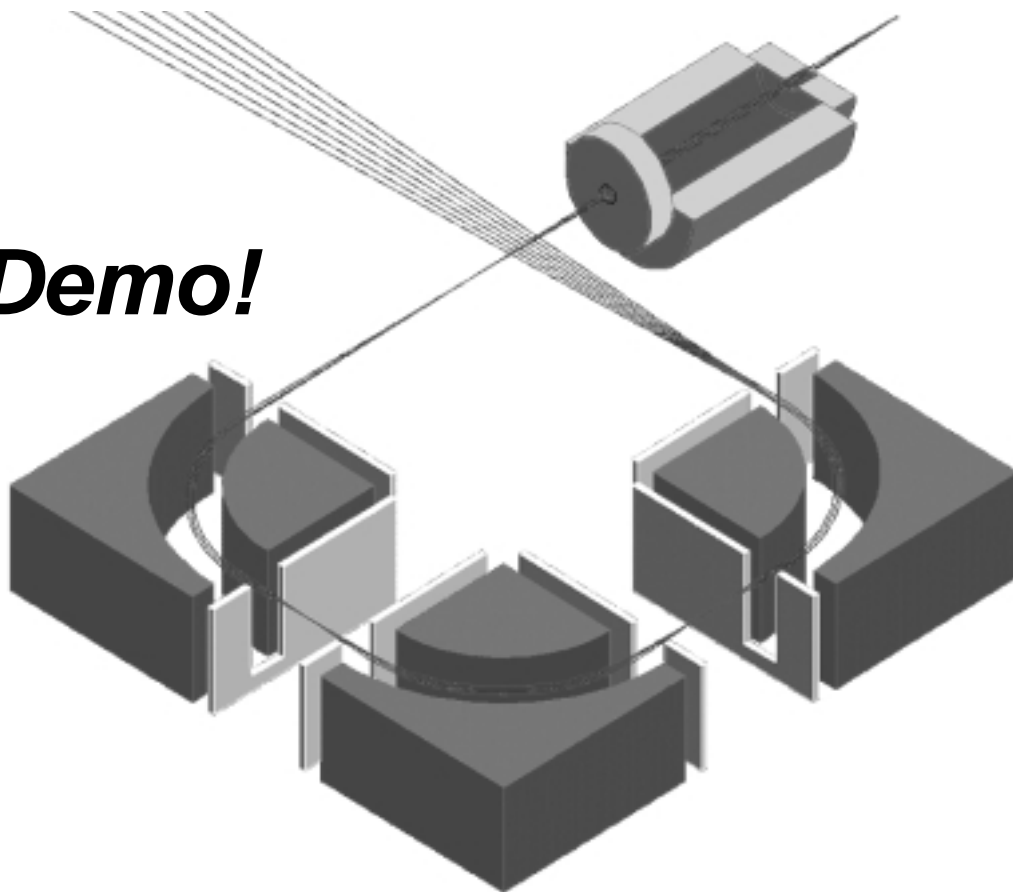
Industry standard database of Mass Spectra. 6th Edition includes over 250,000 spectra. Outperforms NIST library giving higher reliability matches. The Wiley Registry returned a hit of 90% or higher predicted reliability for 50% of 5,459 unknowns compared with only 31% for NIST. Works with all popular data systems. For the 7 volume printed edition see the [Wiley NBS Book Section](#).

Product #	Platform	Description	Price	Demos available
WILEYMS6A	Win	Wiley Registry of MS Data	\$3495.00	Yes
WILEYMS6B	Win	Wiley & NIST MS Data	\$4090.00	

SIMION 3D v6.0

The Industry Standard for Electron and Ion Optics

Free Demo!



- Complete Instrument Simulation
- Interactive User Environment
- 3-Dimensional Design
- Space Charge Simulation

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*Download a free demo.***

The SIMION software is the industry standard for the modeling of electron and ion optics. The new release, SIMION 3D 6.0, represents a breakthrough in the capabilities of computer simulation. Its expanded versatility and power allow the simulation of highly complex systems, interactive parameter manipulation with immediate feedback, and multi-

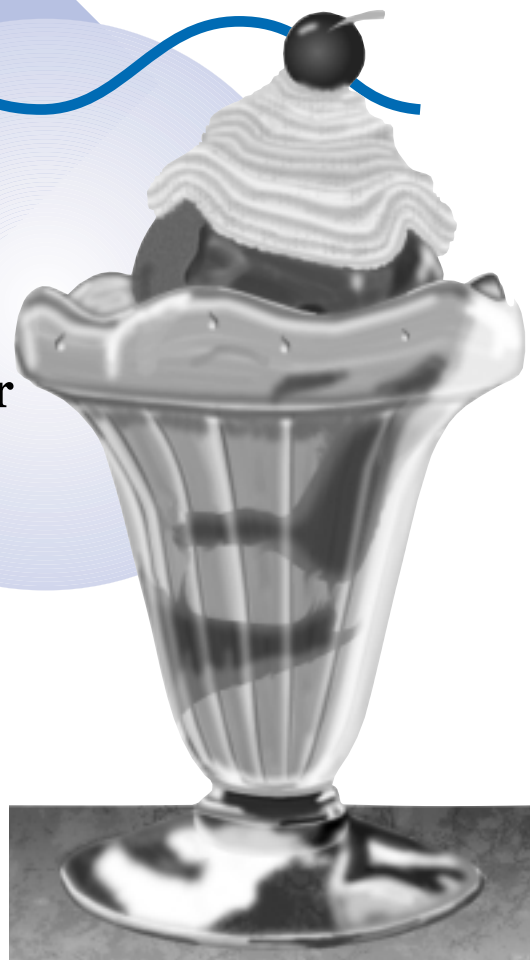
ion trajectory visualization. Features: 200 3D electrostatic/magnetic arrays, cutaways of 3D views, movie effects, data recording, charge repulsion, and user program interface. This program is indispensable when designing mass spectrometers and ion optic systems. The SIS tradition of technical assistance continues with our support of this software.

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*Join us
at our Hospitality Suite
at ASMS for
a Yogurt Sundae*

- May 13 and 14, 1996
- Hospitality Suite,
- Oregon Convention Center
Room A103
- 12:30pm to 2:00pm



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