



Gulf Coast Conference®

"Serving The World of Chemical Analysis"

THE NEW IDEA MACHINE

*2007 Program
October 16 - 17, 2007
Galveston Island, Texas*



Bruker **AXS**



We're on Top of All Your Elemental Analysis Needs

X-ray fluorescence solutions for complete ASTM norm compliance.

www.bruker-axs.com

SEE US IN BOOTHS 615, 617 & 619

think forward

XRF

Make a change the
world
will feel.

Deliver energy solutions with Saudi Aramco.

Join the team powering our planet, people and more possibilities. Enhance your career outlook with a greater vision of rewards. Tap into exciting and vital opportunities with the world's foremost energy company, Saudi Aramco. Explore your role in bringing energy to the world, and discover a lifestyle that is simply not found anywhere else.

From an unmatched work/life balance to a host of rewarding possibilities, drive the next stage of global energy exploration and production in Saudi Arabia.

- ▶ Combustion Kinetic Mechanism Development
- ▶ Experimental Combustion Scientist
- ▶ Fuel Chemist
- ▶ Fuel Combustion Specialist
- ▶ Fuel Formulation Chemist
- ▶ Fuel Formulation & Combustion Specialist
- ▶ Fuel Specification Specialist
- ▶ Heavy Ends Process Engineer
- ▶ Hydrocracking Catalyst R&D Specialist
- ▶ Hydrocracking Process R&D Engineer
- ▶ Light Ends Process Engineer
- ▶ Petroleum Fuel Chemistry Specialist

Join Saudi Aramco and experience responsibility with satisfaction. To explore Saudi Aramco's exceptional opportunities and learn more about the rewards of living in Saudi Arabia or to apply online, visit:

www.aramco.jobs/GCC

Energy to the world.

أرامكو السعودية
Saudi Aramco



TM

Table of Contents

Note from the rolltop ...	6
Conference Registration Form	7
“Presenter of The Years” Forum	8
2006 Presenter of the Year	9
New Product Showcase	10
Conference Schedule	11
Poster Sessions	17
2007 Abstracts	19
Exhibiting Vendors	27
Map of Exhibit Hall	36

2007 Conference Schedule

Monday October 15, 2007

8:30 AM

Gulf Golf Tournament

Galveston Country Club

14228 Stewart Road

Golf Awards Night

7:00 - 10:00 PM

Moody Gardens Hotel

Tuesday October 16, 2007

9:00 AM Presenter of The Years Forum

9:00 AM -5:00 PM

Technical Sessions

Exhibits

New Product Showcase - 11:30 AM - 1:00 PM

5:00 PM - 6:00 PM

Vendor Meeting

Floral Hall A

Wednesday October 17, 2007

8:30 AM - 5:00 PM

Technical Sessions

Poster Sessions

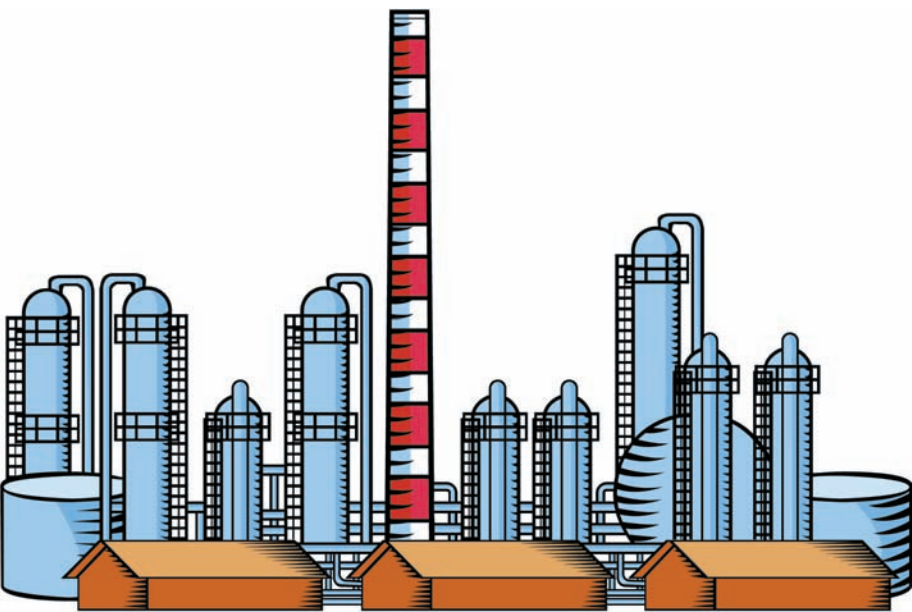
Exhibits

New Product Showcase - 11:30 PM - 1:00 PM

Thursday October 18, 2007

9:00 AM - 4:00 PM

PANalytical User Group Meeting & Training



Gulf Coast Conference Program

The Gulf Coast Conference Magazine is a copyrighted publication of the The Gulf Coast Conference, 395 Sawdust Rd #2090 The Woodlands, TX 77380; 281-256-8807. E-Mail gcc@gulfcoastconference.com

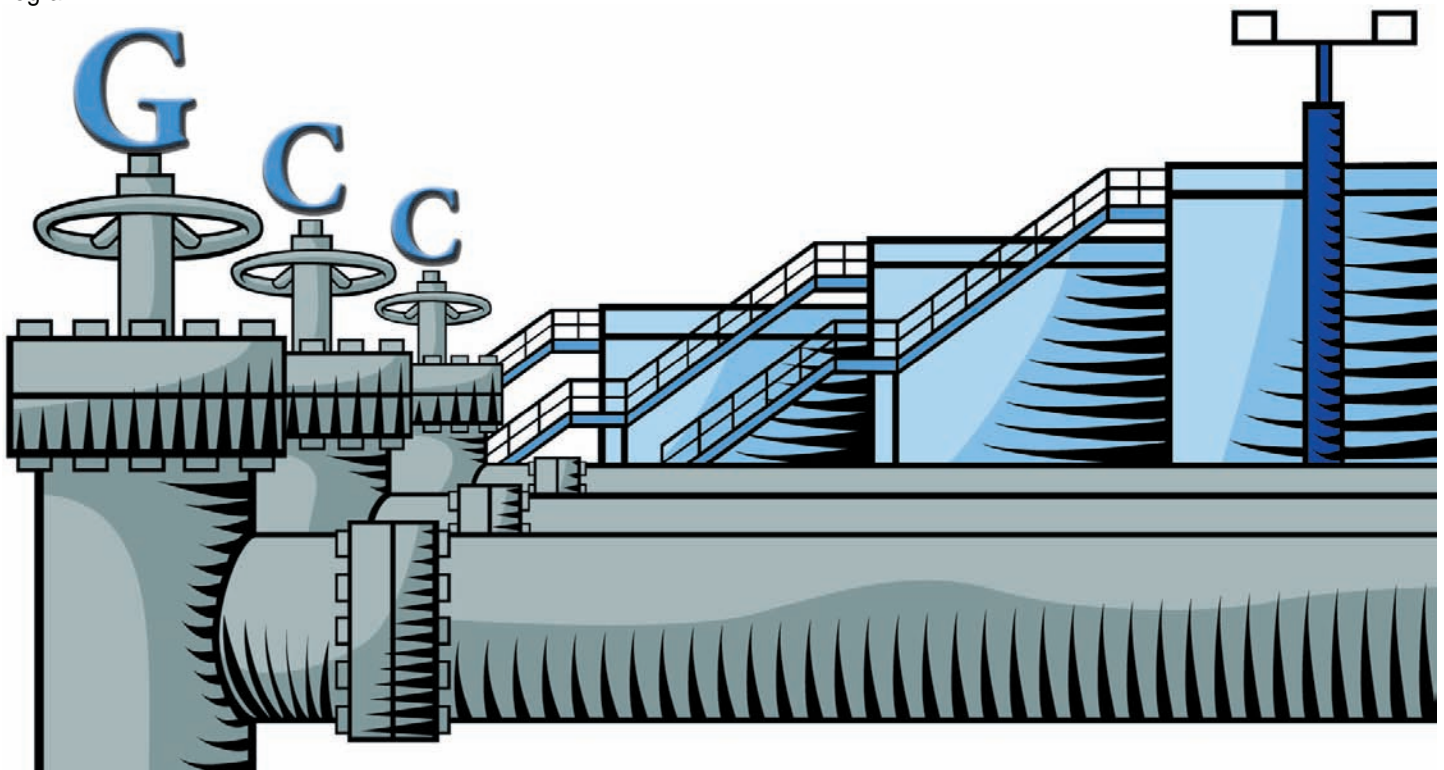
No part of The Gulf Coast Program may be reprinted without express written consent of GCC. The Gulf Coast Conference Program is published annually. The Gulf Coast Conference reserve the right to edit all submissions and articles in the interest of space and clarity.

Submissions for publication are encouraged and should be sent to the Editor at the above addresses. Advertising rates, material requirements, deadlines, etc. should be addressed to the above addresses as well.

POSTMASTER: Send address changes to: **The Gulf Coast Conference Program**, 395 Sawdust Rd #2090 The Woodlands, TX 77380

Mission Statement

"To provide GCC attendees with news, technical & business information which will educate about the petrochemical, refining, environmental, and industrial hygiene fields and professions." The Gulf Coast Conference program will focus on the industry trends and news, regulatory activities, technical information, and the successful implementation of various technical & business methodologies important to those professions. Conference business, events and activities will also be communicated. -- Opinions, claims, conclusions and positions expressed in this publication are the authors' or persons quoted and do not necessarily reflect the opinions of the editor, GCC or the Gulf Coast Conference Program.





Notes from the rolltop...

Welcome to the 2007 GCC Program and our new effort to bring to you an outstanding technical program and a high quality conference and exhibition. This program reflects our industry's current developments, progress, and achievements toward advancing the science of chemical analysis. You will again find new and innovative methods, techniques, and processes at the 2007 GCC, as well as refinements to older solutions which will help resolve old problems for many of you.

Consistent improvement is always a goal, and this year's GCC will not be an exception. Based upon suggestions of our vendor community, we are continuing the format begun last year to allow for a more focused technical group of presentations and in a more compact time frame. Consequently, the technical meeting will be a very full two days. To accommodate this change and in an effort to provide a more reasonable technical schedule and allow each of you the opportunity to attend more technical sessions, yet still have ample time to visit the sponsoring vendors, the GCC has adapted a different scheduling and abstract acceptance philosophy. Consequently, the 2007 GCC program will be a bit less in quantity but significantly more in quality. We sincerely thank and respect all that submitted their work for presentation at the GCC and are very pleased with the information, ideas, data, and results that are offered in this fine program. For the submitters of presentations that were not accepted this year, we encourage you to submit again next year as we strive for that consistent improvement.

Every exhibiting vendor at the GCC makes a significant investment and contribution toward the production of a quality meeting every year. Whether it is a group of new businesses joining together to share a booth, a single new technical idea for presentation in the technical session, or a large mega company displaying their newest innovations, the exhibiting vendors are the bedrock of the conference. Without this support, there would be no meeting, and the organizers of the meeting sincerely appreciate the efforts of all. This level of support and commitment by all will help to advance the GCC as the "best in class" conference for technical exchange in the petrochemical, refining, and environmental business place.

Some highlights for the 2007 meeting:

Analytical Staff Recruiting - Several companies this year are exhibiting specifically to identify and recruit new personnel to meet their growing needs. For those of you that are seeking employment in our community, this will be a good networking opportunity.

Two Dimensional GC Seminar - The event this year has again been organized by Bill Winniford of Dow Chemical Company. They have brought together an outstanding group of contributors to present and discuss the latest efforts and improvements in this field.

New Product Showcase (NPS) - The 3rd annual NPS will provide a central location near the meeting rooms for selected vendors to show off and demonstrate their latest and newest advances in products, software, and methods. For 1 1/2 hours each on Tuesday and Wednesday of the meeting, you are asked to stop by this special exhibit area and review what you see. Significant awards will be given to those vendors selected as "Best in Class" and for the reviewers (you) a special Lifetime GCC Conference Registration will be given to one individual randomly chosen from completed review forms (available through our volunteers in charge of the NPS). We are asking that you fill these forms out with your opinions. This will be helpful to the exhibiting vendors and perhaps provide new information for you and your company regarding new capabilities.

Presenter of the Years Forum - Over the past several years, we have recognized contributors to the GCC program with the annual Presenter of the Year Award. We will do the same again this year, and have again planned a new forum for the presentation of the award and also for our attendees to hear directly from many of these technical leaders from our community. We are planning a special Tuesday morning session in which many of our past award recipients will provide short discussions regarding current topics and a discussion about future trends with "The Impact of Oil Prices On Analytical Laboratories, Instrumentation, & Our Industry". Don't miss this chance for a perspective and view from some of our most important technical contributors.

The rebuilding continues for us all. And although the effects of 04 storms will be with many of us for a lifetime, the commitment continues. Join us this year. Whether this will be your first GCC or your 30th, whether you are a lab tech, chemist, engineer, lab or plant manager, the "New Idea Machine" of the Gulf Coast Conference will be the premier place for education and innovation in your field. Register today with the form found across from this page or on-line at www.gulfcoastconference.com

See you in October!

Bob Kibler
President
Gulf Coast Conference



2007 Registration Form

October 16-17, 2007
Moody Gardens Hotel & Convention Center

Please send the completed form and a check for \$95.00
made payable to [Gulf Coast Conference](#)
or fill out MasterCard/VISA/AMEX/Discover information below & send to:

Gulf Coast Conference
395 Sawdust Rd #2090
The Woodlands, TX 77380
281-256-8807 Voice
281-256-8864 Fax

Name: _____

Company: _____

Address: _____

City, State, Zip, Country: _____

Phone: _____ Fax: _____

Email Address: _____

- I want to attend Papers and Exhibits (\$95.00)
- I want to see the Exhibits only No Charge (Not available to Exhibitors)
- Check Enclosed with the Application (Registration will only be complete upon receipt of payment)
- Charge to MasterCard/VISA/AMEX/Discover

Cardholder Signature: _____

Card #: _____ Exp. Date: _____

Register Online at www.gulfcoastconference.com

Presenter of the Year Forum



*“Impact of Oil Prices On
Analytical Laboratories,
Instrumentation,
& Our Industry”*

For the last eight years, the GCC has recognized a presenter every year for their cumulative work and contributions to the annual program. This group of individuals represent the technical leadership exhibited by many of our contributors over the years, and also provide a significant source of business, technical and scientific expertise that has proven to be useful and timely to our attendees and web visitors throughout the year.

This session will be held in the Floral Hall A at the Moody Gardens Convention center and will start at 9:00 AM on Tuesday October 16th. Each of our past award winners will have an opportunity to present a “view” of the future, followed by a roundtable discussion and Q&A with the audience. The 2007 Presenter of the Year Awardee will be announced, and members of the press have been invited to participate as well.

To kickoff the 2007 GCC, we are beginning the session with this forum. We have invited all of the past award winners to participate in a roundtable discussion of their views as they consider “The Impact of Oil Prices On Analytical Laboratories, Instrumentation, & Our Industry”. The vision of this group surely will portend trends and directions for our industry and we are sure that this group will provide a great introduction to our annual meeting.

2006 Presenter of the Year

Each year, the Gulf Coast Conference recognizes and honors one author for their contributions to the annual program. For 2006, the decision was made to recognize long time presenter and contributor to the GCC, Dr. Michael Pohl of HORIBA Instruments, Inc. For many years at the GCC, Michael has contributed to the collective knowledge base of technology relating to the analysis of sulfur in fuels. Through his good work, methods and techniques of elemental analysis of sulfur have been improved and propogated. Analytical instrumentation has been developed, enhanced, and verified by its adoption and utilization throughout the industry. His efforts and contributions to the field have resulted in savings of time and resources in the laboratory, as well as better analysis results, which have translated to significant improvements in quality of fuel products throughout the industry.

At the 2006 GCC Presenters of The Year Forum, Michael was recognized for his outstanding contributions to the GCC and for his efforts to contribute to the advancement of the science of sulfur analysis. Congratulations and many thanks to Michael and his company - HORIBA Instruments, Inc. for their continued efforts!

To meet and see the 2006 Presenter of the Year, be sure to attend the Tuesday AM "Presenter of the Year Forum" to be held at 9:00 AM October 16th, 2007 in Floral Hall A. The announcement of the 2007 Awardee will be made during this GCC "kickoff" meeting.



2006 Presenter of Year Awardee
Michael Pohl, PhD.
HORIBA Instruments, Inc.



2002
Laura Chambers
OI Corporation



2003
Bill Winniford
The Dow Chemical Co.



2004
Randy Shearer
GE Analytical Instruments



2005
Joaquin Lubkowitz
Separation Systems



2000
Dan DiFeo
SGE, Incorporated



1999
Allen Vickers
Agilent



1998
Jaap de Zeuw
Varian

New Product Showcase

The 2007 Gulf Coast Conference will again sponsor the New Product Showcase event to provide a forum for the introduction of new technology and innovation to our attendees. On Tuesday and Wednesday of the meeting from 11:30 AM - 1:00 PM there will be special table top displays with new products and technology for your examination. Several vendors will provide these products and personnel to describe them during these specific times in the lobby area outside the Floral Hall A on the second floor of the Moody Gardens Convention Center.

We are asking all Attendees to stop by and take a look at these products and complete an opinion survey about what you see. One survey will be drawn on Wednesday afternoon from the completed surveys and that person will receive a LIFETIME registration to the Gulf Coast Conference!

The GCC will appreciate your participation, and we know that the participating vendors will as well!

The logo for PHLS, consisting of the letters P, H, L, and S stacked vertically in a red, serif font.The logo for XOS, featuring the letters X, O, and S in a blue, stylized font with horizontal lines.The logo for COSA INSTRUMENT, with the text "COSA INSTRUMENT" in blue and a circular graphic composed of horizontal lines.The logo for Zip Scientific, featuring the text "Zip Scientific" in a blue, cursive font and "Experts in Analytical Instruments and Analysis" in a smaller, black, serif font.The logo for BAYTEK INTERNATIONAL, with "BAYTEK" in a large, blue, bold font and "INTERNATIONAL" in a smaller, black, bold font.The logo for analytikjena, with "analytik" in red and "jena" in black.The logo for RESTEK, with "RESTEK" in a bold, black, sans-serif font and a graphic of a semi-circle with dots above it.The logo for PANalytical, with a graphic of two blue bars and the text "PANalytical" in a blue, sans-serif font.The logo for HORIBA, with "HORIBA" in a bold, white, sans-serif font on a blue rectangular background.The logo for Thermo ELECTRON CORPORATION, with "Thermo" in a large, red, sans-serif font and "ELECTRON CORPORATION" in a smaller, black, sans-serif font below it.

Just some of the participants in the
2007 New Product Showcase!

2007 CONFERENCE SCHEDULE

Tuesday Session - October 16, 2007

Floral Hall A

“The Trends of Instrumentation for Chemical Analysis”

Gulf Coast Conference Kickoff Session

Roundtable Discussion and Q & A for Panel Members - Invited Panel Members include all past Presenter of the Year Awardees: Jaap de Zuew, Allen Vickers, Dan DiFeo, Laura Chambers, Kefu Sun, Bill Winniford, Randy Shearer, Joaquim Lubkowitz, Michael Pohl
Discussion Forum - 09:00 - 60 minutes

Abstract # 076 - 10:00 to 5:00 Tuesday – Seminar Presentations - Floral Hall A

“Thermo Fisher Scientific Seminar”

Michael Harter - Thermo Fisher Scientific

Bluebonnet

Two Dimensional Gas Chromatography Seminar Series

Organized and Moderated by Bill Winniford - Dow Chemical Company

Abstract # 035 - 10:00 AM – Paper Presentation - 20 minutes - Bluebonnet

“Comprehensive Two Dimensional Gas Chromatography for Qualitative and Quantitative Characterization of Biodiesel Blends”
Daniela Cavagnino, Julien Rieu - Thermo Fisher Scientific

Abstract # 050 - 10:20 AM – Paper Presentation - 30 minutes - Bluebonnet

“Polychrom: A Comprehensive GC*GC Data Handling Software”

B. Celse, S. Bres, F. Adam, F. Bertoncini, L. Duval - IFP

Abstract # 077 - 10:50 AM – Paper Presentation - 20 minutes - Bluebonnet

“Development of a GCxGC Method for Occupational Exposure Biomonitoring of Volatile Aromatic Hydrocarbons”

J.-M. D. Dimandja, L. C. Amorim, D. Hilton, Z. L. Cardeal - Spelman College

Abstract # 078 - 11:10 AM – Paper Presentation - 30 minutes - Bluebonnet

“Towards Classifying Chemical Functionality by Comprehensive Two-Dimensional Gas Chromatography (GC x GC)”

Bill Winniford, Kefu Sun, James Griffith - Dow Chemical Company

Abstract # 083 - 11:30 AM – Paper Presentation - 30 minutes - Bluebonnet

“GC x GC Using Differential Flow Modulation”

James Griffith, Bill Winniford, John Seeley(Oakland University), Kefu Sun

Abstract # 042 - 1:00 PM – Seminar Presentation – 4 hours - Bluebonnet

“Advances in Multidimensional Gas Chromatography. Introducing LECO’s New Consumable-Free Modulator”

Dr. Mark Libardoni - LECO

Daffodil

Abstract # 034 - 1:00 PM – Paper Presentation - 20 minutes - Daffodil

“Complete ICP-AES Method Development Utilizing Multi-line Analysis: Spectral Database and Assistant Software for Wavelength Selection, Interference Filtering and Statistical Outlier Rejection to Improve the Reliability of Analytical Results” *Albert Brennstener, Emmanuel Fretel, Cendrine Dubuisson, Sébastien Velasquez, Agnès Cosnier, Jean-Michel Mermet - Horiba Jobin Yvon*

Abstract # 067 - 1:20 PM – Paper Presentation - 45 minutes - Daffodil

“The Use of Ammonia to Eliminate Carbon Based Interferences in the Analysis of Organic Matrices by Dynamic Reaction Cell ICP-MS”

Daniel Jones - PerkinElmer

Abstract # 061 – 2:05 PM – Paper Presentation - 40 minutes - Daffodil

“The Analysis of Organic Matrices by ICP/ICP-MS Using Chilled Spray Chambers”

David Hilligoss, Matthew Knopp, Ken Neubauer, Dr. Ewa Pruszkowski - PerkinElmer LAS

Hibiscus

Abstract # 030 - 1:30 PM – Paper Presentation - 30 minutes - Hibiscus

“Advanced Laboratory Sample Management Automation with RFID”

Jonathan Richter - Baytek International

Abstract # 019 - 2:00 PM – Paper Presentation - 30 minutes - Hibiscus

“Partnering with Laboratories for Asset Management”

R. G. “Gerry” Hall - TimeKeeper America

Abstract # 052 - 2:30 PM – Workshop Presentation – 2 hours - Hibiscus

“Quality Systems in the Analytical Environment”

Gretchen McAuliffe - EM2 Solutions, Inc.

Iris

Abstract # 007 – 2:00 PM – Paper Presentation - 30 minutes - Iris

“Avoiding Common Pitfalls in Karl Fischer Analysis of Oils”

Michael Stern, Larry Girdler, David Sharp - EMD Chemicals

Abstract # 025 - 2:30 PM – Paper Presentation - 30 minutes - Iris

“Trouble-Free Karl Fischer Analysis Of Oils - A Case-Based Approach”

Larry Girdler, Michael Stern, David Sharp - EMD Chemicals

Abstract # 015 - 3:00 PM – Paper Presentation - 20 minutes - Iris

“Latest Advances in Water Content Determination of Crude Oil and Petrochemical Products, both in the Laboratory and in the Field”

George Robertson, Tom Smith - Penn Hills Lab Supply

Abstract # 071 - 3:20 PM – Paper Presentation - 20 minutes - Iris

“Determination of Acidity and Basicity in NonAqueous Samples by Titration”

Tore Fossum - Mettler Toledo, Inc.

Orchid

Abstract # 079 - 8:00 AM – Users Workshop – Morning Session - Orchid

“Antek 9000 User’s Workshop”

Lisa Nash - PAC, LP

Abstract # 004 - 2:00 PM – Paper Presentation - 30 minutes - Orchid

“Analysis and Chromatographic Separation of Oxygenates in Hydrocarbon Matrices”

Allen K. Vickers - Agilent Technology

Abstract # 075 - 2:30 PM – Paper Presentation – 30 minutes - Orchid

“Investigation of the Selectivity of Room Temperature Ionic Liquid Stationary Phases for Capillary GC”

Leonard M. Sidisky, Greg A. Baney, Katherine K. Stenerson - Supelco

Abstract # 012 – 3:00 PM – Paper Presentation - 20 minutes - Orchid

“Considerations and Implementation of Column Coupling in High Temperature or High Vacuum Capillary GC” *Jaap de Zeeuw, Chris English, Barry Burger, Bill Grove, Gary Stidsen and Donna Lidgett - Restek Corporation*

Abstract # 014 - 3:30 PM – Paper Presentation - 60 minutes - Orchid

“Development of a New Series of Low-Bleed, High-Inertness Capillary GC Columns, Through Improved Deactivation Chemistry and Stationary Phase Synthesis”

Jaap de Zeeuw, Roy Lautamo, Rick Morehead, Chris English and Gary Stidsen - Restek Corporation

Rose

Abstract # 062 - 9:30 AM – Paper Presentation – 30 minutes - Rose

"The Chiral "Finger-Print" of an Herbicidal Product Resolved by SFC"

Jennifer L. Lefler, Jaci Cole, and Dr. Les Dolak - Thar Instruments

Abstract # 066 - 10:30 AM – Paper Presentation - 30 minutes - Rose

"The LPG-Adapter: A Great Guide for Gas"

Lee Tower, Joe Harris - Anton Paar USA

Abstract # 060 - 11:00 AM – Paper Presentation – 30 minutes - Rose

"Quantitative Polymer Characterization"

R.R. Freeman and T. Wilks - Frontier Laboratories

Abstract # 056 - 11:30 AM – Paper Presentation - 20 minutes - Rose

"Separation and Characterization of Photodegradation Products of Various Benzothiazoles by Reversed LC with PDA and ESI-MS as Detectors"

Cyril Parkanyi and Zuzana Zajickova - Florida Atlantic University and Barry University

Abstract # 021 - 2:00 PM – Paper Presentation - 45 minutes - Rose

"Syringeless Solvent Free Injection Device for GC and GC/MS Systems"

Gary Lavigne - University of Connecticut IMS

Abstract # 063 - 2:45 PM – Paper Presentation - 30 minutes - Rose

"The Effects of the Differing Quality Helium Carrier Gas on the Gas Chromatography System"

Sherri Pertee, Mike King - Airgas, Inc.

Abstract # 059 - 3:15 PM – Paper Presentation - 30 minutes - Rose

"Technologies to Increase GC Sample Throughput"

Leeman Bennington - PerkinElmer

Abstract # 043 - 3:45 PM – Paper Presentation - 30 minutes - Rose

"Application of Thermal Desorption in Ambient Air Monitoring"

Leeman Bennington - PerkinElmer

Wisteria

Abstract # 026 - - 9:00 AM - 10:30 AM & 2:00 PM - 3:30 PM – Seminar Presentation - Wisteria

"Using The IQT Ignition Quality Tester To Determine Derived Cetane Number of Diesel Fuel per ASTM D6890 to Qualify Diesel for ASTM D975 and Biodiesel for ASTM D6751"

Greg Lazarczyk & Tom Bell - Lazar Scientific, Inc.

Wednesday Session - October 17, 2007

Bluebonnet

9:00 AM - 12:00 PM Chromatography Solutions/Users Group by Dionex Corporation

Conference attendees with an interest in both HPLC and IC are invited to attend this year's expanded users group meeting. The session will include presentations highlighting the Dionex approach.

Abstract # 081 - 9:00 AM – Paper Presentation - 30 minutes - Bluebonnet

"Optimizing the Utilization time of your HPLC"

Matthew Neely, Frank Steiner, and Frank Arnold - Dionex Corporation

Abstract # 029 - 9:30 AM – Paper Presentation - 30 minutes - Bluebonnet

“Advanced Chromatography Techniques Using The Chromeleon Data Software”

Matthew Neely, Larry West, Graham Webster - Dionex Corporation

Abstract # 070 - 10:00 AM – Paper Presentation - 30 minutes - Bluebonnet

“IonPac Column Selection & Rapid Method Development for Ion Chromatography”

Kirk Chassaniol - Dionex Corporation

Abstract # 032 - 10:30 AM – Paper Presentation - 30 minutes - Bluebonnet

“Basic Troubleshooting for Ion Chromatography”

Kirk Chassaniol - Dionex Corporation

Abstract # 037 - 11:00 AM – User Group Meeting - 1 hour - Bluebonnet

“IC / HPLC Users Group Discussion”

Kirk Chassaniol, Matthew Neely, Lisa Lenehan, Chuck Costanza - Dionex Corporation

SULFUR WARS Presentations

Abstract # 013 - 2:00 – Paper Presentation - 20 minutes - Bluebonnet

“Determination of Sulfur and Metallic Impurities in Ultra Low Sulfur Diesel”

William Geiger, Cindi Foster - CONSCI, LTD

Abstract # 010 - 2:15 PM – Paper Presentation - 20 minutes - Bluebonnet

“Comparing Surface Adsorption Effects During the Analysis of Mercury and Sulfur Containing Streams”

Gary Barone; Marty Higgins - Restek Corporation

Abstract # 031 - 2:45 PM – Paper Presentation - 20 minutes - Bluebonnet

“Advancement in XRF Technique Enables Sulfur and Chlorine Determination Below 1 ppm”

Berry Beumer, Zewu Chen - XOS

Abstract # 020 - 3:00 PM – Paper Presentation - 30 minutes - Bluebonnet

“Sulfur Measurement in Biofuel Samples”

Michael C. Pohl, David Malone, Rudy Haas - Horiba Instruments, Inc.

Abstract # 053 - 3:15 PM – Paper Presentation - 20 minutes - Bluebonnet

“Raman Spectroscopy for On-line Monitoring of Total Sulfur In Fuels”

Lee Smith, Rory Uibel, David Jones, and Robert Benner - Process Instruments, Inc.

Abstract # 054 - 3:45 PM – Paper Presentation - 30 minutes - Bluebonnet

“Raman Spectroscopy Monitoring for Control of Rich and Lean Amine Streams”

Lee Smith, Rory Uibel, Merisa Werner, and Robert Benner - Process Instruments, Inc.

Daffodil

Abstract # 033 - 10:00 AM – Paper Presentation - 30 minutes - Daffodil

“Biodiesel Analysis on a Thermo Fisher Scientific iCAP 6000 Series ICP”

Matthew Cassap - Thermo Fisher Scientific

Abstract # 023 - 10:30 AM – Paper Presentation - 20 minutes - Daffodil

“The Analysis of Biodiesel Using Supercritical Fluid Chromatography”

Nathan Porter, Jody Clark and Brian Jones - Selerity Technologies

Abstract # 058 - 11:00 AM – Paper Presentation - 30 minutes - Daffodil

“Simple and Innovative analysis of Glycerin in Biodiesel”

Jay Gandhi, SPencer Gambacurta, Randy Benton, Larry Tucker - Metrohm-Peak LLC

Abstract # 009 - 11:30 AM – Paper Presentation - 30 minutes - Daffodil

“Biodiesel Glycerides Analysis Made Easy and Reliable”

Jaap de Zeeuw, Roy Lautamo, Barry Burger and Gary Stidsen - Restek Corporation

Floral Hall A

Abstract # 011 - 8:00 AM – Seminar Presentation - 8 hours – Floral Hall A

“Comprehensive Two Dimensional Gas Chromatography (GCXGC) and GC Image Software”

Edward B. Ledford, Jr., Stephen Reichenbach, and Lawrence Matengula - Zoex Corporation

Hibiscus

Abstract # 080 - 1:00 PM – Workshop Presentation - 4 hours - Hibiscus

“Increasing Laboratory Workflow Efficiency through Lean and Automation”

Jeanne A. Mensingh, B.S., CHA - EM2 Solutions, Inc.

Orchid

Abstract # 074 - 1:00 PM – Seminar Presentation - 1 hour - Orchid

“Column Selection, Operation and Maintenance in Petrochemical Analysis”

Jaap de Zeeuw and Barry Burger - Restek Corporation

Wisteria

Abstract # 026 - - 9:00 AM - 10:30 AM & 2:00 PM - 3:30 PM – Seminar Presentation - Wisteria

“Using The IQT Ignition Quality Tester To Determine Derived Cetane Number of Diesel Fuel per ASTM D6890 to Qualify Diesel for ASTM D975 and Biodiesel for ASTM D6751”

Greg Lazarczyk & Tom Bell - Lazar Scientific, Inc.

Thursday Session - October 18, 2007

Bluebonnet

Abstract # 048 - 9 a.m.-5 p.m. on Thursday October 18 – User Group Meeting - Bluebonnet

“PANalytical’s XRF/XRD Users Group Meeting”

Diane Donati – PANalytical

Championship Line Up for Sulfur Analysis HORIBA SLFA Series

SLFA-2800



- ◆ASTM 5453 (Ultra Violet Fluorescence Method)
- ◆Detection down to 30 ppb sulfur
- ◆42 tray auto sampler
- ◆Ideal for ULSD, motorized fuels and biofuels

SLFA-UV21



- ◆ASTM 4294 (EDXRF)
- ◆Measure from 5 ppm to 10 WT% sulfur
- ◆Automatic C/H Ratio Compensation
- ◆Portable & Compact
- ◆Multiple Calibration Capable

SLFA-20



- ◆ASTM 4294 (EDXRF)
- ◆Detection limit 20ppm
- ◆Light weight and Portable
- ◆Self diagnostic function
- ◆Short Analysis time

HORIBA

Call us today at 800-446-7422 ext 200
for more information
or visit
www.horibalab.com

Poster Sessions

Wednesday October 17, 2007
Moody Gardens Convention Center - Exhibit Hall

Authors of the below poster presentations have been asked to attend their poster(s) at the specified times below to discuss their work and answer any questions by attendees. Authors may post their presentations in the exhibit hall any time during exhibition hours on Tuesday, October 16th. Presentations are to remain on display until 5:00 PM on Wednesday, October 17th.

Abstract # 001 – 11:15 AM - Poster Presentation - Exhibit Hall

“Performing Multiple Headspace Extraction, MHE, by Utilizing Static and Dynamic Headspace Sampler Technique” *James Cox - Tele-dyne/Tekmar*

Abstract # 002 – 1:00 PM - Poster Presentation - Exhibit Hall

“A Rapid and Simple Cartridge-Based Approach to Oil and Grease Analysis (EPA Method 1664)”
Don Shelly and Craig A. Perman - UCT, LLC

Abstract # 003 - 10:30 AM – Poster Presentation - Exhibit Hall

“Accurate Low Level Sulfur Measurement in Diesel with High Nitrogen Content Using UV-Fluorescence” *Steve Herre - EST Analytical*

Abstract # 005 - 10:45 AM – Poster Presentation - Exhibit Hall

“Analysis of Low-Level Sulfur Contaminants in Gas Phase Matrices by Pulsed Flame Photometric Detector (PFPD)” *Laura Chambers and Pierre-Jean Arvers - OI Analytical*

Abstract # 006 - 11:00 AM – Poster Presentation - Exhibit Hall

“Automated pH Measurements of Purge-and-Trap Water Samples for USEPA VOC Methods”
Laura Chambers and Joan Killgore - OI Analytical

Abstract # 008 - 10:30 AM – Poster Presentation - Exhibit Hall

“Benzene in Consumer Beverages at Single-Digit Parts-per-Billion (ppb) Levels by Purge-and-Trap (P&T)”
Laura Chambers and Tracy Fulton - OI Analytical

Abstract # 016 - 11:00 AM – Poster Presentation - Exhibit Hall

“New Automated Karl Fischer-Evaporator Systems” *John D. MacFarlane, Ph.D., Ms. Momoko Nagaya, Mr. Kouji Yamato, and Mr. Hajime Takahashi - JM Science, Inc.*

Abstract # 017 - 10:00 AM – Poster Presentation - Exhibit Hall

“Novel Automated Pressurized Microwave Assisted Solvent Extraction” *Tina Ribbing, David Barclay and Elaine Hasty - CEM Corporation*

Abstract # 018 - 10:15 AM – Poster Presentation - Exhibit Hall

“Our History of an Easy Standard” *Alejandro Gonzalez, Roy Rodriges - DCG Partnership*

Abstract # 022 - 10:45 AM – Poster Presentation - Exhibit Hall

“TAN and TBN Analysis in Biodiesel” *John D. MacFarlane, Ph.D. and Ms. Momoko Nagaya - JM Science, Inc.*

Abstract # 024 - 9:45 AM – Poster Presentation - Exhibit Hall

“The Use of Multi-Detector Size Exclusion Chromatography for Pharmaceutical Applications”
Shannon Phillips, Neils-Peter Christensen, Peter Tattersall - Bristol-Myers Squibb

Abstract # 027 - 9:30 AM – Poster Presentation - Exhibit Hall

“A Comparison of Techniques for the Determination of Mercury in Petroleum Products”
David L. Pfeil & Craig Seeley - Teledyne Leeman Labs

Abstract # 028 - 1:15 PM – Poster Presentation - Exhibit Hall

“A New Polarity Scale For GC Phases” *Dan DiFeo, Paul Wynne, Peter Dawes - SGE Incorporated*

Abstract # 036 - 1:30 PM – Poster Presentation - Exhibit Hall

“Fundamental Limitations in the Use of the Endrin/DDT Test for Measuring Liner Deactivation”
Dan DiFeo, Paul Wynne, Peter Dawes, Roy Hibbert and David Melville - SGE Incorporated

Abstract # 038 - 10:15 AM – Poster Presentation - Exhibit Hall

“Improved TOC Analysis for Salt Water Matrices Containing Difficult-to-Oxidize Compounds with Heated Persulfate Oxidation” *Jeffrey Lane, Gary Erickson, Mike Duffy - OI Analytical*

Abstract # 039 - 10:30 AM – Poster Presentation - Exhibit Hall

“A New Approach to Purge-and-Trap Analysis for the Determination of Purgeable Aromatics”
Teri A. Dattilio - Teledyne Tekmar

Abstract # 040 - 10:45 AM – Poster Presentation - Exhibit Hall

“A Novel Approach for Profiling VOCs in Water Samples Utilizing the New Stratum PTC and Aquatek70 Autosampler” *Teri Dattilio - Teledyne Tekmar*

Abstract # 041 - 1:45 PM – Poster Presentation - Exhibit Hall

“New Approaches To The GC Injection Port” *Dan DiFeo, Peter Dawes, David Melville, Paul Wynne - SGE Incorporated*

Abstract # 044 - 11:00 AM – Poster Presentation - Exhibit Hall

“Benzene in Soft Drinks By Teledyne Tekmar HT3 Headspace Sampler” *James Cox - Teledyne/Tekmar*

Abstract # 045 - 1:30 PM – Poster Presentation - Exhibit Hall

“New Application Areas for an Oxygenate Selective Capillary PLOT column Based on a Highly Polarizable Solid Layer Adsorbent” *Johan Kuipers, Kees van der Sar, Max Erwine - Varian, Inc.*

Abstract # 046 - 9:15 AM – Poster Presentation - Exhibit Hall

“Odor and Chemical Quality Control of Gasoline with HERACLES Flash GC E-Nose”
Mr. Manach, Dr. Schmitt, Mrs Bonnefille - Alpha M.O.S.

Abstract # 047 - 2:00 PM – Poster Presentation - Exhibit Hall

“On-Line And Off-Line Application Of Micro-SPE” *Dan DiFeo, Peter Dawes, Ern Dawes, Paul Wynne - SGE Incorporated*

Abstract # 049 - 1:00 PM – Poster Presentation - Exhibit Hall

“Polar Phases For Gas Chromatography” *Dan DiFeo, Paul Wynne, Rebecca Garland, Peter Dawes - SGE Incorporated*

Abstract # 051 - 9:30 AM – Poster Presentation - Exhibit Hall

“Product Development: Odor Analysis of Polyolefin Pellets with Fox Electronic Nose”
Dr Vincent Schmitt, Mr Michel Manach, Mrs Marion Bonnefille - Alpha M.O.S.

Abstract # 055 - 1:15 PM – Poster Presentation - Exhibit Hall

“Robust High Temperature Gas Chromatographic Analysis of Biodiesel Using A New Select Biodiesel For Glycerides Ultimetal Column”
Kuipers, Johan, Oostdijk, J.P., Heijnsdijk, P.H., Peene, J.A., Dijkwel, P., Pérez, J. and Reuter, N. - Varian, Inc.*

Abstract # 057 - 11:30 AM – Poster Presentation - Exhibit Hall

“Profiling of Water for Parts-per-trillion Levels of Geosmin and MIB by Utilizing Dynamic Headspace Sampling” *James Cox - Teledyne/Tekmar*

Abstract # 064 - 10:15 AM – Poster Presentation - Exhibit Hall

“The Fusion: Evaluation and Application of a New TOC Analyzer” *Missy Gibson, Brian Wallace, Stephen Lawson - Teledyne Tekmar*

Abstract # 065 - 9:00 AM – Poster Presentation - Exhibit Hall

“The Gemini Electronic Nose as a New Quality Control Tool to Assess Packaging Odor Conformity”
Dr Vincent Schmitt, Mr Michel Manach, Mrs Marion Bonnefille - Alpha M.O.S.

Abstract # 068 - 10:00 AM – Poster Presentation - Exhibit Hall

“Utilization of TOC Analysis for Continuous Source Water Determination”
Jeffrey Lane, Gary Erickson, Mike Duffy - OI Analytical

Abstract# 69 - 10:00 AM – Poster Presentation - Exhibit Hall

“Using a Single Calibration Curve to Analyze a Wide Range of Samples”
Missy Gibson, Brian Wallace, Stephen Lawson - Teledyne Tekmar

Abstract # 072 - 11:15 AM – Poster Presentation – Exhibit Hall

“Group Type Analysis of Middle Distillates Samples by Simulated Distillation GC/MS”
A. Mendez Ph.D.; R. Meneghini M.Eng.; A. Bonini and J.A. Lubkowitz Ph.D. - Separation Systems Inc.*

Abstract # 073 - 9:45 AM – Poster Presentation - Exhibit Hall

“A Novel Approach in the Profiling of Volatile Organic Compounds in Soil Utilizing the Stratum PTC and Solatek Autosampler”
Teri A. Dattilio - Teledyne Tekmar

Abstracts 2007

Abstract # 001 – Poster Presentation - 11:15 AM - Exhibit Hall

"Performing Multiple Headspace Extraction, MHE, by Utilizing Static and Dynamic Headspace Sampler Technique"

James Cox - Teledyne/Tekmar

Multiple Headspace Extraction, MHE, is technique that only holds a valuable academic purpose. The reason for performing an MHE on a sample was to be able to perform a calculation of the concentrations of present analytes and derive the partition coefficient. Once this calculation is achieved, unknown samples can be analyzed against it to determine their concentrations. To expedite sample testing and minimize the errors associated with MHE a comparison of a dynamic and static headspace sampling techniques were used to perform a multiple headspace extraction. Data will be presented comparing the two different MHE techniques and the resulting accuracy and precision obtained. Poster Presentation Abstract # 001

Abstract # 002 – Poster Presentation - 1:00 PM - Exhibit Hall

"A Rapid and Simple Cartridge-Based Approach to Oil and Grease Analysis (EPA Method 1664)"

Don Shelly and Craig A. Perman - UCT, LLC

The withdrawal of Freon based liquid-liquid extraction (LLE) methods by the EPA has forced laboratories to seek alternative extraction methodologies. Many laboratories have converted to other solvent based methods which use hexane but the use of this solvent presents new issues for the LLE user. In addition to a labor intensive technique, problems with LLE can include poor phase separation and the formation of emulsions which can result in erroneous results. EPA Method 1664A is a performance based solid-phase extraction method (SPE) that has been introduced to provide the laboratory with an alternative approach for the extraction of oil and grease analytes (hexane extractables) in wastewater. SPE is the method of choice for most laboratories since SPE eliminates the need to deal with problem emulsions and non-oil and grease co-extractables that give inflated recoveries. SPE also allows laboratories to decrease operating costs by reducing labor, lab space and solvent use. Profitability and sample throughput is enhanced because of improved sample turn-around-times. Results are obtained at lower cost to the laboratory. SPE can be easily adapted to automated systems further enhancing its utility as a rapid test. UCT, LLC has developed a new SPE cartridge specifically designed for fast and efficient extraction of oil and grease. This cartridge design features a multilayer, multimedia prefilter for enhanced performance with samples with high suspended solids, minimizing clogging. The compact cartridge design reduces the quantity of solvents required for activation and elution as well as minimizing water holdup and dry times. These advantages mean fast extraction and high sample capacity at lower cost. This paper will present the results of comparative testing on product performance to show rapid extraction and high recovery can be achieved using the UCT oil and grease cartridge. Poster Presentation Abstract # 002

Abstract # 003 - 10:30 AM – Poster Presentation - Exhibit Hall

"Accurate Low Level Sulfur Measurement in Diesel with High Nitrogen Content Using UV-Fluorescence"

Steve Herre - EST Analytical

Measuring for low level sulfur in samples containing high levels of nitrogen can be very problematic when using UV-Fluorescence. This nitrogen interference presents a real problem when analyzing for sulfur in today's diesel, since the addition of cetane improvers which are high in nitrogen. The poster will explain that with adding ozone to the effluent of the combustion furnace, and adding a defined amount of NO to the combustion process that this nitrogen interference can be eliminated. Poster Presentation Abstract # 003

Abstract # 004 - 2:00 PM – Paper Presentation - 30 minutes - Orchid

"Analysis and Chromatographic Separation of Oxygenates in Hydrocarbon Matrices"

Allen K. Vickers - Agilent Technology

Oxygenates end up in various petrochemical streams through a variety of pathways. In the case of reformulated gasoline, alcohols and ethers have been purposefully used to meet US EPA requirements for added oxygen in motor fuels. Other times, oxygenated compounds are introduced due to cross contamination, such as during storage or transport of one product after another. In any case, the accurate qualitative and quantitative analysis of lower oxygenates in these matrices is a key concern. Methods for the analysis of oxygenates in hydrocarbon stream have been developed by standards committees such as ASTM D02. Demonstrated here is a GC-FID system that separates C1 C4 alcohols, ethers and selected ketones from gasoline and light hydrocarbon gas streams utilizing an Electronic Pressure Controlled Automated Column Switching (EPCACS). EPCACS allows for the selective trapping of these oxygenated compounds on a new, high selectivity megabore column. After trapping, the oxygenates are eluted from the trapping column for qualitative and quantitative determination. Paper Presentation - 30 minutes Abstract #004

Abstract # 005 - 10:45 AM – Poster Presentation - Exhibit Hall

"Analysis of Low-Level Sulfur Contaminants in Gas Phase Matrices by Pulsed Flame Photometric Detector (PFPD)"

Laura Chambers and Pierre-Jean Arvers - OI Analytical

Analysis of volatile sulfur-containing compounds in process gas streams is a critical quality control step in a variety of industries ranging from petrochemical streams to bottling carbonated beverages. Even parts-per-billion (ppb) levels of

these sulfur contaminants can cause production problems that range from mere

inconvenience to complete plant shut down. Failure to quickly detect and accurately quantify a sulfur event can lead to disastrous results and easily cost millions of dollars in contaminated product and production downtime. This poster describes a GC system that is capable of detecting and accurately quantifying volatile sulfur contaminants in gas phase matrices at approximately 10 ppbv using the PFPD. Poster Presentation Abstract # 005

Abstract # 006 - 11:00 AM – Poster Presentation - Exhibit Hall

"Automated pH Measurements of Purge-and-Trap Water Samples for USEPA VOC Methods"

Laura Chambers and Joan Killgore - OI Analytical

Many USEPA methods require that all drinking water and waste water samples be preserved with acid during the collection process to pH less than 2 prior to analysis for Volatile Organic Compounds (VOCs) by purge-and-trap (P&T). For nearly thirty years, the process of measuring, recording, and reporting each samples pH level has been an entirely manual procedure. For high-throughput laboratories with multiple P&T instruments operating 24-hours each day this practice can be extremely time-consuming, labor-intensive, and expensive. This poster describes a new instrument that fully automates the process of measuring, recording, and reporting the pH level for all VOC water samples. Poster Presentation Abstract # 006

Abstract # 007 – 2:00 PM – Paper Presentation - 30 minutes - Iris

"Avoiding Common Pitfalls in Karl Fischer Analysis of Oils"

Michael Stern, Larry Girdler, David Sharp - EMD Chemicals

Karl Fischer (KF) titration is commonly used to determine water content in many product types. Errors in KF analysis may arise from a variety of sources. Following a brief review of the most common sources of error in KF titration, this seminar will provide specific strategies to minimize errors due to: Choice of instrument · Choice of reagents · Titration cell set-up/preparation · Sample weighing technique · Sample handling technique · Sample addition technique · Side reactions Paper Presentation - 30 minutes Abstract # 007

Abstract # 008 - 10:30 AM – Poster Presentation - Exhibit Hall

"Benzene in Consumer Beverages at Single-Digit Parts-per-Billion (ppb) Levels by Purge-and-Trap (P&T)"

Laura Chambers and Tracy Fulton - OI Analytical

In November 2005, the FDA received reports that benzene was present at low concentrations in some consumer beverages. Beverage manufacturers are currently reformulating products that have been identified as containing greater than 5 ppb benzene, but the low low-level detection of this human carcinogen in consumer beverages emphasizes the need for a robust reliable, automated procedure for the routine testing these products. This poster describes an automated method for the analysis of benzene in consumer products at sub-ppb concentrations using a closed-system P&T technique. Benzene is measured in carbonated and non-carbonated beverages, a variety of common table-ready food products, and other consumer products using the method presented. Poster Presentation Abstract # 008

Abstract # 009 - 11:30 AM – Paper Presentation - 30 minutes - Daffodil

"Biodiesel Glycerides Analysis Made Easy and Reliable"

Jaap de Zeeuw, Roy Lautamo, Barry Burger and Gary Stidsen - Restek Corporation

One of the challenges in biodiesel fuel analysis is accurate determination of the residual triglyceride content: in biodiesel, triglycerides are present at low levels, and elute at high temperatures. For accurate analysis, on-column injection is required. Analytical methods ASTM D-6584 and EN-14105 describe the use of 0.32mm analytical columns coupled with a 0.53mm retention gap. The column must be operated at temperatures up to 380°C, which puts strong challenges on the mechanical stability of the capillary tubing, the stability of the phase, and the leak-tightness of the coupling. We developed a new line of 0.32mm ID and 0.53mm ID stainless steel capillary columns to address these concerns, using Siltek® deactivation technology to stabilize the stationary phase and assure reproducible retention times. Additionally, a new column connector makes a perfect leak-tight seal for either metal-to-metal or fused silica connections. In addition, we will discuss the performance of a column with an integral retention gap. This solution eliminates the need for a column coupling and thus considerably simplifies the analysis. Paper Presentation - 30 minutes Abstract # 009

Abstract # 010 - 2:15 PM – Paper Presentation - 20 minutes - Bluebonnet

"Comparing Surface Adsorption Effects During the Analysis of Mercury and Sulfur Containing Streams"

Gary Barone, Marty Higgins - Restek Corporation

Characterization of mercury and sulfur requires sampling and analysis systems capable of reliably and reproducibly transferring sample streams containing active compounds. A variety of sampling system surfaces will be evaluated in the transport and retention of mercury, sulfur and moisture containing streams. Mercury and sulfur streams are difficult to transport due to activity with and adsorption to ferrous surfaces. Surfaces to be evaluated include 316L grade stainless steel, high performance electropolished 316L grade stainless steel and functionalized amorphous silicon-coated 316L grade stainless steel. Industries benefiting from this study will include refining streams, oil and gas exploration, stack gas sampling and environmental quality testing. Paper Presentation Abstract # 010

Abstract # 011 - 8:00 AM – Seminar Presentation - 8 hours - Bluebonnet
"Comprehensive Two Dimensional Gas Chromatography (GCXGC) and GC Image Software"
Edward B. Ledford, Jr., Stephen Reichenbach, and Lawrence Matengula - Zoex Corporation
The seminar will cover: " Orientation to GCXGC technique for first time users " GCXGC applications and status of official methods in petrochemicals (ASTM D - Hydrocarbon Types in Middle Distillates by Comprehensive Two-Dimensional Gas Chromatography) " Basic image processing using GC Image Software " Advanced image processing, quantitation and template development Who should attend? " Laboratory managers in petrochemicals, forensics, environmental, flavors and fragrances " Those new to GCXGC technique " Current GCXGC users Prerequisites " Attendees who wish to use GC Image Software should bring laptops (1 GB of RAM minimum REQUIRED). Seminar Presentation Abstract # 011

Abstract # 012 – 3:00 PM – Paper Presentation - 20 minutes - Orchid
"Considerations and Implementation of Column Coupling in High Temperature or High Vacuum Capillary GC"
Jaap de Zeeuw, Chris English, Barry Burger, Bill Grove, Gary Stidsen and Donna Lidgett - Restek Corporation
Fused silica capillary GC columns are connected in series by using specialized coupling devices. Column coupling has lead to new methodologies which have, in turn, produced a large series of applications. Column coupling can be used for: " Selectivity tuning (for optimal sample separation) " Connecting a pre-column or retention gap to an analytical column (extending column lifetime) " Making large volume injections (<100µL of sample) " Connecting a restrictor to an analytical column (e.g., for GC/MS or vacuum GC) " Allowing high pressure injection (for a narrow injection band) " Transfer lines or particle traps Column coupling also can be challenging, especially in high temperature GC, or in GC/MS, PDD, or other vacuum applications. Based on encouraging results with metal ferrules, we developed a new metal ferrule-based column connector. The Aluseal™ connector can be used to connect fused silica tubing of equal or differing diameter, or for connecting stainless steel capillary tubing. We have tested this new connector in a series of challenging applications and results are very promising. In this presentation we will discuss the applications for column coupling and the practical limitations of various coupling devices. Paper Presentation - 20 minutes Abstract # 012

Abstract # 013 - 2:00 – Paper Presentation - 20 minutes - Bluebonnet
"Determination of Sulfur and Metallic Impurities in Ultra Low Sulfur Diesel"
William Geiger, Cindi Foster - CONSCI, LTD
Advances in ICP-MS in terms of size, reliability, and cost have made it a viable analytical not only for aqueous samples, but also for organic and petroleum based products. Concurrent with this, recent EPA legislation has required that highway diesel fuels contain less than 15 ppm sulfur. A method is described that is more sensitive and more robust than many of the currently recognized methods for the analysis of total sulfur in diesel. ICP-MS offers the additional benefits of using internal standards, standard additions, and eliminates the inaccuracies of syringe based delivery technologies. Paper Presentation - 20 minutes Abstract # 013

Abstract # 014 - 3:30 PM – Paper Presentation - 60 minutes - Orchid
"Development of a New Series of Low-Bleed, High-Inertness Capillary GC Columns, Through Improved Deactivation Chemistry and Stationary Phase Synthesis"
Jaap de Zeeuw, Roy Lautamo, Rick Morehead, Chris English and Gary Stidsen - Restek Corporation
Gas chromatograph has been consistently improving in order to gain improvements in sensitivity for difficult-to-analyze compounds, especially in petrochemical analysis. While there have been many instrument improvements (e.g., GCxGC, GC-MS), column performance has remained relatively constant over the last several years. In order to address the need for improved sensitivity, and make use of the instrument improvements, it is necessary to reduce column bleed levels and increase column inertness. In this presentation we will discuss the development, and demonstrate the improvements which are possible, through a re-engineering the manufacturing process and optimizing the deactivation chemistry used to manufacture GC columns. Data will be shown for difficult compound analysis, including pyridine, 1,4-dioxane, and N-nitrosodimethyl amine, among others. Paper Presentation - 60 minutes Abstract # 014

Abstract # 015 - 3:00 PM – Paper Presentation - 20 minutes - Iris
"Latest Advances in Water Content Determination of Crude Oil and Petrochemical Products, both in the Laboratory and in the Field"
George Robertson, Tom Smith - Penn Hills Lab Supply
Measuring the amount of water in oils is of considerable economic importance to the industrial community, particularly to the crude oil and petrochemical industries. The amount of water in crude oils affects the cost of the oil at the well head, the pipeline and the refinery. Water content of crude oil has, in the past, been determined by three different techniques; distillation, centrifugation and titration. This presentation is intended to clarify the differences in the techniques and to explain how latest innovations and product designs can overcome the problems usually associated with analysis of crude oil and other petroleum products both in and out of the laboratory. Paper Presentation - 20 minutes Abstract # 015

Abstract # 016 - 11:00 AM – Poster Presentation - Exhibit Hall
"New Automated Karl Fischer-Evaporator Systems"
John D. MacFarlane, Ph.D., Ms. Momoko Nagaya, Mr. Kouji Yamato, and Mr. Hajime Takahashi - JM Science, Inc.
Karl Fischer titration remains one of the most widely used methods for measuring moisture across many industries. Despite the high selectivity of Karl Fischer (KF) reagents toward water, there are several compounds that react with KF reagents besides water. The use of evaporators or ovens are typically to overcome these shortcomings as well as being used to analyze difficult samples such as various solids, powders, polymers, greases, and fatty products. However, the use of such evaporators can only be used manually and are thus tedious and time consuming. For testing labs with heavy sample workloads, an automated KF-evaporator system would be extremely useful to maximize sample throughput. In this report, we describe the improvement in the automation of the KF analysis of samples that are both difficult to analyze and those with interfering substances. Data from a wide range of samples will be presented. Poster Presentation Abstract # 016

Abstract # 017 - 10:00 AM – Poster Presentation - Exhibit Hall
"Novel Automated Pressurized Microwave Assisted Solvent Extraction"
Tina Ribbing, David Barclay and Elaine Hastly - CEM Corporation
Microwave assisted solvent extraction techniques have become accepted as a rapid and low solvent use 20green technology. Pressurizing the extraction solvent allows temperatures to be achieved in excess of the atmospheric boiling point and thus increases the rate of partition of the analyte into the liquid phase. Of course, care must be taken to ensure the temperature is not sufficient to degrade the analyte of interest. This paper will introduce a novel approach to automation in microwave assisted solvent extraction. A semi-open focused microwave system will be shown to offer significant advantages in terms of extraction time, ease of use and flexibility. Analytical data will be presented for solvent extractions of polymers and plastics for environmentally important additives. Enhanced flexibility and ease of use will be demonstrated along with low solvent usage. This novel, sequential sample processing instrument can rapidly extract up to 96 samples with each sample under full temperature and pressure control. A comparison will be made of extraction efficiency for samples that are stirred and unstirred and a range of sample size to extraction solvent volume ratios studied. Results will be presented which show a significant saving in time and solvent volume for extractions of this type. Poster Presentation Abstract # 017

Abstract # 018 - 10:15 AM – Poster Presentation - Exhibit Hall
"Our History of an Easy Standard"
Alejandro Gonzalez, Roy Rodriguez - DCG Partnership
Working on a new method for ASTM International D16 Committee, we got to make a series of standards with Methylcyclohexane, Toluene, 1,4-Dioxane, Ethylbenzene and Xylenes in concentrations between 2 and 2000 ppm wt, in benzene. We needed to know the purity of our raw products, we found that the contaminants in our benzene are exactly the same as those we needed to add, logically. Consequence: we needed to purify benzene, to get a clean matrix. But, this means we need a quantitative standard to reference: we made it in a different matrix (isooctane), free of these contaminants. Different matrix means density corrections, so we need yet another standard to check our quality: standard addition with the original benzene, to get a good quantification of the contaminants. We run all three sets of standards with our method and got an excellent calibration curve for each compound on each matrix. The only way to be sure that the benzene standard is ready for use, is putting together all the points for each compound in one curve: it kept the correlation. Within the statistical parameters, we can say we got the same result in all four curves & we got a standard. Poster Presentation Abstract # 018

Abstract # 019 - 2:00 PM – Paper Presentation - 30 minutes - Hibiscus
"Partnering with Laboratories for Asset Management"
R. G. "Gerry" Hall - TimeKeeper America
TimeKeeper® America (TKA) software partners with laboratories for Asset Management. Assets range from the lab itself to the equipment in it and can even include your employees. TKA functions are not included in most LIMS programs. TKA tracks, schedules and documents actions such as maintenance, Demonstrations of Capability and of Calibration (for NELAP). TimeKeeper also can track personnel requirements such as training. TKA contains a Chemical Inventory Section (CIS) that tracks chemicals from receipt to opening and from expiration to disposal. These actions are demonstrations of compliance to an auditor. All actions contribute toward control and quality data or product. Paper Presentation - 30 minutes Abstract # 019

Abstract # 020 - 3:00 PM – Paper Presentation - 30 minutes - Bluebonnet
"Sulfur Measurement in Biofuel Samples"
Michael C. Pohl, David Malone, Rudy Haas - Horiba Instruments, Inc.
The recent rise in fuel prices caused by high crude oil prices has created a renewed interest in renewable fuels. These fuels have different chemical compositions from traditional fuels such as gasoline or diesel fuel. This change creates some challenges for performing chemical analysis as is required by EPA. While there are a wide variety of ASTM Methods available to characterize these fuels, it is not clear that the methods will work. As a result, these Test Methods must be challenged with these new fuels. This work is under way at ASTM, and this project will be discussed. The implications of these new fuels will be examined from the point of view of the analytical methods. Paper Presentation - 30 minutes Abstract # 020

Abstract # 021 - 2:00 PM – Paper Presentation - 45 minutes - Rose

"Syringeless Solvent Free Injection Device for GC and GC/MS Systems"

Gary Lavigne - University of Connecticut IMS

Direct injection and removal of solids and viscous liquids from within an injection port is achieved by replacing the standard injection port liner with a Syringeless Injection Device. Sample temperature, injection duration and movement of the sample into and out of the injection port is facilitated through the injection ports controller, no external controllers are needed. The sample contained within a glass vial is reproducibly positioned 2 cm from the inlet of the capillary column, eliminating the need for a heated transfer line. Preheated carrier gas continuously sweeps volatiles organic into the capillary column for collection and subsequent separation and detection. Paper Presentation - 45 minutes Abstract # 021

Abstract # 022 - 10:45 AM – Poster Presentation - Exhibit Hall

"TAN and TBN Analysis in Biodiesel"

John D. MacFarlane, Ph.D. and Ms. Momoko Nagaya - JM Science, Inc.

The latest increase in the price of motor fuel and current instability in the Middle East continue to promote the use of alternative fuels. In this report, we describe the total acid number (TAN) and total base number (TBN) in several sources of biodiesel using published ASTM methods using a basic potentiometric titrator. Specific values of TAN and TBN may indicate the relative quality and lubricity of the fuel which may be related to the starting material used in biodiesel production. Results from several different sources of biodiesel will be presented and discussed. Poster Presentation Abstract # 022

Abstract # 023 - 10:30 AM – Paper Presentation - 20 minutes - Daffodil

"The Analysis of Biodiesel Using Supercritical Fluid Chromatography"

Nathan Porter, Jody Clark and Brian Jones - Selerity Technologies

Biodiesel has potential for use as an alternative fuel source in combination with traditional fossil fuels. The transesterification reaction of triacylglycerols in which this fuel is produced, yields variable amounts of glycerine and glycol esters as side products. These side products, as well as the molecular weight of diesel fuels, make the monitoring of the biodiesel quality difficult when using traditional methods, therefore current methods of analysis for biodiesel focus on B100 (100% biodiesel) products. Supercritical fluid chromatography (SFC) has become accepted in the petroleum industry to conveniently provide total aromatic and olefinic content in fossil fuels using pure carbon dioxide as the mobile phase. SFC offers some distinct advantages over other more widely accepted separation techniques, such as increased solubility over gas chromatography, the use of the flame ionization detector (FID), and the capability of group-type separations. In this study, using SFC to analyze biodiesels products has been investigated. By using the class separation capabilities of SFC and an FID, we were able to perform analyses on samples that were comprised of biodiesel blended in petroleum diesel. This method enables the analysis of blended fuels ranging from 1% to 100% biodiesel. The separation can be used to quantify the amount of FAMES, polar compounds and petroleum diesel contained in the fuel. It also allows the analysis of the mono aromatic and polynuclear aromatic content of the petroleum diesel fraction. A comparison of response factors for FAMES, FAES, Monoglycerides, Diglycerides, Triglycerides, and fatty acids were also examined. Paper Presentation - 20 minutes Abstract # 023

Abstract # 024 - 9:45 AM – Poster Presentation - Exhibit Hall

"The Use of Multi-Detector Size Exclusion Chromatography for Pharmaceutical Applications"

Shannon Phillips, Neils-Peter Christensen, Peter Tattersall - Bristol-Myers Squibb

Macromolecules are used by the pharmaceutical industry as excipients, drug delivery aids and active pharmaceutical agents (API). Examples abound, highlighting the scientific efforts that the pharmaceutical industry undertakes to understand the physico-chemical properties of the highly pure API. However, the physico-chemical properties of the pharmacologically inactive ingredients added to the formulated product are not well characterized. Size Exclusion Chromatography with Multiple Detection was utilized in an effort to understand the polymeric nature of products encountered in the pharmaceutical development arena. This work will explore efforts to characterize polymers used as a tablet coating material and a drug precipitation inhibitor. Poster Presentation Abstract # 024

Abstract # 025 - 2:30 PM – Paper Presentation - 30 minutes - Iris

"Trouble-Free Karl Fischer Analysis Of Oils - A Case-Based Approach"

Larry Girdler, Michael Stern, David Sharp - EMD Chemicals

The challenges posed to accurate Karl Fischer (KF) analysis by crude oils and various formulated petroleum-based products are well documented. These can generally be classified as being either issues of sample matrix solubility or reactivity between the additives and typical KF reagents, or both. This presentation will provide an case-based overview of strategies, methods, and practices that can be used to overcome these challenges. Specifically addressed will be the effect of additives' chemistries on direct titration of such product classes as light and heavy crudes, transformer oils, lube oils, ethereal oils, greases. Finally, indirect titration using an oil evaporator will be reviewed. Paper Presentation - 30 minutes Abstract # 025

Abstract # 026 - 9:00 AM - 10:30 AM & 2:00 PM - 3:30 PM – Seminar Presentation - Wisteria

"Using The IQT Ignition Quality Tester To Determine Derived Cetane Number of Diesel Fuel per ASTM D6890 to Qualify Diesel for ASTM D975 and Biodiesel for

ASTM D6751"

Greg Lazarczyk & Tom Bell - Lazar Scientific, Inc.

Each presentation will cover the principals of operation of the test, step-by-step hands-on use of the instrument and a review of the data generated over years of round robin testing. We will also review the history of the method and address its usefulness in fine tuning blends of diesel to produce the most profitable product. Attendees are welcome to provide samples for testing during the workshops. Each workshop will take place in the Laxar Scientific mobile laboratory in front of the confluence center. Personnel will be available in the lab between sessions if more time is required. Seminar Presentation Two Sessions Each Day 9:00 to 10:30 and 2:00-3:30 Abstract # 026

Abstract # 027 - 9:30 AM – Poster Presentation - Exhibit Hall

"A Comparison of Techniques for the Determination of Mercury in Petroleum Products"

David L. Pfeil & Craig Seeley - Teledyne Leeman Labs

Most of the mercury entering the environment from human activity results from combustion of waste and fuels. The EPA has estimated that 10% of the total mercury released through combustion comes from the burning of fuel oil. This poster describes the measurement of mercury in petroleum products using the current techniques of reduction and thermal decomposition for sample preparation. Poster Presentation Abstract # 027

Abstract # 028 - 1:15 PM – Poster Presentation - Exhibit Hall

"A New Polarity Scale For GC Phases"

Dan DiFeo, Paul Wynne, Peter Dawes - SGE Incorporated

Traditionally, the polarity of GC phases has been represented on a qualitative polarity scale in one dimension. While different presentations have been adopted by different manufacturers, the information content has remained essentially the same in each case. We present here a three-dimensional GC polarity scale that considers the selectivity of the GC phase towards any analyte as being dependent on at least three types of interactions: van der Waals forces, hydrogen bonding (or proton donor and acceptor type bonding) and bonding between π - and n-type orbitals. Because the scale is in three dimensional space, it can easily show that a phase may exhibit elements of all bonding types or a dominance of one. It also illustrates what the phase is not. The one dimensional polarity scale does not show different types of interactions and also does not show that if one bonding type becomes dominant then such dominance must logically be at the expense of at least one of the other bonding types. This information is readily conveyed in a three dimensional format. The new polarity scale is able to convey a more detailed description of GC phase polarity with great simplicity. By using a qualitative graphic approach, three-dimensions of information can be provided to the chemist without the added complexity of descriptive terminology. The additional information content of the new polarity scale also allows the chromatographer to more reliably select a GC phase for their specific analyte and therefore aid in column selection across applications. Poster Presentation Abstract # 028

Abstract # 029 - 9:30 AM – Paper Presentation - 30 minutes - Bluebonnet

"Advanced Chromatography Techniques Using The Chromeleon Data Software"

Matthew Neely, Larry West, Graham Webster - Dionex Corporation

So your chromatography is getting faster, but you are not sure how to analyze all that data. In this presentation we will discuss some advanced tools for automated data collection and processing. In addition, a method validation package will be presented that can streamline the processes of method transfer to the quality control laboratory. Paper Presentation 30 minutes Abstract # 029

Abstract # 030 - 1:30 PM – Paper Presentation - 30 minutes - Hibiscus

"Advanced Laboratory Sample Management Automation with RFID"

Jonathan Richter - Baytek International

While vast improvements continue to be made in the areas of laboratory automation, procedures, and workflow, improvements in efficiency and quality seem to be occurring in smaller and smaller increments. It is as if there is a glass ceiling beyond which no lab can improve. The good news, however, is that this is a false ceiling. What is lacking is an innovative approach and perspective on laboratory automation and sample delivery within the lab. By combining a fresh approach with the correct technologies, such as RFID, laboratories can again make procedural and automation improvements that will bring both significant advancements in efficiency and impressive enhancements in quality to the laboratory. Paper Presentation - 30 minutes Abstract # 030

Abstract # 031 - 2:45 PM – Paper Presentation - 20 minutes - Bluebonnet

"Advancement in XRF Technique Enables Sulfur and Chlorine Determination Below 1 ppm"

Berry Beumer, Zewu Chen - XOS

Refining processes require detection improvements and robust analytical techniques for sulfur and chlorine determination. Monochromatic Wavelength Dispersive X-Ray Fluorescence (MWDXRF) gained broad acceptance for measuring sulfur in Ultra LSD and ultra low sulfur gasoline. This technique is now applied to quantify chlorine concentrations in hydrocarbon samples at 0.5 ppm levels. This presentation will review the MWDXRF technique and provide a comparison to conventional XRF methods. Precision results will be discussed for sulfur in e.g. ULSD and gasoline, and for chlorine in e.g. crude, aromatic and aqueous samples. Paper Presentation - 20 minutes Abstract # 031

Abstract # 032 - 10:30 AM – Paper Presentation - 30 minutes - Bluebonnet
"Basic Troubleshooting for Ion Chromatography"
Kirk Chassaniol - Dionex Corporation
Increase up time and improve the performance of your IC system. From eluent preparation/generation to detector operation, we will present a systematic approach to IC troubleshooting. Paper Presentation - 30 minutes Abstract # 032

Abstract # 033 - 10:00 AM – Paper Presentation - 30 minutes - Daffodil
"Biodiesel Analysis on a Thermo Fisher Scientific iCAP 6000 Series ICP"
Matthew Cassap - Thermo Fisher Scientific
There is an ever increasing demand on fossil fuel resources and as the global population increases the strain on these even further. To overcome the problem of potential fuel shortage, alternative fuels for consumers is now receiving heavy investment from governments and industry. The most commonly used of these are biodiesel. Biodiesels is a fatty acid methyl esters (FAME), the FAME is derived from vegetable or animal fats which have undergone a transesterification process with an alcohol, catalysed by sodium or potassium hydroxide. Biodiesel also has environmental benefits if it is derived from vegetable fat as the carbon released during the manufacturing and burning of the biodiesel (in most cases) is less than the carbon absorbed by the plant whilst growing. As well as Biodiesel, biodiesel blends are also used as fuel. These are a blend of petroleum based diesel and biodiesel. The reduction in the carbon footprint of these blends is reduced but the FAME acts a diluent, reducing the concentration of sulphur in the fuel which after combustion can lead to acid rain. The analysis of biodiesel and its blends is necessary to ensure that the concentration of sulphur is below the legal requirement and that minimal sodium or potassium is carried over from the manufacturing process as these elements may have an adverse effect on the properties of the fuel. This paper will provide the background to biodiesel production and will include experimental data of the raw materials, biodiesel and biodiesel blends that were analysed for the required elements on Thermo Fisher Scientific iCAP 6000 ICP with petroleum diesel used as a comparison. Paper Presentation - 30 minutes Abstract # 033

Abstract # 034 - 1:00 PM – Paper Presentation - 20 minutes - Daffodil
"Complete ICP-AES Method Development Utilizing Multi-line Analysis: Spectral Database and Assistant Software for Wavelength Selection, Interference Filtering and Statistical Outlier Rejection to Improve the Reliability of Analytical Results"
Albert Brennstainer, Emmanuel Fretel, Cendrine Dubuisson, Sébastien Velasquez, Agnès Cosnier, Jean-Michel Mermet - Horiba Jobin Yvon
The total process for method development includes a series of assistant software tools dedicated to the HORIBA Jobin Yvon recently introduced ICP-AES system, the ACTIVA-M. In order to take full benefit of the information emitted by an ICP, it is most useful and appropriate to perform multi-line analysis, i.e. the use of several lines per element, instead of using a single line, as is usually conducted. Each tool aims at improving the results from the data obtained from multiple lines. The IMAGE tool allows the user to conduct semi-quantitative analysis so as to determine the list of elements present and their relative concentration ranges. IMAGE is based on the acquisition of the entire emission spectrum for the sample. The S3-base is a complete collection of single-element spectra and spectroscopic data: such as wavelength, excitation energy, limit of detection, sensitivity and line width. Using the S3-base, the MASTER tool facilitates multi-line selection, taking into account the list of elements and their concentrations. Multi-line analysis makes it possible to identify and filter wavelengths based on sensitivity and unexpected spectral interferences. A filtering process recommends a list of possible lines based on relative sensitivities and potential spectral interferences, while an interactive display permits the user to visualize the virtual spectrum and validate the line selection and background correction points. A statistical tool, SOS, analyzes the various concentrations and their standard deviations for the set of lines of a given element, and rejects, if any, the outliers, so as to provide a single, reliable elemental concentration. When necessary, multi-line internal standard correction can be performed to improve accuracy. Using this logical step-by-step series of tools, any ICP user may become an expert. The ACTIVA-M, through its advanced CCD detector technology and the associated tools, is then perfectly dedicated and optimized to perform multi-line analysis, which results in improved concentration reliabilities. The complete multi-line analysis process will be illustrated with real data. Paper Presentation - 30 minutes Abstract # 034

Abstract # 035 - 10:00 AM – Paper Presentation - 20 minutes - Bluebonnet
"Comprehensive Two Dimensional Gas Chromatography for Qualitative and Quantitative Characterization of Biodiesel Blends"
Daniela Cavagnino, Julien Rieu - Thermo Fisher Scientific
Comprehensive Two Dimensional Gas Chromatography has been demonstrated to be a very powerful analytical technique for the characterization of complex mixtures due to its enhanced separation power. It is therefore a very suitable technique for studying in more details the composition of middle distillate fractions. In particular this study is focused on the characterization of mineral diesel blended with different amounts of biodiesel, with the aim of comparing quantitative data on biodiesel content with ones obtained with alternative official analytical methods. Typically, the total content of esters in biodiesel blends can be easily determined by fast IR methods (EN14078) but without the possibility to differentiate the biodiesel composition. A different European Standard procedure (EN 14331) specifies a method for a LC pre-separation of FAMES followed by quantitative GC determination of individual esters. The GCxGC method development and optimization will be discussed along with comparative quantitative data. Paper Presentation - 20 minutes Abstract # 035

Abstract # 036 - 1:30 PM – Poster Presentation - 20 minutes - Exhibit Hall
"Fundamental Limitations in the Use of the Endrin/DDT Test for Measuring Liner Deactivation"
Dan DiFeo, Paul Wynne, Peter Dawes, Roy Hibbert and David Melville - SGE Incorporated
The use of glass injection port liners, with or without wool, for gas chromatography introduces silanol activity to the flash vaporization process. Silanol groups can participate in the loss of analyte from samples by both sorption and catalytic pathways. Amelioration of the silanol effect is achieved by either covalent modification of the silanol moieties or by the introduction of a physical barrier layer. Processes that reduce or eliminate silanol participation in the injection process are termed deactivation. The accepted test of deactivation efficacy is to measure the degradation of endrin and DDT relative to selected breakdown products. The conditions adopted for such tests by liner manufacturers are increasingly regarded as an unrealistic indicator of performance in service by many end users. In practice, the liner test has little relationship to the analysis of endrin or DDT residues in real samples and their continued use as probes is based partly on their wide availability and partly on the baseline of historical data held by liner manufacturers. We describe here the fundamental purpose of the endrin and DDT test in terms of the kinetic events unfolding during flash vaporization. The meaning of the test result may subsequently be understood of a sum of injection port activities rather than as an unrealistic application for the analysis of endrin or DDT. By derivation, the testing of activity in liners that operate by different mechanisms (e.g. wool packed liners and large volume liners) may also be completed with the same probes. Paper Presentation - 20 minutes Abstract # 036

Abstract # 037 - 11:00 AM – User Group Meeting - 1 hour - Bluebonnet
"IC / HPLC Users Group Discussion"
Kirk Chassaniol, Matthew Neely, Lisa Lenehan, Chuck Costanza - Dionex Corporation
A question & answer discussion session led by a panel of Dionex experts. Open to all conference attendees with an interest in IC &/or HPLC. Specific topics for discussion prior to the meeting are welcome by sending an e-mail to: lisa.lenehan@dionex.com. Users Group Meeting - 1 hour Abstract # 037

Abstract # 038 - 10:15 AM – Poster Presentation - Exhibit Hall
"Improved TOC Analysis for Salt Water Matrices Containing Difficult-to-Oxidize Compounds with Heated Persulfate Oxidation"
Jeffrey Lane, Gary Erickson, Mike Duffy - OI Analytical
Total Organic Carbon (TOC) analysis is used to monitor a number of industrial processes and waste streams. Historically, the streams that contained high concentrations of salts required significant sample preparation, typically in the form of dilutions. These dilutions were required to reduce or eliminate the effect of the salts on the chemical oxidation analysis systems and to minimize maintenance requirements for high temperature combustion systems, often at the expense of detection limits and reliable data. Improvements to combustion analyzers, particularly the development of the 680 °C catalytic technique, provided more robust systems for this analysis. However, these analyzers remain plagued with problems of salt buildup in the combustion tubes (and sample pathways). Additionally, damage to the reactor and catalyst result from the salt load placed on the reactor. The resulting requirement of additional maintenance creates a higher cost of equipment ownership as a consequence of accelerated use of consumables and the loss of analyzer availability resulting from increased maintenance. These issues culminate in reduced laboratory efficiency. The heated persulfate wet oxidation method was originally created to contend with higher salt matrices up to and including seawater. The use of this low temperature (100 °C) wet oxidation method provides a solution without the issues most commonly associated with the high temperature combustion of salts, including plugging, catalyst poisoning, and potential coating of the NDIR optics with the volatile by-products of combustion. The ability to process the salt matrices up to seawater in a low temperature system has proven to be very valuable but leaves the issues in place for samples with higher salt content. A recent improvement in methodology for use with wet oxidation TOC analyzer applications has resulted in an instrument capable of performing TOC analysis of difficult-to-oxidize compounds in matrices up to and including brine. The introduction of a modified oxidation reagent by OI Analytical extends wet chemical oxidation application capabilities to matrices that include brine. With this development, solid analytical results are achievable in the TOC analysis of high salt matrices without the involved maintenance and expense of the combustion process. Poster Presentation Abstract # 038

Abstract # 039 - 10:30 AM – Poster Presentation - Exhibit Hall
"A New Approach to Purge-and-Trap Analysis for the Determination of Purgeable Aromatics"
Teri A. Dattilio - Teledyne Tekmar
BTEX (Benzene, Toluene, Ethylbenzene and Xylene) compounds are frequently found to occur at hazardous waste sites. Contamination of soils can lead to groundwater contamination which can further result in indoor air contamination through volatilization when the water is used as household water. This poster describes a novel approach to the analysis of BTEX compounds and the optimum parameters used with the New Stratum PTC purge-and-trap concentrator. Poster Presentation Abstract # 039

Abstract # 040 - 10:45 AM – Poster Presentation - Exhibit Hall
"A Novel Approach for Profiling VOCs in Water Samples Utilizing the New Stratum PTC and Aquatek70 Autosampler"
Teri Dattilio - Teledyne Tekmar
The United States Environmental Protection Agency (USEPA) drinking water methods 524 and 8260 implement Purge&Trap (P&T) technology and are widely used by laboratories for the analysis of Volatile Organic Compounds (VOCs). This poster describes the Stratum PTCs ability to manage water and minimize

carryover, both serious issues associated with Purge&Trap analysis, while maintaining excellent data quality. Poster Presentation Abstract # 040

Abstract # 041 - 1:45 PM – Poster Presentation - Exhibit Hall

"New Approaches To The GC Injection Port"

Dan DiFeo, Peter Dawes, David Melville, Paul Wynne - SGE Incorporated

The application of gas chromatographic methods is limited by the efficiency of vaporization and sample transfer from the injection port to the head of the column. The most common injection port design is based on flash vaporization and split or splitless transfer to the column. The technique is less effective for thermally labile analytes and, because the high temperatures of operation provide sufficient energy to exceed the activation energy, less effective for analytes that are prone to catalytic decomposition on the liner body or packing. Considerable effort has been directed to the design of injection port liners that overcome the undesirable aspects of flash vaporization and splitless residence times. While on-column injection overcomes some of the discrimination and other difficulties associated with flash vaporization, it is not useful for split sample inlet and has limited appeal for use in routine applications. We describe here alternative approaches to GC sample introduction based on the deactivation of the injection port liner and the principles under which the liner functions. The advantages of alternative injection techniques are described for polar and labile analytes. Poster Presentation Abstract # 041

Abstract # 042 - 1:00 PM – Seminar Presentation – 4 hours - Bluebonnet

"Advances in Multidimensional Gas Chromatography. Introducing LECO's New Consumable-Free Modulator" *Dr. Mark Libardoni - LECO*

LECO, the founder of GCxGC-MS, will be hosting a seminar discussing the use of GCxGC-FID and GCxGC-TOFMS for the analysis of petroleum samples utilizing the new LECO Consumable-Free Modulator. The need for comprehensive two-dimensional gas chromatography (GCxGC) in resolving complex matrices, such as petroleum samples, has steadily grown in recent years. The complexity of petroleum samples, which often contain hundreds of compounds, along with the need for increased sample throughput, creates significant challenges to today's analytical chemist. Traditional analysis of volatile and semi-volatile compounds found in petroleum samples have been performed with gas chromatography and mass spectrometry (GCMS). Recently, the use of comprehensive two-dimensional gas chromatography (GCxGC) as a separation technique has further pushed the limits of analytical resolving power, enhanced peak capacity and improved detectability. Join us to explore how GCxGC can be utilized in your laboratory to deliver superior results. Seminar Presentation - 4 hours Abstract # 042

Abstract # 043 - 3:45 PM – Paper Presentation - 30 minutes - Rose

"Application of Thermal Desorption in Ambient Air Monitoring"

Leeman Bennington - PerkinElmer

Thermal Desorption has been a technique utilized in ambient air monitoring since the early 1990s for ozone precursor and air toxic (TO-17) analyses. Keys to ambient air monitoring include unattended operation, system ruggedness, simultaneous chromatography on two columns, cryogen free operation, and automated system calibration. In this paper, we will present a brief history of regulatory implementation along with an overview of thermal desorption operation. In addition, new technologies in thermal desorption, including pneumatic control, moisture management, and impedance testing, will be discussed. Applications of thermal desorption technology for the measurement of ozone precursors at photochemical air monitoring sites (PAMs) and air toxics will also be offered and supported by actual field examples and precision data. Paper Presentation - 30 minutes Abstract # 043

Abstract # 044 - 11:00 AM – Poster Presentation - Exhibit Hall

"Benzene in Soft Drinks By Teledyne Tekmar HT3 Headspace Sampler"

James Cox - Teledyne/Tekmar

This poster presents a method that demonstrates the ability of the HT3 Headspace autosampler to analyze Benzene in Soft drinks at low detection levels. Benzene, a known carcinogen, is naturally occurring (for example, in crude oil) but is also manufactured for use in the industrial sector. Benzene is released to the air from various sources, including industrial emissions, fires, vehicle exhaust and tobacco smoke. Because benzene readily evaporates into the air from gasoline, gas stations are also a source of benzene to the air. In the early 1990s, it was found that benzene could be formed in soft drinks containing certain food preservatives and nutrient additives. It was shown that benzoate salts, used as an anti-microbial agent in certain soft drink products, could react with ascorbic acid (vitamin C) to form benzene, especially in the presence of light and elevated temperatures. Ascorbic acid may be either naturally present from a fruit juice ingredient in the soft drink or added as an antioxidant food additive. In November 2005 the FDA received private laboratory results reporting low levels of benzene in a small number of soft drinks that contained benzoate salts and ascorbic acid. FDA has no regulatory limits for benzene in beverages other than bottled water, for which FDA uses the US Environmental Protection Agency (EPA) maximum contaminant level (MCL) of 5 ppb for drinking water, as a quality standard. This method could be used by quality control to determine whether soft drinks contain benzene above the U.S.E.P.A. MCL of 5 ug/L (ppb) or the U.K. MCL of 1 ug/L (ppb). Soda beverages were analyzed using a Teledyne Tekmar HT3 with a Gas Chromatograph equipped with a Mass Spectrometer. A 5-point calibration curve for Benzene was first analyzed in water. Poster Presentation Abstract # 044

Abstract # 045 - 1:30 PM – Poster Presentation - Exhibit Hall

"New Application Areas for an Oxygenate Selective Capillary PLOT column

Based on a Highly Polarizable Solid Layer Adsorbent"

Johan Kuipers, Kees van der Sar, Max Erwine - Varian, Inc.

The unique retention and moisture trapping characteristics of the CP-Lowox PLOT column has been widely and successfully used for the separation of various classes of low boiling oxygenates in a variety of hydrocarbon streams, particularly for the ppm/ppb level analysis of alcohols, ethers and other volatile oxygen containing compounds in LPGs, propylene, butylenes and more complex hydrocarbon matrices. This poster describes some new application developments for the CP-Lowox. Studies show that the selective polarizable adsorbent exhibits interesting interactions not only for oxygenated compounds but also for many sulfur containing analytes, some halogenated compounds and natural gas odorants. Poster Presentation Abstract # 045

Abstract # 046 - 9:15 AM – Poster Presentation - Exhibit Hall

"Odor and Chemical Quality Control of Gasoline with HERACLES Flash GC E-Nose" *Mr. Manach, Dr. Schmitt, Mrs Bonnefille - Alpha M.O.S.*

The odor and chemical conformity of gasoline is of utmost importance since it can contain hazardous substances that pose a threat to the public's health and the environment. Currently, many countries set tight limits on noxious compounds such as gasoline aromatics in general, benzene in particular, and olefins (alkene). This poster presents the use of an electronic nose based on Ultra Fast Gas Chromatography, the HERACLES, to achieve the organoleptic and chemical quality control of gasoline. Featuring 2 short columns of different polarities and 2 FID, this analyzer runs simultaneously 2 chromatograms in seconds. The software combines current chromatographic functionalities and comprehensive data treatment to set-up decision tools such as qualitative models for products comparison (Principal Component Analysis, Discriminant Factorial Analysis), quality control charts and threshold alerts. Thus the analyzer allows to reliably (RSD < 6%) and rapidly differentiate good gasoline samples from bad ones containing unacceptable amounts of BTEX compounds. The HERACLES electronic nose can bring the ability to screen a large number of samples to check their quality. Through the use of this instrument, companies can reduce time and costs of analysis chain process, and significantly improve the product quality consistency. Poster Presentation Abstract # 046

Abstract # 047 - 2:00 PM – Poster Presentation - Exhibit Hall

"On-Line And Off-Line Application Of Micro-SPE"

Dan DiFeo, Peter Dawes, Ern Dawes, Paul Wynne - SGE Incorporated

Solid-phase extraction (SPE) has revolutionized sample preparation methodology for diverse sample types. In many cases, variations on the technique offer enhanced recovery, greater opportunity for speciation and a reduction in solvent and sample consumption. Unlike solvent extraction, SPE is generally easy to automate for off-line use. The simple adaptation of SPE for on-line use has not been as successful as its uptake for off-line applications. Recognizing that the primary purpose of most SPE methods is solvent exchange (e.g. the extraction of an aqueous sample for GC inlet) or some form of matrix clean-up (e.g. desalting or removal of endogenous materials), the further development of SPE for on-line use becomes a directed exercise. Miniaturization of SPE into the sample injection system allows a much smaller portion of the sample to be extracted and for the whole of the extract to be injected onto the chromatographic column for separation. In many cases, such an approach allows the same level of sample concentration to be achieved as is possible with off-line conventional SPE. Providing the miniaturization does not approach the same scale as the pseudo-plates of the sorbent, micro-SPE may be readily adapted from established SPE methods. Using simple applications, we demonstrate the usefulness of micro-SPE for different combinations of sample type and sorbent chemistry prior to analysis by GC or LC techniques. The micro-SPE apparatus is suitable for on-line use in GC, HPLC and other chromatographic techniques and for sample preparation prior to other analytical techniques including immunoassay and off-line non-destructive spectroscopic analysis by NMR, IR and other methods. Poster Presentation Abstract # 047

Abstract # 048 - 9 a.m.-5 p.m. on Thursday October 18 – User Group Meeting - Bluebonnet

"PANalytical's XRF/XRD Users Group Meeting"

Diane Donati - PANalytical User Group Meeting Abstract # 048

Abstract # 049 - 1:00 PM – Poster Presentation - Exhibit Hall

"Polar Phases For Gas Chromatography"

Dan DiFeo, Paul Wynne, Rebecca Garland, Peter Dawes - SGE Incorporated

Improvements in the control of gas chromatographic systems and the increasing demands for selectivity in applications has led to growing interest in phases that offer some orthogonality to the non-polar and weakly polar phases such as polydimethylsiloxane (e.g. BP1) and the 5% equivalent phenyl phases. In particular, this interest is strong from users of multi-dimensional techniques that require speciation capacities that are only achieved with the use of phases that offer different types of interactions. We describe additions to our range of polar GC columns in terms of their polar chemistry type and the likely applications for which they may be used. We separate the different phase types on the basis of their primary and secondary retention mechanisms. Using a new three dimensional polarity scale has assisted with the realisation of new phases and development of a better understanding of the usefulness of phases with similar overall polarity but different mechanisms for interaction with retained species. Poster Presentation Abstract # 049

Abstract # 050 - 10:15 AM – Paper Presentation - 30 minutes - Bluebonnet

"Polychrom: A Comprehensive GC*GC Data Handling Software"

B. Celse, S. Bres, F. Adam, F. Bertocini, L. Duval - IFP

Several commercial processing softwares exist for GC*GC analysis. They generally perform well for isolated peaks with large areas/volumes. However, for complex matrices (like gas-oil), they encounter difficulties when integrating less intense peaks in samples with high background levels, and components that partly coelute in the first dimension. Manual corrections by the user are often required. A new industrial software, named Polychrom, has then been developed for quantitative GC*GC analysis. The main philosophy of the software is to define parameter sets for each kind of application and samples. Similarly to the 1D chromatographic software CarburaneO, parameters are stored in two different files: " the parameter file, which contains general information and acquisition, calibration and visualization parameters, " the identification file, which contains a template of blob lists. Each blob (region of interest) is associated to a chemical component and its family. These files are generated during the template generation phase. In routine analysis, they are not modified and only the following operations must be carried out. First, quantification and calibration mode must be chosen. For quantification, several modes are possible. In standard case, classical formulae are used, providing a direct link between areas on the second dimension and concentration ([1]). It is also possible to use correcting coefficient factors (one factor for each chemical component). For calibration, several modes are available: internal normalization, internal and external calibration. Second, pre-processing (baseline suppression, offset determination to suppress wrapping around effect) may be applied to the data. Third, blobs stored in the reference identification file must be matched to the new sample analysis. Two automatic matches must be carried out: " Blob shifting: each reference blobs (typically normal paraffins) are shifted to the new samples. Active contours techniques are used ([2]). Non-reference blobs are subsequently shifted using Van den Dol index ([3]) " Blob fitting: each blob is vertically fitted to the start and stop points of the peaks in the second dimension ([4], cf. Figure 2 and 3). If necessary, blobs are then modified manually using classical operations: move/suppress/add of blobs, move/add/ suppress corner blob corners... A new module is added, aiming at samples' comparison. Comparison is carried out using several criteria: " Blob area (i.e. component concentration) " Inter-peak distance and peak amplitude. Several classification techniques are used: K-Means clustering and Hierarchical clustering. Fisher discriminant analysis is carried out in order to define discriminate zones in the chromatogram. As a conclusion, unlike other automatic labeling softwares, the commercial software Polychrom, with identifications files specially devoted to each specific group of products, can predict the composition and the physical properties of these samples with a very good compliance with manual blobs definition. It may also compare several samples. This industrial software is used as a routine in our laboratory. About 200 analyses were carried out in 2006; more than 500 analyses are expected in 2007. [1] J. Dalluge, M. van Rijn, J. Beens, R.J.J. Vreuls, U.A.Th. Brinkman, J. Chromatogr. A 965 (2002) 207 [2] M. Kass, A. Witkin, D. Terzopoulos, Snakes: Active contour models. *Int'l J. Comp. Vis.*, pp. 321-331, 1988 [3] B. Celse, S. Bres, F. Adam, F. Bertoncini, L. Duval, Automatic blob fitting in comprehensive two-dimensional gas chromatography images, PSIP Congress, 2007 [4] B. Celse, S. Bres, F. Adam, F. Bertoncini, L. Duval, Automatic template fit in comprehensive two dimensional gas chromatography images, Dalian Congress, 2007 Paper Presentation - 30 minutes Abstract # 050

Abstract # 051 - 9:30 AM – Poster Presentation - Exhibit Hall

"Product Development: Odor Analysis of Polyolefin Pellets with Fox Electronic Nose"

Dr Vincent Schmitt, Mr Michel Manach, Mrs Marion Bonnefille - Alpha M.O.S.
Quality of plastics and packaging is a key issue in many industries, such as food&beverage, pharmacy or cosmetics, both from its safety and its protection functions. Among the quality parameters that are strictly controlled, odor is crucial. Consequently, olfactive features must be monitored from the product development stage. The first step in identifying odors objectively is to use panels of human test subjects to detect and rate odors on the basis of how pleasant or unpleasant they are. Responses of these panels can then be correlated with measurements of volatiles in plastics made with standard instrumental analytical methods such as gas chromatography/mass spectroscopy (GC/MS). But these latter techniques cannot be easily linked to human perception. The use of Electronic Noses, which consist of gas sensor arrays and pattern recognition technology, allows to perform global analysis of odors in correlation with human assessment. The objective of this presentation is to analyze LLDPE samples with a FOX Electronic Nose to optimize a new formulation development, benchmark competitive products and monitor the manufacturing process. Instrumental measurement shows the influence of additives on the production batches in term of odor. This technique allows to determine the optimum parameters of the process in order to meet the quality requirements in comparison with a target. The Electronic nose analyzer can be used by industrials to speed-up new product development, to monitor manufacturing process and achieve routine quality control of raw materials or finished products. Poster Presentation Abstract # 051

Abstract # 052 - 2:30 PM – Workshop Presentation – 2 hours - Hibiscus

"Quality Systems in the Analytical Environment"
Gretchen McAuliffe - EM2 Solutions, Inc.
This workshop focuses on key elements of a quality management system in a modern laboratory. A quality system defines the procedures, processes, responsibilities and resources necessary to manage throughput, increase efficiency, reduce cost, and detect and correct deviations. Discussion will focus on how laboratories apply elements of international standards and statistical techniques to manage people, infrastructure, and data. The participants shall see how successful implementation of a quality system in an analytical environment will increase confidence in analytical data, improve reliability of personnel and instruments, and lower sample turnaround times. Workshop Presentation - 2 hours Abstract # 052

Abstract # 053 - 3:15 PM – Paper Presentation - 20 minutes - Bluebonnet

"Raman Spectroscopy for On-line Monitoring of Total Sulfur In Fuels"
Lee Smith, Rory Uibel, David Jones, and Robert Benner - Process Instruments, Inc.

As total sulfur levels in finished petroleum products are lowered it becomes even more important to control sulfur in individual process streams. However, often the high cost of an additional, dedicated sulfur analyzer can not be justified on the many component streams. After collecting on-line grab samples over a period of ~ 4 months, we modeled on-line Raman scattering spectra against an on-line UV Fluorescence (UVF) sulfur analyzer to enable measuring total sulfur content in finished gasoline. On-line Raman spectroscopy is currently being used to determine most if not all key gasoline parameters, except total sulfur. An On-line, side-by-side comparison of Raman with conventional UVF technology demonstrates that Raman scattering can now provide this additional key parameter for gasoline component and ULSD blending streams. Paper Presentation - 30 minutes Abstract # 053

Abstract # 054 - 3:45 PM – Paper Presentation - 30 minutes - Bluebonnet

"Raman Spectroscopy Monitoring for Control of Rich and Lean Amine Streams"
Lee Smith, Rory Uibel, Merisa Werner, and Robert Benner - Process Instruments, Inc.

Aqueous amine streams are commonly used to remove Hydrogen Sulfide (H2S) from hydrocarbon streams. There is an optimum amine concentration for maximizing H2S removal and minimizing amine cost and maintaining an equilibrium in the reactor. Current, standard laboratory practice requires laborious titration of grab samples to determine amine and H2S levels in both the rich and lean amine streams. We report on using Raman scattering instrumentation to directly measure both the amine and H2S concentrations. After collecting on-line grab samples over a period of ~ 4 months, chemometric models were prepared to directly predict the concentrations of DGA, MDEA, and H2S in both the rich and lean streams. Laboratory tests suggest that our Raman scattering approach would also apply to other commonly used amines including, MEA, DEA, and DIPA. Paper Presentation - 30 minutes Abstract # 054

Abstract # 055 - 1:15 PM – Poster Presentation - Exhibit Hall

"Robust High Temperature Gas Chromatographic Analysis of Biodiesel Using A New Select Biodiesel For Glycerides Ultimetal Column"

Kuipers, Johan, Oostdijk, J.P., Heijnsdijk, P.H., Peene, J.A., Dijkwel, P., Pérez, J. and Reuter, N. - Varian, Inc.

The use of Biodiesel fuel is on the rise. The impurities from the tranesterification production process can have significant impact on the quality of the Biodiesel and must fall within specifications mentioned in EN-14214 or ASTM D 6751. The thermal stress of routine testing can significantly reduce GC column lifetime. Varian Select™ Biodiesel for Glycerides GC column offers low bleed performance and significant stability improvements over standard polyimide coated fused silica columns. Tested up to 687 hours at 400°C this Ultimetal™ column performs to the high temperature demands of standard procedures such as EN 14104 and ASTM D 6584. Poster Presentation Abstract # 055

Abstract # 056 - 11:30 AM – Paper Presentation - 20 minutes - Rose

"Separation and Characterization of Photodegradation Products of Various Benzothiazoles by Reversed LC with PDA and ESI-MS as Detectors"

Cyril Parkanyl and Zuzana Zajickova - Florida Atlantic University and Barry University

A simple method was developed for the separation and characterization of photodegradation products of various benzothiazoles. 2-Substituted benzothiazoles including some of their dimers of wide range of polarities were analyzed using reversed phase liquid chromatography with a photodiode array detector (PDA) and electrospray ionization mass spectrometry detector (ESI-MS). The separation was accomplished on the Hypersil ODS column with acetonitrile-water gradient. Formic acid or ammonium acetate were used as additives in the positive or negative mode of ionization in the ESI-MS analysis. Paper Presentation - 20 minutes Abstract # 056

Abstract # 057 - 11:30 AM – Poster Presentation - Exhibit Hall

"Profiling of Water for Parts-per-trillion Levels of Geosmin and MIB by Utilizing Dynamic Headspace Sampling" *James Cox - Teledyne/Tekmar*

The musty/earthy odor associated with drinking water has been strongly linked to two chemical compounds 2-Methyl-isobornone (2-MIB) and Geosmin (Octahydro-4, 8a-dimethyl-4a(2H)-Naphthalenol). These compounds are produced by blue-green algae (cyanobacteria) and actinomycete bacteria. At very low-level concentrations of 10ppt or less some people can smell the analytes in drinking water. In most nations the mandatory detection levels are 10ppt or lower. The Teledyne Tekmar HT3 Headspace GC/MS method for the analysis of Geosmin and 2-MIB in water shows good sensitivity and quantization capability. Also it offers another benefit because it does not require organic solvents for extraction. This method of analysis proves to be a simple and inexpensive extraction technique that can achieve trace levels of detection for Geosmin and 2-MIB in water. Poster Presentation Abstract # 057

Abstract # 058 - 11:00 AM – Paper Presentation - 30 minutes - Daffodil

"Simple and Innovative analysis of Glycerin in Biodiesel" *Jay Gandhi, SPencer Gambacurta, Randy Benton, Larry Tucker - Metrohm-Peak LLC*
Glycerin/Glycerol analysis in Bio-diesel is currently performed using GC-FID after derivitization. This presentation demonstrates simple and innovative analytical method for the Glycerin in Bio-diesel. Paper Presentation - Abstract # 058

Abstract # 059 - 3:15 PM – Paper Presentation - 30 minutes - Rose

"Technologies to Increase GC Sample Throughput"

Leeman Bennington - PerkinElmer

"Fast Chromatography" does not necessarily mean fast analysis. In this paper, we investigate technologies for reducing the overall analysis time by shortening the time used for chromatography, as well as, reducing the time between analyses spent in cooling and equilibrating the oven and in preparing an autosampler for sample injection. Examples are shown where the chromatography time is reduced by using high oven temperature programming rates in conjunction with short, narrow-bore, thin-film capillary columns using hydrogen as carrier gas. In cases where no changes to existing analytical methods are desired, significant time savings will be demonstrated utilizing a new GC air bath oven able to cool from 450°C to 45°C in less than 2 minutes and pre-emptive rinsing of the liquid autosampler syringe with the next sample prior to the GC becoming ready. Paper Presentation - 30 minutes Abstract # 059

Abstract # 060 - 11:00 AM – Paper Presentation – 30 minutes - Rose

"Quantitative Polymer Characterization"

R.R. Freeman and T. Wilks - Frontier Laboratories

The characterization of additives and polymeric material has historically been a complex task, involving cumbersome sample preparation and a multitude of instrumental techniques. And, the data has been qualitative, at best. This work describes an innovative multi-functional pyrolyzer which is based upon a programmable, micro-furnace. The need for sample preparation is virtually eliminated; the sample is simply put in a quartz cup prior to analysis. The sample can be heated in any atmosphere; fractions of the sample which are of no interest can be vented. The chromatographic data is free of interferences. Library search results are of high quality and peak integrations are accurate. This presentation will describe the new pyrolyzer and present several examples showing the quantitative analysis of several additives in a polymeric matrix. Paper Presentation - 30 minutes Abstract # 060

Abstract # 061 - 1:45 PM – Paper Presentation - 40 minutes - Daffodil

"The Analysis of Organic Matrices by ICP/ICP-MS Using Chilled Spray Chambers"

David Hilligoss, Matthew Knopp, Ken Neubauer, Dr. Ewa Pruszkowski - PerkinElmer LAS

The analysis of samples prepared in organic solvents can be particularly challenging for most ICP instruments. The volatility of most solvents makes it difficult to maintain a stable plasma. This paper will discuss the use of cooled spray chambers and oxygen addition for ICP-OES and ICP/MS instruments with such solvents as dichloromethane, methanol, ethanol, acetone, hexane and many others. Paper Presentation - 40 minutes Abstract # 061

Abstract # 062 - 9:30 AM – Paper Presentation – 30 minutes - Rose

"The Chiral "Finger-Print" of an Herbicidal Product Resolved by SFC"

Jennifer L. Lefler, Jaci Cole, and Dr. Les Dolak - Thar Instruments

Environmental analyses can be highly complex, and the analysis of racemic mixtures increases the difficulty. Residue analyses of herbicides, pesticides and their metabolites are critical environmental chemistry applications that have primarily been addressed via HPLC or GC. Metolachlor is one of many chiral pesticides that are monitored by the EPA. The ratio of diastereomers is indicative of the products manufacturer, thereby possessing a chiral finger-print. The ability to detect and resolve, via SFC, residues and diastereomers of metolachlor in a quick and low polluting matter will be illustrated in this presentation. Paper Presentation - 30 minutes Abstract # 062

Abstract # 063 - 2:45 PM – Paper Presentation - 30 minutes - Rose

"The Effects of the Differing Quality Helium Carrier Gas on the Gas Chromatography System" *Sherri Pettee, Mike King - Airgas, Inc.*

OBJECTIVE: Determining the effects of Helium Carrier gas supplies on signal to noise ratio. Other factors include; manifold design and cylinder exchange procedures, leak detection, column selection and oven temperature programming. EQUIPMENT USED: Agilent 6890N Gas Chromatograph equipped with the following: 1) Pulse Discharge Detector (PDD), 2) Flame Ionization Detector (FID), 3) Split/splitless injection ports, 4) DB-5, 30mX0.32mmX0.25um film. PROCEDURES: A Gas Chromatograph was configured as described above and tested using three differing grades of helium. To ensure adequate representation of the gases before data was collected, the setup process for each carrier gas was exactly the same: a thorough 25leak check of the complete system and an overnight purge process. No external purifiers were used at any time during this experiment. The Capability index was calculated for each differing carrier gas grade. CONCLUSION: The capability of an instrument and the reliability of results can be improved by using a consistent quality, higher purity, more consistent carrier gas grade. Paper Presentation - 30 minutes Abstract # 063

Abstract # 064 - 10:15 AM – Poster Presentation - Exhibit Hall

"The Fusion: Evaluation and Application of a New TOC Analyzer"

Missy Gibson, Brian Wallace, Stephen Lawson - Teledyne Tekmar

Calibration for any instrument is critical to successful operation. The Fusion and TekLink™ software combine to provide a user friendly platform for calibrating. With one universal system blank, stock and sample dilution capability, and turnkey method development calibration and verification has been made simple. By implementing the patent-pending Static Pressure Concentration (SPC) technology, the Fusion is able to achieve unprecedented performance analysis using a Non-Dispersive Infrared (NDIR) detector. The theory of this system of calibration will be presented with practical examples. Poster Presentation Abstract # 064

Abstract # 065 - 9:00 AM – Poster Presentation - Exhibit Hall

"The Gemini Electronic Nose as a New Quality Control Tool to Assess Packaging Odor Conformity"

Dr Vincent Schmitt, Mr Michel Manach, Mrs Marion Bonnefille - Alpha M.O.S.

Packaging materials made of plastic, such as caps, liners, bottles, need to be tested for their organoleptic properties (odor and taste), to guarantee that they will not transfer an unpleasant flavor to food products. These tests are often performed by sensory panel and require various hours and a frequent availability of panelists. The poster will present how to use a GEMINI electronic nose instrument to improve the aroma / flavor testing of plastic packaging. The Gemini Electronic Nose includes an array of 6 cross-selective sensors to perform the analysis of volatile compounds emanating from samples. One of the applications presented will be the quality control of polyethylene (PE) pellets. A Quality Control chart is first built-up based on sensory panel scale of assessment. Then routine analysis on 3 various PE shows a high level of correlation between results obtained with the GEMINI analyzer and sensory panel ones. The GEMINI analyzer provides efficient solutions for packaging producers and food & beverage industrials in order to ensure quality and safety of products while saving time and costs. It allows to follow-up the organoleptic impact of additives, to compare various suppliers to select the more suitable packaging, to monitor batch to batch consistency of a single supplier, to detect contamination that could occur during storage or shipment. Poster Presentation Abstract # 065

Abstract # 066 - 10:30 AM – Paper Presentation - 30 minutes - Rose

"The LPG-Adapter: A Great Guide for Gas"

Lee Tower, Joe Harris - Anton Paar USA

To make things easier, Anton Paar has developed a filling system for the measurement of propane, butane, and mixtures of these in their liquid phase - the LPG-Adapter. It provides the optimal link between gas containers and DMA HP density measuring cells, keeping the gas in its liquid phase through constant overpressure. The focus of the LPG-Adapters entire setup and configuration is ease-of-use, versatile application, and safety, all the while providing the reliability and accuracy Anton Paar is known for. Together with DMA HP and an evaluation unit, it offers a complete, 25ready-to-go solution. A quick coupler couples a wide range of sample containers within seconds, without requiring any further tools. The user simply opens 2 valves, the LPG is filled into the adapter and from there into the pre-tempered DMA HP density measuring cell. Press the key on the evaluation and control unit (DMA 4100, DMA 4500, DMA 5000) and wait for the result to be displayed, printed, and stored. This maintenance-free adapter makes difficult and strenuous preparations required with pressure hydrometers a thing of the past, thus saving on lab time - but also on lab space, with its highly compact design. Seminar Presentation - 30 minutes Abstract # 066

Abstract # 067 - 1:15 PM – Paper Presentation - 45 minutes - Daffodil

"The Use of Ammonia to Eliminate Carbon Based Interferences in the Analysis of Organic Matrices by Dynamic Reaction Cell ICP-MS"

Daniel Jones - PerkinElmer

Carbon can combine with itself or other ions such as argon to form a number polyatomic spectral interferences. The Dynamic Reaction Cell ICP-MS can eliminate many of these argon and carbon based interferences, allowing trace determination of many critical elements in organic compounds. Paper Presentation - 45 minutes Abstract # 067

Abstract # 068 - 10:00 AM – Poster Presentation - Exhibit Hall

"Utilization of TOC Analysis for Continuous Source Water Determination"

Jeffrey Lane, Gary Erickson, Mike Duffy - OI Analytical

Total Organic Carbon (TOC) analysis is quite typical for facilities that monitor a continual flow of water or product on a regular basis. These facilities adjust the need to treat the material in question based on influent and effluent results. By doing this, trends can be established based on the results given. However, facilities are in a position to do laboratory monitoring by grab samples or through at-line monitoring because TOC analyzers are capable of doing one or the other, but not both functions, and the ability of owning two instruments can be costly. Recently, with the advent of the O I Analytical Aurora 1030W TOC Analyzer, it is possible to have an analyzer that can function as both an at-line instrument and laboratory analyzer with little configuration change, as well as possess the ability to perform trend analysis for multiple continuous sources. As a result, there is also an ability to determine a point of diminishing return in the treatment of these source products. Poster Presentation Abstract # 068

Abstract# 69 - 10:00 AM – Poster Presentation - Exhibit Hall

"Using a Single Calibration Curve to Analyze a Wide Range of Samples"

Missy Gibson, Brian Wallace, Stephen Lawson - Teledyne Tekmar

A next generation UV/Persulfate Total Organic Carbon (TOC) analyzer has been introduced with unparalleled analytical capabilities for real world samples. Use of a new patent-pending technique of static pressure concentration (SPC) Nondispersive Infrared (NDIR) detection achieves greater levels of accuracy and precision within TOC analysis. Traditional analyzers use multiple calibration curves to analyze the spectrum of samples submitted for analysis. Within this analyzer's versatile software design and SPC technology, a single calibration curve may be used to cover a wide range of samples concentrations. Poster Presentation Abstract # 069

Abstract # 070 - 10:00 AM – Paper Presentation - 30 minutes - Bluebonnet

"IonPac Column Selection & Rapid Method Development for Ion Chromatography"

Kirk Chassaniol - Dionex Corporation

Column choice is one of the most important tools used to optimize IC methods.

This overview of IonPac® Columns will include the latest columns and accessories. Theoretical aspects of method development will be illustrated with practical examples. Paper Presentation - 45 minutes Abstract # 070

Abstract # 071 - 3:15 PM – Paper Presentation - 20 minutes - Iris

“Determination of Acidity and Basicity in NonAqueous Samples by Titration”
Tore Fossum - Mettler Toledo, Inc.

Trace levels of acidity or basicity has been determined in nonaqueous polyol samples with a technique which can be applied to a variety of trace level titrimetric analyses. A blank spike of a known and uniform amount of base is placed in a beaker along with the typical solvent amount. This is titrated with acid as a blank. A sample is titrated in the same way, with the blank spike of base and solvent. If there is acidity in the sample, the titration will require a smaller volume of acid titrant. If there is base in the sample, the titration will require more titrant than the blank spike. In many cases, the presence of base in the polymer precursor may be far more troublesome than acidity. Therefore, this titrimetric method can provide valuable information about the acid base balance of the polymer raw material with one simple titration. Paper Presentation - 20 minutes Abstract # 071

Abstract # 072 - 11:15 AM – Poster Presentation – Exhibit Hall

“Group Type Analysis of Middle Distillates Samples by Simulated Distillation GC/MS”
A. Mendez Ph.D.; R. Meneghini M.Eng.; A. Bonini and J.A. Lubkowitz Ph.D. - Separation Systems Inc.*

Compositional Analysis of middle and heavy oil fractions is routinely performed by high ionizing voltage low mass resolution mass spectrometry according to ASTM, D-2425, D-2786 and D-3239. These methods require separation of saturates and aromatics by liquid chromatography D-2549 or equivalent preparative procedure. To avoid this lengthy and prone to error step, a simultaneous combination of simulated distillation and low resolution MS algorithm is presented. It is demonstrated how this synergy improves the quality of the results. The algorithm performs multiple slice calculations to ensure that the proper sensitivity factors are used. Since the FID and MSD are used simultaneously by splitting the effluent in a controlled way, it is possible to obtain identical signal patterns in a single run in both detectors. As a result physical and chemical characterization can be performed in a rapid manner. Results show excellent correlations with other techniques such as liquid chromatography and stand alone mass spectrometry for a variety of samples tested, encompassing straight run oil fractions and products resulting from hydrotreating. The methodology is very repeatable and fully compliant with both simulated distillation and mass spectrometry standards. Poster Presentation Abstract # 072

Abstract # 073 - 9:45 AM – Poster Presentation - Exhibit Hall

“A Novel Approach in the Profiling of Volatile Organic Compounds in Soil Utilizing the Stratum PTC and Solatek Autosampler”
Teri A. Dattilo - Teledyne Tekmar
United States Environmental Protection Agency (USEPA) Methods for the determination of Volatile Organic Compounds (VOCs) in soil following Methods 5030 and 8260 parameters can be a challenge when trying to ensure the fastest possible run time without sacrificing analytical integrity. Two main aspects that are often compromised when optimizing a purge-and-trap concentrator and autosampler are carryover and low end sensitivity. Teledyne Tekmar offers a new approach to P&T with the New Stratum PTC achieving unprecedented performance. Data presented in this poster demonstrate advances in analytical abilities without sacrificing data integrity. Poster Presentation Abstract # 073

Abstract # 074 - 1:00 PM – Seminar Presentation - 1 hour - Orchid

“Column Selection, Operation and Maintenance in Petrochemical Analysis”
Jaap de Zeeuw and Barry Burger - Restek Corporation
In petrochemical applications many different types of GC columns have found application. The practical operation is often based on setting instructions by the manual. In this seminar we will zoom into the impact of column variables on the separation in order to optimize the separation. We will discuss the characteristics and maintenance items of some typical columns used in petrochemical analysis of hydrocarbons in C1-C4 range, PONA up to the Mineral oil/ Simdis and bio-fuel range, zoom in onto trace sulfur as well. Seminar - 60 minutes Abstract # 074

Abstract # 075 - 2:30 PM – Paper Presentation – 30 minutes - Orchid

“Investigation of the Selectivity of Room Temperature Ionic Liquid Stationary Phases for Capillary GC”
Leonard M. Sidisky, Greg A. Baney, Katherine K. Stenerson - Supelco
Ionic liquids are a class of nonmolecular ionic solvents with low melting points. These liquids are unique combination of cations and anions and can provide a variety of different selectivities when used as stationary phases in capillary gas chromatography. We have recently begun evaluating the selectivity and thermal stability of a number of different ionic liquid cation and anion combinations. Selectivity was determined and compared using various isothermal and temperature programmed test mixes. Thermal stability was determined by examining column performance during incremental (destructive) and long-term stability testing at various upper temperatures. Particular cation and anion combinations appear to provide the selectivity similar to polar polyethylene glycol and highly polar cyanosilicone phases while possibly providing higher maximum temperature stability. Paper Presentation - 30 minutes Abstract # 075

Abstract # 076 - 10:00 to 5:00 Tuesday – Seminar Presentation - Floral Hall A

“Thermo Fisher Scientific Seminar”
Michael Harter - Thermo Fisher Scientific
Multiple Presentations - Tuesday Abstract # 076

Abstract # 077 - 10:45 AM – Paper Presentation - 20 minutes - Bluebonnet

“Development of a GCxGC Method for Occupational Exposure Biomonitoring of Volatile Aromatic Hydrocarbons”

J.-M. D. Dimandja, L. C. Amorim, D. Hilton, Z. L. Cardeal - Spelman College
Occupational exposure assessment strategies have progressively shifted from the monitoring of a single biomarker to a more comprehensive set of compounds. The complexity of the multi-analyte profiling approach resides in the fact that the analytical tools used to date are quite challenged in their ability to resolve and identify all the compounds of interest out the biological matrix. In this work we report the use of GCxGC to adapt a current 1D GC/MS method for the analysis of aromatic hydrocarbon metabolites in urine. Method development issues pertaining to column selection, quantitative analysis, and translation of the protocol from GCxGC/MS to GCxGC-FID will be discussed. Paper Presentation - 30 minutes Abstract # 077

Abstract # 078 - 11:00 AM – Paper Presentation - 30 minutes - Bluebonnet

“Towards Classifying Chemical Functionality by Comprehensive Two-Dimensional Gas Chromatography (GC x GC)”

Bill Winniford, Kefu Sun, James Griffith - Dow Chemical Company
A unique aspect of GC x GC data is the partial to complete segregation of components by their chemical functionality as in commonly shown chromatograms of diesel or other complex hydrocarbon samples. Using this characteristic to predict the identity of unknown components is still in the early stages. In this work we discuss progress both from our own work and the literature in establishing simple rules for relating retention in two dimensions to possible chemical structures. Examples will include characterization of hydrocarbon isomers that cannot be readily confirmed by mass spectrometry. Paper Presentation - 30 minutes Abstract # 078

Abstract # 079 - 8:00 AM – Users Workshop – Morning Session - Orchid

“Antek 9000 User's Workshop”
Lisa Nash - PAC, LLP
Antek 9000 Users Workshop Morning Session Abstract # 079

Abstract # 080 - 1:00 PM – Workshop Presentation - 4 hours - Hibiscus

“Increasing Laboratory Workflow Efficiency through Lean and Automation”
Jeanne A. Mensingh, B.S., CHA - EM2 Solutions, Inc.
Design and automation of the QC laboratory can deliver significant efficiencies and reduce labor costs. By applying Lean tools to the laboratory and automating sample data collection, one can reap the benefits of a cost and labor efficient department. A tool designed for easy implementation would be 5S for organizing the laboratory and improving workflow. Automating the laboratory through instrumentation and a laboratory information system enables the company to utilize data to streamline processes, evaluate turnaround time (TAT), and manage workload. This workshop will provide an overview of the tools available for improving the overall efficiency of the lab. Workshop Presentation - 4 hours Abstract # 080

Abstract # 081 - 9:00 AM – Paper Presentation - 30 minutes - Bluebonnet

“Optimizing the Utilization time of your HPLC”
Matthew Neely, Frank Steiner, and Frank Arnold - Dionex Corporation
Its a universal desire get more done in less time and with fewer resources. The chromatography laboratory is no exception; most labs are already implementing or investigating new technologies that allow faster chromatographic separation. But before we embark on method development to reduce our 30-minute run down to just 2 minutes, we should stop to consider whether the run-time alone is the only factor that impacts our productivity. In this presentation, we will look at the innovative solutions to improve productivity of the chromatography laboratory. Paper Presentation - 30 minutes Abstract # 081

Abstract# 82 - 11:45 – Paper Presentation - 30 minutes - Bluebonnet

“Characterization of Petroleum Feedstocks by GCxGC Time of Flight Mass Spectrometry”
Hung A. Pham, Stella B. Cabanban - UOP LLC
Screening the petroleum feedstock and the products derived after the chemical processes is a major activity for the analytical laboratory. These analyses are used for process development and the selection and optimization of catalysts and materials. When the changes in the feedstock are known, the design of petroleum refining materials, optimization of new processes, and troubleshooting problems in existing refinery units can be facilitated. Analytical tools that provide accurate, reliable compositional information with high precision and accuracy are needed. One of the tools being used in our analytical labs is a GC x GC Time of Flight Mass Spectrometry instrument. We have used it to identify compounds and classes of compounds in petroleum feedstocks such as: diesel, light cycle oil, and vacuum gas oil. Paper Presentation - 30 minutes Abstract # 082

Abstract # 083 - 11:30 AM – Paper Presentation - 30 minutes - Bluebonnet

“GC x GC Using Differential Flow Modulation”
James Griffith, Bill Winniford, John Seeley(Oakland University), Kefu Sun
This presentation will focus on the important factors in setting up GC x GC with differential flow modulation with comparisons to results from thermal modulation. Since the earliest days of comprehensive two-dimensional chromatography various approaches have been employed to modulate components from the first column to the second column. Much of the published work has been done with thermal modulation which relies on a source of cryogen. Recently both Seely and Amirav have successfully demonstrated GC x GC using differential flow modulation. Though the resolution is not quite as good as the results with thermal modulation, the appeal is the simplicity and robustness for use in QC laboratories or even for on-line chromatography. Paper Presentation - 30 minutes Abstract # 083

Exhibitors 2006

[A2 Technologies](#)

A2 Technologies, the innovator and manufacturer of portable Fourier Transform Infrared (FT-IR) spectrometers introduces the revolutionary Mobility Series of FT-IR spectrometers. Developed for use in the field, these portable, rugged spectrometers are purpose-built to move FT-IR spectroscopy out of the conventional analytical laboratory and closer to the source of the sample. Booth # 106

[AccuStandard Inc.](#)

AccuStandard is an ISO 9001 and ISO 17025 registered manufacturer of Certified Chemical Reference Standards. We have complete lines of Standards for Petroleum, Sulfur, Nitrogen, Physical Standards, Wear metals, Organics, and Inorganics. AccuStandard has a fully equipped QC laboratory staffed by knowledgeable Chemists. www.accustandard.com Booth # 306

[Ace Glass Incorporated](#)

Ace Glass features Corning and Ace research glass products, reactors and temperature equipment. See our new DynaBlocs, Jacketed flasks, vials and other products. Sign up for our new 2008 general catalog. Booth # 704

[Agilent Technologies](#)

Agilent is a leading provider of life sciences and analytical instrument systems to scientists in life sciences, pharmaceutical, environmental and chemical industries, worldwide. The company offers scientists the range of instruments including LC-MS, HPLC, Bioanalyzer, Micro array solutions, ICP-MS, GC, and GC-MS systems, as well as services needed for success in acquiring and interpreting genetic and chemical information - from sample handling, to analysis to data management and reporting. Agilent is committed to providing superior standards-based technology, designed for maximum productivity, cost effectiveness and ease in complying with regulatory requirements. Booth # 903

[Airgas SW](#)

Airgas, Inc. (NYSE:ARG), through its subsidiaries, is the largest U.S. distributor of industrial, medical, and specialty gases and related hard-goods, such as welding supplies. Airgas is also a leading U.S. distributor of safety products, the largest U.S. producer of nitrous oxide and dry ice, the largest liquid carbon dioxide producer in the Southeast, and a leading distributor of process chemicals, refrigerants and ammonia products. To locate your local branch, call 866-924-7427. To access Airgas on-line, go to www.airgas.com. Booth # 820, 822

[Alpha Omega Technologies, Inc.](#)

Sales, leases/rentals of new and reconditioned HP and Agilent GCs, GC/MS, HPLC, UV-VIS, and data systems configured to customer specifications. New Varian GC, GC/MS, Purge and Trap, Archons, and Galaxie Data Systems. Depot Repair Center, Customer Training Center, and telephone technical support. Geanna High Speed Refinery Analyzer analyzes a whole suite of refinery gasses in under 100 seconds. Parts and supplies including difficult to find and reconditioned parts for discontinued HP and Agilent equipment. Booth # 102, 104

[American Laboratory](#)

Our publications are edited for North American chemists and life scientists who have a professional interest in the application of modern instrumentation to analytical chemistry, bio-analysis and applied spectroscopy. The editorial includes application notes, technical articles, conference reviews and information on the most current laboratory instrumentation. Home Page <http://www.iscpubs.com> Booth # 805

[Ametek T&CI - Americas \(Petrolab Co\)](#)

Ametek-Petrolab Company, your distributor for Grabner, Petrotest, Lovibond, Tamson, Lawler, Horiba, Jofra and Lloyds instruments offers the greatest selection of products for the petroleum industry. Petrolab provides instrumentation for analysis of Octane, Flash Point, Distillation, Vapor Pressure, Viscosity, Density, Color, Penetration, Oxidation, Gum Content, Foam, Ductility, Softening Point, Pour Point, Cloud Point, Benzene, Aromatics, Material Testing and Tribology. Booth # 715, 717

[AMK Glass](#)

AMK Glass has manufactured petrochemical and laboratory glassware for over 35 years. We are dedicated to producing the highest quality products at the most affordable price. Some of the items that we manufacture are D86 Flasks, D86 Probes, D95 Glassware, FIA Glassware, D1160 Flasks, & Viscometers. We also offer a repair & custom glassware service. Booth # 807

[Analytical Services, Inc.](#)

Manufacturer of Calibration Standards for the Petroleum & Crude Oil Industries. Custom multi-element standards and single element. We pride

ourselves in customer service and strive for total customer satisfaction
Booth # 210

[Analytik Jena USA, Inc.](#)

Analytik Jena is a leading manufacturer of analytical instrumentation in the petrochemical industry. As a trusted vendor in industrial and scientific laboratories in more than 90 countries, we are a leading producer of Elemental Analyzers (S, N, and Cl), TOC/TOX, UV-Vis, and Atomic Absorption Spectrometers (flame and graphite furnace). Our long tradition in developing high quality and precision analytical systems is what makes Analytik Jena one of today's most innovative companies. Booth # 319

[Anton PAAR USA](#)

Anton Paar will present a wide range of its highly accurate and attractively priced instruments. Talk with our specialists about density meters for lab and process applications or check out our viscometers for measurements on a range of substances including petrochemicals, polymers and inks. Take a look at the RheolabQC rheometer for routine QC applications such as flow and viscosity curves, the mixing and stirring behavior of emulsions and dispersions, testing the sagging and leveling behavior of coatings and determining the yield point of gels and pastes. Come and see how our instruments can benefit you! Booth # 311, 410

[ATOM Instrument Corp.](#)

Analytical detection technologies providing practical solutions to specific measurement problems within the petroleum and petrochemical industries. Primary products and expertise related to Excimer UV Fluorescence (EUVF) detection methods and application development. Manufacturer of Excimer UV sources that provide exceptional sensitivity, coupled with unprecedented nitrogen rejection performance. Closed-loop control of excitation intensity is optionally incorporated for drift-free analysis of sulfur dioxide. Booth # 520

[B/R Instrument Corp](#)

Manufacture distillation equipment for various applications including ASTM D1160, D2892 and D5236, solvent recycling and fractional distillation. Specializing in Spinning Band distillation systems. Booth # 215

[Baytek International](#)

Fully functional WinBLISS LIMS for the Refining, Petrochemical, Chemical, Bulk Pharmaceutical industries. Innovative architecture shortens implementation time and reduces cost. Fully integrated instrument interface/automation module for all types of instruments: GC's, Mass Spec on line analyzers, titrators, ADA's etc. BayID - an advanced RFID sample tracking solution provides exact time and location for remote samples and uses information in Advanced Process Control Strategies. Consulting services to integrate with SAP QM, AspenTech IP-21, OSI-PI, Honeywell, JD Edwards etc. WebBLISS provides a web-based search engine and statistical analysis tool. Booth # 515

[Beckman Coulter Inc.](#)

The Particle Characterization Group of Beckman Coulter provides answers and solutions to those involved in the testing and measurement of the physical properties of particles. We are in a unique position to offer solutions for most particle analysis needs. World-Class support, including being listed as an ASTM laboratory with service only a company such as Beckman Coulter can provide. Purchasing an instrument from us will deliver performance, versatility and peace of mind. Booth # 902

[Bellingham + Stanley Inc](#)

Bellingham + Stanley Inc. supply and service a complete range of high quality Refractometers and Colorimeters within the USA. Traditional Abbe refractometers can be used for general refractive index measurements in accordance with ASTM D 1747 as well as for dispersion measurements of hydrocarbons (ASTM D 1218). Modern day laboratories dictate the need for digital instrumentation in order to eliminate human error. The RFM800 range of digital refractometers offer very high accuracy measurements over a wide RI range in accordance with ASTM D 5006, ASTM D 1747 and ASTM D 1218 (annex 2) without the need for optical alignment and having internal Peltier temperature control devices, no waterbath is required. Booth # 219

[Brinkmann Instruments Inc](#)

Come see Metrohm's ProcessLab, an At-Line customized, system for your manufacturing processes and QC applications. Brinkmann Instruments also offers a comprehensive line of potentiometric and Karl Fischer titrators, from basic, dedicated units to fully automated, computerized systems. Automate even low-level Karl Fischer moisture samples. We also offer pH/ion meters, colorimeters, electrodes, trace metal analyzers, kjeldahl equipment, and much more. Our dedication to quality products, service and customer satisfaction set us apart. Booth # 906

[Bruker AXS, Inc](#)

Bruker AXS provides cost-effective WDXRF and EDXRF instruments for elemental analysis of petrochemical products. New this year at GCC is the compact benchtop S2 RANGER HC energy dispersive system with a Peltier cooled detector. The S2 RANGER HC (HydroCarbon) performs multielement analysis of sodium (Na) to uranium (U) present in any concentration -- from 100% down to ppm -- in solid, powder, and liquid samples with little or no sample preparation required. The S2 RANGER HC provides the most accurate and precise results possible for all sample types, and features an easy-to-use touch screen and integrated printer. It delivers the element sensitivities you need for ASTM and EPA regulatory compliance. Testing for S in petroleum products (ASTM D4294), S in gasoline (ASTM D6445), Pb in gasoline (ASTM D5059), and low S (15 ppm) in diesel fuels according to the EPA's 40 CFR Part 80 couldn't be faster or easier. Also new at GCC is our S8 TIGER, a revolutionary wavelength dispersive instrument featuring an intuitive touch screen as well as a unique SampleCare system for automatic sample recognition, instant switching between solids and liquids, and safe handling of solids, powders and liquids. Bruker also has PETRO-QUANT, our pre-claimed solutions for ASTM method compliances for D2622, D4927, D6443 and wear metals detection with our S4 EXPLORER and S4 PIONEER WDXRF systems. Visit our booth and see why Bruker XRF instruments are efficient and reliable quality control tools in the production of fuels, lube oils, polymers & more. Find out more about Bruker AXS at: www.bruker-axs.com. Booth # 615,617,619

[Bruker Daltonics NBC Detection Corp.](#)

Bruker Daltonics NBC Detection Corporation is a worldwide leader in supplying mass-spectrometry based products and systems for substance detection and pathogen identification in security, defense, and law enforcement applications. Booth # 110

[Cannon Instrument Company](#)

Automatic and manual instrumentation, Cannon CAV 2000 Series Automatic Viscometer, Cannon miniAV Automatic Viscometer, Cannon PolyVISC Automatic Polymer Viscometer, Tanaka Flash, Cloud and Pour Point Testers, Zematra ASA P-Value Residual-Fuels Tester, Viscosity and Flash Point Standards and related software. Booth # 810

[CETAC Technologies](#)

CETAC Technologies is a world wide leader in sample handling and sample introduction technologies for elemental analysis. CETAC provides a comprehensive range of product based solutions for the analysis of elements in samples ranging from drinking water and high pruity acids to radioactive waste. We develop, manufacture and market a family of products and services that provide essential solutions to customers around the globe. Booth # 320

[Chemplex Industries](#)

Expanded XRF Sample Cup product line now includes a new MicroSample Cup Series with apertures of 6, 10, 15 and 20 mm for applications in air, helium or vacuum. SpectroMembrane®, pre-cut circles and rolled window films in: Mylar®, Prolene®, Kapton® and polypropylene. Diesel fuel-resistant Etnom-S SpectroMembrane® eliminates permeation, static cling, trimming and contamination. GyrulGrinder® and SpectroMill® grinding/blending equipment and comminution vessels; Manual and Automatic SpectroPresses® with integrated removable dies; tapered and straight-walled aluminum powder briquetting PelletCups®; powdered and tableted grinding/briquetting additives; automatic fusion machines; pre-fused fusion fluxes; adjunct accessories and supplies. On-line ordering: <http://www.chemplex.com>. Free CD Catalog. Booth # 709

[Compass Instruments, Inc](#)

Compass Instruments, Inc. - Testing Equipment for determining the physical properties and performance characteristics of fuels, lubricants, and materials. North American Distributors of Waukesha Engine-Dresser CFR Products, Eralytics GmbH, Falex Corporation, Normalab Analisis S.A., Strama-MPS GmbH, and Ramin' Corporation. Instrument Sales, Service, and Calibration. Octane ASTM D2699 and D2700, Cetane (D613 and D7170), Vapor Pressure (D5188, D5191, D5492, D6377, D6378, D6897), Distillation (D86 and D1160), Flash Point (D56, D92, D93), Viscosity (D445), Oxidation, Penetration, Cloud (D2500), Pour (D97) and Plugging Points, Tribology Testing, and Petroleum Testing Glassware. www.compass-instruments.com (630) 556 4835 Sugar Grove, IL USA. Booth # 609, 611

[Cosa Instrument Corporation](#)

Coas Instrument Corporation covers laboratory and process markets nationwide, specializing in high technology for a wide range of applications in many industries, including: Petrochemical, Energy, Environmental,

Pharmaceutical, Semiconductor, Plastics, and the Emerging Alternative Fuels industries. Introducing three New Products Model CA-200, a Simultaneous Dual-Channel Coulometric/Volumetric KF & Bromine Index & Number Analyzer, Model AOX-200, a fully automated TOX/AOX Analyzer following EPA Methods 9020/1650 Booth # 1009, 1011

[DC Scientific Glass, Inc](#)

DC Scientific is an ISO 9001 registered manufacturer of precision glassware products and distributor of analytical testing equipment for the petroleum laboratory. DC manufactures a broad range of products ranging from viscometer tubes to FIA Systems to temperature probes for leading brands of equipment. DC is also partnered in the United States with B/R Instrument, Paragon Scientific, Lovibond Tintometer, Horiba and Tamsom to provide first class products for petroleum testing. B/R Instrument provides Auto, Semi-Auto, and Manual D1160 Vacuum Distillation Systems. Paragon Scientific, an ISO 17025 accredited company, provides certified reference materials for Viscosity, CCS, Color, and TAN/TBN. Lovibond Tintometer, an ISO 9001 registered manufacturer, products include a full range of color measurement equipment including ASTM, Saybolt, APHA/Pt-Co, and Acid Wash Color. Horiba provides instruments for measurement of sulfur in oil. Tamsom products include Viscosity Baths, Heating and Cooling Baths and Circulators. DC Scientific also provides service for most major brands of petroleum testing equipment and is a Tintometer, Tamsom, and Horiba Certified Service Center. Booth # 308,310

[Dionex Corporation](#)

Ion Chromatography HPLC, Mass Spec, Accelerated Solvent Extraction Booth # 509,511

[Distributed Energy Systems \(Proton Energy Systems\)](#)

Distributed Energy Systems Corp. (NASDAQ: DESC) designs, develops, and manufactures proton exchange membrane (PEM) electrochemical products that meet a variety of market needs for hydrogen generation and advanced energy storage applications. Distributed Energy Systems HOGEN® hydrogen generators produce hydrogen from electricity and water in a clean and efficient process using its proprietary PEM technology. Markets served by this technology include industrial hydrogen, vehicle fueling, backup power, military and aerospace, and renewable energy storage. Booth # 622

[Ed Martin and Associates, Inc](#)

ASTM Thermometers, SAMA Thermometers and PermaTherm® ASTM mercury substitute thermometers (to ASTM E2251), API Hydrometers, Thermo-Hydrometers, Digital Thermometers and Dial thermometers have been assessed and approved under ISO-9001:2000. NIST Traceable calibration laboratory services for temperature, density and viscosity. Instruments include Thermometers, Hydrometer, Viscometer, Certified Viscosity Oils, Weight's, Pipettors and Humidity. The laboratories have been assessed and approved to meet the requirements of ISO/IEC 17025 accredited. We also offer a complete line of gauging supplies to include gauging tapes, petroleum electronic thermometers, closed and restricted gauging systems. Additional supplies include water and gas indicating paste, cotton cord, tally books, various types of samplers, railcar measuring devices, and bacon bombs. Booth # 701

[Elementar Americas, Inc](#)

Elementar has the broadest line of analyzers for the determination of Carbon, Hydrogen, Nitrogen, Sulfur and Oxygen. This year we extend our line with the introduction of the rapid N cube (N/Protein) and the vario MICRO cube CHNS analyzers. The Elementar CUBE analyzers feature the latest in micro-engineering and electronics. Only 18.5 inches wide with integrated samplers of 60 or 120 positions without stacking! The vastly popular vario MAX (multigram sample size) analyzer will also be displayed. Booth # 518

[EM2 Solutions, Inc.](#)

EM2 Solutions, Inc. is a consulting company offering quality assurance, quality control, and quality improvement techniques to laboratories and manufacturers. Founded by professionals with more than 30 years experience, EM2 can provide consulting and training in ISO and cGMP quality based systems. Such services include QMS management, auditing, technical writing, statistical process control, training, and validation. EM2 also offers laboratory management experience and is an expert at streamlining operations based on Lean Manufacturing principles. Booth # 918

[EMD Chemicals Inc](#)

EMD manufactures high-purity chemicals and reagents for research and analytical laboratories in industrial, academic and life science markets; high-purity chemicals for R & D, scale-up and production in pharmaceuti-

cal and biopharmaceutical industries; TLC plates and silica gel, test strips for environmental testing and microbiology products, including rapid tests for food, beverage and environmental companies. Products of interest to the petrochemical industry include our OmniSolv® high-purity solvents, OmniTrace® and SupraPur® high-purity acids, Aquastar® Karl Fisher titrators and reagents, Optifix® liquid handling devices and ACS/GR reagents for QC and environmental analysis. Booth # 420,422

[Entech Instruments](#)

Booth # 1016

[EST Analytical](#)

Since 1990, EST has supplied analytical laboratories throughout the U.S. with advanced instrumentation solutions. EST has grown dramatically over the past several years by creating a culture of commitment to our customer's success. Our innovative approaches to improving laboratory throughput and profitability within the environmental laboratory are the result of this commitment and have become standards in the industry. Booth # 706

[Fisher Scientific](#)

Fisher Scientific is a leading provider of equipment, supplies, instrumentation, chemicals and services to the worldwide scientific community. We provide a unique one-stop shopping experience with an extensive product portfolio unrivaled in the industry. From chemicals to chromatography, automated analyzers to test kits we provide the products you need to support research and analysis in the petrochemical, refining and environmental industries. Stop by booth 905 to learn more about Fisher Scientific's product portfolio and the choices we offer. Booth # 905

[Full Spectrum Analytics Inc.](#)

With eleven offices located from New Jersey to San Diego FSA is your strategic partner for instrument maintenance, consisting of veteran engineers, applications specialists and validations experts, FSA has the answer to your service and maintenance needs. Agilent, Waters, Varian, Sciex, Shimadzu, Dionex are all supported. We provide service and validations programs for HPLC, LCMS, GC, GCMS, TOC and IC. Booth # 521

[GenTech Scientific, Inc.](#)

GenTech Scientific, Inc. Product Description: GenTech Scientific sells and services new and refurbished analytical equipment, specializing in GC, HPLC, Mass Spectrometers and accessories from major manufacturers. Our experienced staff and specialized technicians provide in-shop/on-site service along with training courses and service contracts. We purchase laboratories or individual instruments. At GenTech, the focus is on superior customer service. Booth # 910

[Gerstel, Inc](#)

Complete chromatography solutions for GC, LC, and MS. Twister performs simplified extraction and ultra-trace determination of organic compounds. The most versatile Thermal Desorption System available for all sample types. PrepStation integrates sample preparation and introduction. MultiPurpose Sampler provides maximum sampling versatility and software integrated throughput. MACH Fast GC modules for accelerated separations. Cooled (PTV) inlets, Olfactory Detection Ports, Multidimensional Column Switching systems, Preparative Fraction Collectors, SPE, dpx, Dynamic HS, Headspace, and MSD based ChemSensor with chemometrics for rapid quality determination Booth # 620

[Glas-Col, LLC](#)

See our expanded line of concentrators and evaporators for the fast removal of solvents. Glas-Col still offers one of the largest selections of standard heating mantles and custom heating jackets in the world plus a full line of temperature controls and monitors. Our Tools for Scientists line offers safety accessories such as glove bags, safety shields, flow monitors and lead stability products. Booth # 209

[GOW-MAC Instrument Co.](#)

GOW-MAC offers custom solutions for a wide variety of analytical requirements. We will be exhibiting our trace N2 in helium and trace helium in argon analyzers; total hydrocarbon analyzers; aromatic hydrocarbon analyzers; moisture analyzers, and point-of-use gas chromatographs. Standard and corrosion resistant instruments available. Instruments engineered for hazardous locations and duties are also offered. Booth # 808

[Hanna Instruments](#)

Hanna Instruments a world leader in the development and manufacturing of quality analytical instrumentation. Hanna produces instruments, electrodes, reagents for analysis of over 100 critical parameters such as

pH/ORP, ISE, dissolved oxygen, conductivity, turbidity, chlorine, temperature and more. Booth # 811

[Hitachi High Technologies America, Inc](#)

Hitachi High Technologies America, Inc. (HTA) assists researchers in finding solutions to their scientific instrument requirements. We are committed to providing the highest quality scientific instruments to the North American market. We support thousands of satisfied customers with a wide range of reliability-proven analytical instrumentation, including high performance liquid chromatography (HPLC), Amino Acid Analyzers, LCMS Systems, and UV-Visible/NIR and Fluorescence Spectroscopy Systems. Booth # 103

[Horiba Instruments, Inc](#)

A variety of analyzers for use by the oil industry will be on display. These include several types of instruments to measure low levels of sulfur in fuel and chemicals. The fuel qualifier analyzer for determining aviation fuel quality will be shown. Equipment to determine the oil content of water steams will be present. A general purpose ICP will be on display. Booth # 414

[Horiba Jobin Yvon](#)

HORIBA Jobin Yvon - The new ACTIVA M ICP spectrometer with CCD Solid State Detection uses innovative interactive software and statistical tools for improved accuracy and enhanced reliability. The interactive tools include full-spectrum acquisition, multi-line analysis, wavelength filtering and outlier rejection. JY Glow Discharge-Optical Emissions Products and the Horiba Carbon/Sulfur, Oxygen/Nitrogen and Hydrogen Analyzers will also be presented. Booth # 416

[Hunter Lab](#)

A full range of color measurement systems for research and quality control. These instruments measure reflected and transmitted color and quantify how color appears to the human eye. Measure color and metrics such as APHA/PtCo/Hazen, Saybolt, Gardner Scale, ASTM D 1500, Yellowness Index, Whiteness Index and Transmission Haze. The systems are used to measure the color of chemical, petroleum, plastic, paint and other products. Booth # 718

[ICL Calibration Laboratories, Inc.](#)

An ISO/IEC 17025 Accredited Calibration Laboratory offering A2LA accredited, NIST Traceable Calibration Services for Thermometers, Hydrometers, Weights, Humidity devices and Volumetric Glassware. ICL is also a leading supplier of ASTM & non ASTM thermometers, Hart Scientific brand Platinum Resistance thermometers and Industrial RTDs, Digital Thermometers, ASTM Hydrometers, ASTM Weight sets, ASTM & Petroleum glassware, Humidity equipment, Viscometers and Viscosity Standards. For our customers involved with petroleum gauging and inspection, ICL offers ThermoProbe Digital Gauging thermometers, Lufkin Oil Gauging tapes & bobs, NIST traceable tape verification services, MMC Intl. Tri-Mode (UTI) Gauging tapes, samplers and vapor control valves, Petroleum Samplers, Factory Authorized repairs and recalibration services for both ThermoProbe and MMC Intl. as well as many more gauging accessories. For a complete listing of ICL's products and services, please visit www.icllabs.com. Booth # 816

[Index Instruments U.S., Inc.](#)

Refractometers range from standard to temperature control with 15 models to choose. Our GPR 11-37 E model is used for high temperature in the Petroleum industry. We have models to meet the needs for the Petrochemical, Petroleum, Chemical, as well as Food, Beverage, Flavor & Fragrance, Sugar, Pharmaceutical industries. Sixteen models of Polarimeters to choose for custom application. All instruments are sold, serviced and re-certified in our modern facility in Kissimmee, Florida. The instruments are manufactured in our UKAS certified lab/ISO 17025 compliance traceable to NIST. Our production facility include 21 CFR Part 11. A full range of accessories along with calibration standards, Quartz Plates and recertification are available. Booth # 814

[Inspectorate America Corporation](#)

Few testing and inspection firms can match the exacting standards set by Inspectorate. We set ourselves apart in the industry with our technical and analytical capability, rigorously trained professionals and our customer-focused philosophy. For over half a century, our customers have trusted Inspectorate with their laboratory and inspection service requirements. A Certificate of Analysis (COA) from Inspectorate ensures confidence that they are receiving consistent, reliable data, minimizing customer risk. Booth # 516

[ISGAS](#)

ISGAS is a supplier of custom calibration standards for many industries -

Refining, Chemical, Research & Development and many others. We offer a full range of hydrocarbon standards including - Gases, LPG/LNG, Liquids, ASTM/UOP, Sulfur, CEM, HRVOC, etc. We can ampulize you process streams, and even offer custom distillation work. We can also build gas chromatograph's for your specific needs. We specialize in HRVOC Standards.
Booth # 207

[JM Science Inc](#)

Exhibiting AQUACOUNTER Potentiometric and Karl Fisher titrators. Our low cost coulometric and volumetric 300 series feature free download software and RS-232 cable, DVD training movie, complete accessories kit and KF reagent kit.COM-1600 Potentiometric Titrator with automated sample changer will be featured. Wide selection of manual and automated solid and oil evaporators for determining moisture in various solids and difficult samples like heavy oils, grease, peanut butter etc. New AQUACOUNTER Karl Fischer reagents also available. New Shodex and Shiseido HPLC columns, detectors, degassers and accessories.
Booth # 505

[Julabo](#)

JULABO is a worldwide leader in temperature control innovation. JULABO manufactures: -Temperature control Calibration Baths -30°C&+300°C, Refrigerated and heating Circulators from -95°C&+200°C, Prestos & HTs Highly Dynamic Temperature Control Systems from -85°C&+350°C, Water Baths from +20°C&+99.9°C, Recirculating Coolers from -25°C&+150°C. Features include: fast cool-down times, small footprint, digital and analog interfaces, external temperature control and a 2 year warranty. JULABO has manufacturing and service support offices throughout the world. In the United States, JULABO is available from Coast to Coast! JULABO EAST, located in Allentown, Pennsylvania and JULABO WEST, located in Vista, California. Online-catalog www.julabo.com
Booth # 418

[Kelly Scientific Resources](#)

Kelly Scientific Resources (KSR) is the largest provider of scientific staffing solutions in the world. KSR provides staffing services on a temporary, project, and full-time basis to a broad spectrum of industries including biotechnology, chemical, petrochemical, consumer products, environmental, food science, oil and gas, and pharmaceutical. Kelly Scientific Resources is the scientific business unit of Kelly Services, a Fortune 500 staffing industry leader. Since its launch in 1995, KSR has grown into a multi-million dollar global business with over 100 locations in 13 countries, employing more than 5,000 scientists on an ongoing basis. KSR Houston has been servicing the Houston metropolitan and surrounding areas since 1996. Our staff is comprised of degreed, scientific professionals who are active members of the scientific community. We look forward to the opportunity to assist you with your staffing needs!
Booth # 109

[KIN-TEK Laboratories, Inc.](#)

Kin-Tek Laboratories, Inc. is exhibiting Trace Source™ permeation tubes and instruments for dynamically blending ppm, ppb and pptr concentration gas mixtures. Standards for a wide range of compounds including volatile sulfurs, oxygenates, hydrides, moisture and oxygen are available. Kin-Tek specializes in creating complex mixtures to simulate real sample streams. Typical applications include low ppb concentrations of sulfur compounds in polymerization grade propylene matrix, arsine in ethylene, and oxygenates in olefins. Other applications include trace moisture in gases, and HRVOCs in cooling water. Most mixtures are traceable to NIST through physical standards.
Booth # 708, 710

[Koehler Instrument Company](#)

Koehler Instrument Company welcomes our customers and guests to the Gulf Coast Conference. Koehler was established 75 years ago and is one of the largest domestic manufacturer of instruments for the refining, and petrochemical industry. Koehler recently introduced the ADA 5000, the only Automatic Distillation Instrument made in the USA. We also feature many automatic instruments for D93, D92, D56, D1160,color, oxidation stability tests. We also offer the AFT, Automatic Flocculation Titrimeter to determine, coking tendencies, asphaltene content, and compatibility values of residuas and crude oil. We are also planning an office in the Houston area that should be in operation the 2nd quarter. We will offer local service and sales support.
Booth # 702

[Lab Products, Inc.](#)

Chromatography Supplies, Environmental Sample Containers, General Lab Supplies.
Booth # 514

[Lachat Instruments/ Hach](#)

Lachat Instruments provides comprehensive solutions for ion analysis based on flow injection analysis and ion chromatography technologies. New IL550/500 series high performance TOC Systems. Hach Company provides advanced analytical systems and technical support for water quality testing, with solutions for lab, process, and field. NEW Spectrophotometers DR 5000" UV-VIS and DR 2800" portable and laboratory testing instruments. NEW HQd Digital Meters Conductivity, Dissolved Oxygen, and pH meters and IntelliCAL™ probes. New TNT Plus.
Booth # 707

[LANCER](#)

Featuring the best of three worlds, LANCER, BioMedical Solutions and AT Villa offer many solutions for your lab. LANCER manufactures the broadest range of Glassware Washing Systems for critical cleaning applications including general research, R and D, petroleum, cosmetics and industrial applications. The rugged, LANCER TI series of washers will be featured. BioMedical Solutions will be displaying their line of Flammable/Explosion Proof Refrigerators and Ovens. AT Villa will be exhibiting their mobile/flexible furniture line.
Booth # 804

[Lawler Manufacturing](#)

Celebrating over 60 years serving the laboratory equipment needs of the fuels and lubricants industry. Please visit our booth to learn more about our manual and automated physical property testing apparatus. We offer cold properties equipment for cloud, pour, freeze, CFPP, and LTFT. Other equipment including asphaltene, gravity, corrosion, FIA, foam testing, Octane/Cetane engine and reference fuel blender automation systems, oxidation, rust, TOST, Viscosity (low & high temp.), water separability and much more. Learn how our heated tube technology replaces bulky block baths. Also, we welcome new equipment design applications, so bring us your requirements.
Booth # 503

[Lazar Scientific, Inc.](#)

Lazar Scientific, Inc. will be introducing the latest developments to Advanced Engine Technology's IQT™ Ignition Quality Tester as per ASTM D6890. This method is now acceptable for reporting the derived Cetane Number under ASTM Specification D975 for Diesel and ASTM D6751 for Biodiesel. Also, once again, we will be demonstrating the newest D86 Workload Management Software from Orbis BV on their PAM D86 instrument with Volume Scan. As the US Sales and Service representative for Stanhope Seta Co., we will be introducing the latest development in their instruments for flash point testing, the Series 8 Small Scale Closed Cup Flash Tester with Electric Ignition of sample. XOS Sindre ASTM D7039 Sulfur Analyzers, Phase Technology cloud and pour point analyzers, Phase/PSL Auto-Viscometers and specialty lube oil tests from Tannas and King Refrigeration are all available from LSI. We also carry a complete line of certified standards and glassware from DC Scientific Glass for color, viscosity and TAN/TBN.
Booth # 220

[LCGC Magazine](#)

LCGC, with an audited circulation of 50,100, is the largest dedicated chromatography publication in North America. LCGC's editorial covers all key growth segments, including pharmaceutical analysis, bioseparations, environmental, food analysis, and chiral technology. Our peer-reviewed, method and applications oriented content helps laboratories become more productive, links advertisers and buyers, and facilitates the spread of cutting-edge scientific information throughout the chromatography community.
Booth # 205

[LECO Corporation](#)

For over 70 years, industries around the world have trusted LECO Corporation to deliver technologically advanced products and solutions for organic and inorganic analysis. Today's technologies for separation science resolve complex samples and pioneer high sample throughput using GCxGC, GCxGC-TOFMS, GC-TOFMS, and LC-TOFMS. A unique combination of easy-to-use software and advanced instrumentation provide an innovative solution for today's most demanding applications, including food, flavor/fragrance, petroleum, environmental, and metabolomics. Visit LECO at booth #208 and discover how LECO continues to Deliver the Right Results.
Booth # 208

[Mallinckrodt Baker, Inc.](#)

Dedicated to exceeding industry quality standards with two brands, J.T. Baker and Mallinckrodt Laboratory Chemicals. As one of the most trusted and respected suppliers in the industry, Mallinckrodt Baker offers an expand-

ed line of innovative products designed for the most demanding experiments. Product lines include high purity solvents in CYCLE TAINER returnable containers, BakerDRY ultra low water solvents, high purity acids at affordable prices, specialty chemicals, custom solutions, solvent blends and packaging to meet your unique requirements.
Booth # 522

[ManSci, Inc](#)

ManSci Inc. is the exclusive distributor for Man-Tech Associates Inc., a manufacturer of titration and ion analysis products for analytical laboratories, focusing on automation and flexibility. Man-Tech systems combine titration analyses with other analysis types such as ion selective electrode (ISE) direct measurement, conductivity, turbidity and/or color. Specific applications include: TAN/TBN, RA, H2S/Mercaptan, MEA, DEA, sulfidity, etc. Mansci Inc. is also the exclusive U.S. distributor for Gilson's line of Automated Solid Phase Extraction (SPE) systems.
Booth # 916

[Matheson TriGas](#)

Matheson Tri-Gas, Inc., is a single source provider of specialty gases; specialty gas handling equipment; high performance purification systems; bulk and industrial gases; and related hard goods. MTG is also a manufacturer of low sulfur diesel standards using ASTM method D5453, to assist our refinery and pipeline customers in meeting the new CFR Title 40, Part 80 guidelines. The Company also provides support services, engineering services, and systems management services to analytical laboratories and semiconductor manufacturers worldwide. As a member of the Taiyo Nippon Sanso Corporation group, Matheson Tri-Gas, Inc., is part of a worldwide industrial gas organization focusing on being the single source provider for global customer requirements.
Booth # 202, 204

[Metrohm-Peak, LLC](#)

Extensive line of instruments, automation, columns, software, accessories, reagents and consumable products set the industry mark for use in chromatography analyses, sample preparation and laboratory automation.
Booth # 809

[METTLER TOLEDO](#)

METTLER TOLEDO offers a full range of products to compliment the needs of any laboratory. The complete line of laboratory products include balances, titrators, pH meters, density meters, refractometers, moisture analyzers and thermal analysis equipment. METTLER TOLEDO can also create a tailored service package, including routine maintenance and repair, for all product lines.
Booth # 909, 911

[MicroLiter Analytical Supplies, Inc.](#)

MicroLiter Analytical Supplies, Inc. offers a complete product line of vials, caps, spets, inserts and 96-well Microplates for the modern analytical laboratory. MicroLiter is also introducing an innovative approach for SPE and Sample Filtration called ITSP. Instrument Top Sample Prep (ITSP) uses a CTC/PAL Sample Handler to prep samples serially while the instrument is analyzing the prior sample. View ITSP and our full product line of sample handling supplies in our booth at GCC.
Booth # 1015

[Miele, Inc](#)

Miele is a leading manufacturer of laboratory glassware washing systems. Miele provides a complete range of washers from under-counter units for in-lab use, to large capacity systems for central wash areas. Miele systems utilize high temperature, high circulation rate, gentle spray pressure and final rinsing with hot DI water for analytically clean results. Miele offers a full line of detergents, baskets and inserts, technical expertise and fully trained sales and service nationwide. Miele washers can be used for demanding applications such as cleaning of petroleum compounds from glassware.
Booth # 112

[Miller & Weber, Inc](#)

Temperature, Density & Viscosity Instruments and Equipment.
Booth # 315

[MKS Instruments, Inc.](#)

MKS is a leading global provider of products that measure, control, power and monitor critical parameters of advanced manufacturing and research environments. Products include gas analysis instruments; portable leak detectors; pressure transducers and control valves; vacuum gauges; vacuum fittings and valves; mass flow controllers; pressure/gas flow calibration systems; microwave, RF and DC power supplies; and digital I/Os and gateways.
Booth # 203

[National Laboratory Specialists, Inc](#)

Specializing in LABORATORY DESIGN and CONSTRUCTION. Fume hood specialists - certification, exhaust design and repair, existing fume hood replacement with high efficiency fume hoods. Countertop replacement - budget that doesn't allow for a new laboratory? A new countertop may provide the cleanliness and bacteria free answer. If a laboratory renovation is being considered, visit with us before you make a decision on who to use.
Booth # 221, 223

[Noria Publishing Company](#)

Noria Corporation, the publisher of RELIABLE PLANT, MACHINERY LUBRICATION and PRACTICING OIL ANALYSIS magazines, provides industry a range of educational services related to advanced machine reliability and maintenance technologies. Our targeted audience members are the managers, technicians, engineers, planners and specialists whose daily responsibilities include equipment reliability and process management in a variety of environments. Noria is the education resource of choice for numerous Fortune 500 companies.
Booth # 720

[o2si smart solutions](#)

o2si smart solutions is an ISO Certified 9001:2000 Analytical Standards Manufacturer specializing in providing Custom Solutions with rapid turnarounds at fair prices. We offer Innovative cost saving solutions to laboratories while providing superior customer service! We provide a comprehensive line of Organic and Inorganic NIST Traceable Reference Standards, and Innovative sampling and laboratory products for the Chemical, Environmental, and Petroleum Industries. These include, but are not limited to Petroleum, Sulfur, Chlorine, and Nitrogen Solutions.
Booth # 904

[Ocean Optics](#)

Ocean Optics is the leader in optical sensing with nearly 100,000 spectrometers sold. We've expanded the frontiers of optical sensing and photonics, making it an innovative foundation where life-changing ideas are built. With diverse applications in chemistry, biological research, environmental monitoring, and education, our extensive line of complementary technologies include spectrometers, sampling accessories, sensors, and optics. Visit our website, OceanOptics.com for more information.
Booth # 607

[Ohaus Corporation](#)

Ohaus Corporation is a leading manufacturer of scales and balances for the lab, education, and industrial worldwide. With 100 years of experience in the design, development and marketing of balances for a variety of applications, Ohaus has earned its reputation as a trusted supplier of precise, reliable and affordable products that meet virtually any weighing need. We remain focused on continuing the long-standing record of success and on expanding our global presence with new products and solutions worldwide.
Booth # 115

[OI Analytical](#)

OI Analytical provides analytical instruments used for detecting and measuring chemical compounds and elements in petrochemicals and environmental samples. Instrumentation offered includes; the PFPD - pulsed flame photometric detector for sulfur selective analysis of hydrocarbon mixtures, custom configured GC/GC-MS systems, Purge-and-Trap sample concentrators, TOC analyzers, Automated Chemistry Analyzers, and Continuous Air Monitoring Systems for toxic gases.
Booth # 217

[Omnicol, Inc.](#)

Omnicol Inc. manufactures small scale microcalorimeter systems for the pharmaceutical and chemical industries. Our reaction microcalorimeters are used in process safety, process development, process scale-up research as well as other fields like catalysis research. Omnicol instruments combine a microcalorimeter with a small scale industrial reactor allowing chemists to screen sensitive reactions and generate scalable enthalpies while performing chemistry under real process conditions. Our systems also come in a variety of throughputs at medium and small scale to fit the needs of individual research operations. Omnicol microcalorimeters are currently used by the vast majority of large pharmaceutical and chemical companies around the world. We will also be representing Chemyx infusion syringe pumps.
Booth # 817

[ORBIS BV LLC](#)

ORBIS BV LLC Petroleum and petrochemical distillation instrumentation. Orbis BV PAM Fully Automatic Distillation Unit acc. ASTM D-86 features the unique Orbis Volume Scanner, Auto Receiver Calibration, Auto Calibration

Probe, Auto Residue Determination, Auto Final Heat Adjustment and Solid State Cooling Techniques. The Orbis Workload Management Software allows simple programming of samples for the day or week then starts with the push of one button. Additional distillation units include fully automatic vacuum distillation units Orbis BV D-1160 CC and Orbis BV D-2892 CC (TBP). www.orbisbv.com Booth # 523

Oxford Instruments

Oxford Instruments Molecular Biotoools manufactures an array of Low field benchtop NMR analysers for a variety of Quality Control applications including: fat and moisture in foodstuffs and oilseeds; solid fat content in edible oils; oil in wax; polymer density; xylene solubles; fluoride in toothpaste; hydrogen in fuel. Instruments for research applications such as relaxation and diffusion measurements, MRI systems for materials and pharmaceutical applications, including tablet dissolution. Booth # 703

Oxford Instruments America LLC

Oxford Instruments offers our customers a range of Analytical Instruments designed for the demanding quality control applications of the petrochemical industry. Our Lab-X, Twin-X, ED2000 and MDX1000 XRF spectrometers span the price/performance range for chemical analysis. With our broad product offerings, we can match the correct spectrometer to your needs. Our handheld X-ray Fluorescence analyzers and mobile Optical Emission analyzers are specifically designed for positive material identification, alloy analysis and identification of hazardous material. Booth # 123

PAC

Your single most responsive source for the worlds leading brands of analytical and testing equipment for laboratory applications; including Total Nitrogen, Total Sulfur, Speciated Nitrogen, Speciated Sulfur, Water Content, Viscosity, Volatility and Cold Flow Properties such as Cloud/Pour Point and Freeze Point. Customers world wide rely on the PAC family of companies: AC Analytical Controls, Alcor, Antek Instruments, Herzog, ISL, PetroSpec, and Precision Scientific Petroleum Instruments. PAC has combined the world's most respected, well accepted brands of test equipment into a single dynamic manufacturing and service organization. Booth # 403

PANAlytical

We are the leading supplier of instrumentation and software for X-ray fluorescence spectrometry. We offer a wide range of WXRf and EDXRf instrumentation for the analysis of petroleum based products; from the MiniPal 4 benchtop system to the high power Axios WDXF, including our new trace element analyzer, the Epsilon 5. We also offer the Axios Petro, a version of our Axios WDXRF spectrometers that is the fastest and most sensitive wavelength-dispersive X-ray fluorescence (WDXRF) spectrometer currently available for the petrochemical industry. The Axios-Petro is configured especially to meet the needs of XRF analysis in the petrochemical industry - today and in the future. Offering the highest levels of reliability in this demanding environment, the Axios-Petro is a sequential XRF system for all XRF applications, from sulfur through catalysts to wear metals. It is simple to operate and the compact design is easily integrated into today's laboratories. The Axios-Petro enables you to perform routine chemical analysis more quickly, efficiently, and accurately than ever before. As a sequential XRF system for all XRF applications, the Axios-Petro handles analyses including: determination of sulfur in all kinds of petroleum products, monitoring of Fe, Na, Sb and K as process efficiency indicators, monitoring of additives and stabilizers in lubricating oils, regular wear metal analysis in lubricants, determination of S, Ni, Cl and V levels in waste oil, analysis of petroleum coke. We also introduce Oil Trace, our new analytical software for the highly accurate analysis of halogens and metals in petroleum products from a wide range of matrices with a single calibration. Oil Trace coupled with the Axios Petro XRF spectrometer provides a complete analytical solution for the analysis of petroleum products. Booth # 411, 510

Parker Hannifin

Parker Balston - Analytical Gas Systems We manufacture gas generators to eliminate high purity gas cylinders from the laboratory. There is no longer need to buy and store cylinder reserves and use laboratory space as protection from late deliveries, transportation interruptions, or periods of tight supply. With gas generators, you control supply. These state-of-the-art gas generators can continuously generate ultra-high purity gases for LC/MS/MS, GC, FT-IR, TOC, ICP, Thermal and AA instrumentation. All products are backed by fully staffed field sales and service organizations and one-year warranty. Booth # 214

Penn Hills Lab Supply

Aquamax KF titrators have been specially designed to enable all personnel to accurately measure water content. Coulometric titrators require special chemicals to enable them to operate efficiently, our Cou-Lo Formula reagents have been packaged to make them safer to use and safer to store than other KF reagents. Unique glassware design is more robust than other

types of titrator glassware therefore less breakages and lower maintenance costs. Aquamax KF distributor - Penn Hills Lab Supply. ooth # 914

PerkinElmer, Inc.

PerkinElmer serves a number of growing industries and markets including the environmental, pharmaceutical, chemical, petrochemical, semiconductor, academic research, biotechnology, and clinical screening segments. Our total application-driven laboratory solutions help our customers speed drug discovery, enhance research productivity, meet strict regulatory requirements, improve time-to-market, and increase manufacturing efficiencies. Booth # 621

Petroleum Systems Services Corp.

Petroleum Systems Services Corporation provides sales and Service on a complete line of Petrochemical Testing Equipment for Vapor Pressure, Distillation, Flash Point, Pour Point, Copper/Silver Corrosion, and Scientific Glassware for ASTM, IP, ISO, BS, DIN, and FTMS testing methods. Featuring quality products by Koehler Instrument Company, Lovibond, and Stanhope-Seta. Grabner Instruments vapor pressure calibrations are available on a 1 day Service as well as standard full service calibrations and the cost savings ASTM 6-month calibration service. Flash Point calibrations are now available for the once a year performance verifications to meet specifications of the latest ASTM/Flash Point method. Booth # 608, 610

Phase Technology

Greater precision and cost savings - two results that every testing facility wants, but often find difficult to obtain. Eliminating bias and increasing work flow productivity are the goals that every Phase Technology analyzer delivers. With a 26 year history of research and development, Phase Technology's advantage is its specialization. A focus on assessing cold flow properties has made its methods the most accepted worldwide standard. Phase Technology instruments measure cloud, pour and freeze point, combining innovation with straightforward design. The user benefits - quick, precise results - are backed by responsive service and ongoing support. The world's leading oil refineries, commercial laboratories, fuel distributors, lubricating oil blenders, aviation companies, and military that use Phase Technology instruments have already benefited from improved precision and reduced cost. Shouldn't you? Booth # 415

Pollution Equipment News/Rimbach Publishing Inc.

POLLUTION EQUIPMENT NEWS, reaches over 90,000 professionals nationwide and in Canada, who are responsible for air, water, wastewater pollution control and hazardous waste disposal. INDUSTRIAL HYGIENE NEWS, reaches over 68,000 professionals nationwide and in Canada who are responsible for occupational safety, health, IAQ, emergency response and industrial hygiene instrumentation. Booth # 108

PREMIER Lab Supply, Inc.

XRF Sample Preparation Specialists for Liquids, Powders and Fusion Applications; Items include; XRF Sample Cups, X-Ray Films, Aluminum Cups, Binders, PHOENIX VFD Fusion Machines and Platinum Lab Ware Products Booth # 602, 604

Process Instruments, Inc.

Instrumentation specifically designed for process control applications. Features include: long-life, high-powered (400 mW), narrow linewidth diode lasers, robust, high throughput (f/2.0)spectrograph with 4 cm-1 resolution that incorporates a sensitive CCD TE-cooled detector. Multiplexing capability with fiber-optic probes provides up to 18 channels. Real-time chemometric software includes MODBUS interface. Booth # 417

Quantum Analytics

Rent, lease or purchase from our multi-million dollar inventory of new and reconditioned instruments ready for immediate delivery. Instruments available include: GC, GC/MS, HPLC, LC/MS, Pyrolysis Systems, Thermal Desorption Systems, Post-Column Systems, SimDis Software, Gas Generators, Micropipetting System, Sample Preparation and Handling, Data Systems and Software, LIMS, ICP/MS, UV/Vis, TOC and XRF; manufacturers include: Agilent Technologies, Diablo, GeSIM, Frontier Laboratories, LEAP Technologies, Markes International, Matheson Tri-Gas, Mulan Laboratory, Pickering Laboratories, Teledyne Tekmar, XT LIMS and more. Booth # 316

Restek Corporation

Restek develops and markets innovative columns, parts and accessories, and calibration chemicals for gas chromatography and HPLC. Our products are used by a broad spectrum of analysts in research and development, production, quality assurance, and teaching laboratories. Booth # 211

Rheotek USA, Inc

Automated Viscometer Systems for Petrochemicals, Polymers and pulp.

Automating methods such as ASTM D445, ASTM D789, ASTM D4603, and ISO 307. New Biovis System for kinematic viscosity of diesels and biofuels. In line process viscosity analyzers. Polymer and Oil Standards. Booth # 121

[RICCA Chemical Company](#)

Chemical testing solutions including standardized acids, bases and other titrants; pH buffers; atomic absorption, ICP, ion chromatography, ion specific electrode, and other standards; pH and chemical indicators; in vitro diagnostic reagents; ASTM, APHA, EPA, AOAC, USP, ACS, and other solutions for water, environmental, chemical, food, beverage, petrochemical and other analyses. Booth # 802

[Rigaku](#)

Rigaku provides the world's most complete line of analytical X-ray instrumentation for the petrochemical industry. Both full-sized laboratory systems and portable/benchtop systems for use in the field are available. Applications include a full range of elemental analyses such as S, Cl and P content in fuels by X-ray fluorescence and measurement of phase composition in muds, rocks and drill cores by X-ray diffraction. Booth # 815

[Rudolph Instruments Inc](#)

Rudolph Instruments offers a 16 Model range of High Resolution Digital Refractometers that measure from 1.3 to 1.7RI. A world leader in Polarimeter design Rudolph Instruments introduces the New DigiPol - 781 Series available in a range of configurations from the Multi-Wavelength M6U - UV/VIS to the TDV - VIS 589nm all meeting the requirements of Petrochemical, Pharmaceutical, Flavors, Fragrances, and Food industries. All units have 21CFR Part 11 compliant software capabilities; other applications include Forensic Analysis, and Characterization of Newly Synthesized Compounds. Featured also will be the unique HP100 Hand Held Polarimeter for rapid on site analysis and the Trace Metals Analyzer TEA 4000 Polarograph with detection limits matching ICP. Booth # 1010

[Rudolph Research Analytical](#)

Density Meters for ASTM D1250, D4052, and D5002. Also Refractometers to meet ASTM D1218, D1747 and D5006. Automatic Refractometer line includes 6 different models with electronic cooling and heating, wide Refractive Index range (1.3 - 1.7 RI). Automatic Density Meters with innovative and exclusive features designed to meet the most demanding applications. Models to satisfy needs of the chemical, petrochemical, and petroleum industries, as well as education and research. Booth # 908

[SAUDI ARAMCO](#)

The Saudi Arabian Oil Company (Saudi Aramco) is the world's largest crude oil producer and exporter, holding approximately one-fourth of global oil reserves. It also ranks among the leading producers of natural gas and in refining capacity. Saudi Aramco employs experienced professionals in all fields supporting its energy operations. Booth # 1008

[Scientific Equipment Company \(SECO\)](#)

Automatic, Lovibond Tintometer, Spectrophotometric, Colorimeter For Petroleum Products, Measuring; ASTM Color ASTM D1500, Saybolt Color ASTM D156, Platinum-Cobalt/Hazen/APHA Color ASTM D1209, Dyed Aviation Gasoline ASTM D2392, Lovibond R.Y.B.N., Gardner Color ASTM D1544, I.P Units, C.I.E. Values, Tristimulus Values ASTM D6045, Spectral Data, Optional Heated Chamber For Hot Samples, Conformance Filters, and Window Software, Additional Scales Available, Also Aluminum One Piece, Seamless Bottles, Rust and Leakproof, Opaque, Non-Magnetic, Sparkproof and Non-Permeable To Vapor Transmission With Polypropylene Plug Seal and Tamper Evident Cap. Ideal For Gasolines, Fuels, Octane and Cetane Testing, Solvents, Acids, Aromatics, Pharmaceuticals, Flavors and Agro-Chemicals, SECO is a Stocking Distributor For Laboratory Supplies, Equipment, Chromatography Products Sample Containers, High Purity Chemicals, Lab Furniture, Representing Over 500 Manufacturers, 1300 Page Catalog Booth # 1014

[Scientific Marketing](#)

Scientific Marketing is the premier Manufacturer's Representative group serving Texas, Louisiana, Oklahoma, and Arkansas. Currently we represent Agilent Technologies, Gerstel, OI Analytical, Nippon Instruments, CDS Analytical, Gow-Mac Instrument Co., Supercritical Fluid Technologies, and YSI. Scientific Marketing offers Solutions to Increase Your Throughput Without Increasing Your Input. Booth # 819, 821

[Selerity Technologies, Inc.](#)

SFC for ASTM 5186, 6550 and other methods for the petroleum industry; high temperature column heaters for enhancing existing HPLC system performance. Booth # 803

[Separation Systems, Inc.](#)

Separation Systems, Inc. is a highly experienced provider of specialty gas chromatography systems for the petrochemical and environmental industry. Separation Systems designs and constructs systems that require accessories from various vendors while using the Agilent Technologies gas chromatography platform as the main component of its analytical applications. The systems can be as simple as one automated sampling valve, one chromatographic column and a detector to complex multidimensional systems requiring multiple injectors, several valves and columns and a wide variety of detectors such as the classic FID and TCD to more sophisticated specific sulfur and nitrogen chemiluminescence and mass spectrometry detectors. We cover a wide spectrum of applications such as Refinery Gas, Natural Gas, Simulated Distillation, Detailed Hydrocarbon Analysis in gasolines and naphthas, Group Type Analysis of middle distillates by GC/MS, Fast Chromatography and Fast Simulated Distillation, Supercritical Fluid Chromatography, Trace Oxygenates, and customized applications to meet specific requirements. Each instrument is designed, built and tested to meet the most rigorous standards. Separation Systems also provides proprietary software for every analytical applications. Booth # 603, 605

[SGE, Incorporated](#)

Manufacturer of Analytical and Life Science Instrument Consumables - manual and autosampler syringes, forte capillary GC columns, MEPS (Micro Extraction by Packed Sorbent), ProteoCol capillary HPLC columns and accessories, ferrules, fittings (including SiTite ferrules for GC use), septa, micro valves, inlet liners, tubing, HPLC columns; GC/MS Supplies - ETP electron multipliers, ms NoVent II; Instruments - pyrolyzer, multidimensional system (Deans Switch). Booth # 304

[SGS North America Inc](#)

SGS is the world's leading verification, testing and certification company. SGS is a global provider to the petroleum, chemical and biodiesel industry. Our areas of expertise are quantity and quality control, analytical testing, packing & forwarding of samples. SGS laboratories can test a full range of petrochemical products, from raw crude oil to distilled and processed products. From physical to trace analysis, SGS has the professional staff and modern instrumentation to do the job quickly and accurately. When you need to be sure...SGS. Booth # 302

[Shimadzu Scientific Instruments, Inc.](#)

Shimadzu offers a full line of analytical instrumentation, including UV Visible and Fluorescence Spectrophotometers; FTIR Spectrometers; Automated FTIR Microscope; HPLC systems and components; LC/MS; Gas Chromatography; GC/MS; Data Stations for Spectroscopy and Chromatography; Thermal Analyzers, TOC, Atomic Absorption Spectrometers, ICP, EDX, Particle Size Analyzers, Balances, Capillary Rheometers, Mooney Viscometers, Universal Testing Equipment and more. Booth # 105

[Siemens Water Technologies](#)

The world leader in water purification offers a full range of central systems, pretreatment, and point-of-use polishing systems. Purelab® Ultra provides ultra pure water for the most stringent analytical and biological applications while the new Option Q provides 18.2 m water direct from tap for general laboratory techniques. Prima reverse osmosis systems offer flexibility as a pretreatment source or to feed autoclaves and glassware washers. The new Centra is an integrated system for storage, purification and central distribution of purified water to multiple labs. Booth # 111

[Sigma-Aldrich/Supelco](#)

We provide chromatography columns and supplies for analysis and purification. Product areas include: Ascentis™ HPLC columns, Discovery® SPE product lines, Discovery BIO HPLC columns for biopharmaceutical applications, flash chromatography systems, Equity™ and SLB™ -5ms capillary GC columns, packed GC columns, solid phase microextraction (SPME), chemical standards, ProClin™ preservatives, ion exchange and adsorbent resins, carbon adsorbents, TLC, and chromatography accessories. Customized products and services, including application development, resin processing, and small-unit packaging. For the latest product and technical information, visit our web site, <http://sigma-aldrich.com> Booth # 915

[Skalar, Inc](#)

· Fluo-Imager: Latest scanning technology utilizing spectral fluorescent signatures for many parameters simultaneously; Oil in water, phenol, benzene etc. · Wet chemistry automation analyzers for environmental/ industrial applications including Total Nitrogen/Phosphate; Total Cyanide and Total Cyanide · Robotics analyzers for BOD analysis and additional large variety of applications available such as pH, conductivity, sample-prep COD and more. · TOC and Solid Carbon Analyzers · Total Nitrogen analysis (solids and liquids) Booth # 1017

[Smiths Detection](#)

Smiths Detection Scientific offers micro-analysis and trace detection technology for public health laboratories, mobile laboratories, forensics, pharmaceutical and chemical markets for drug discovery, process research, cleaning validation, material identification and quality control, ranging from contaminant identification to polymorph screening. Products are based on two advanced technologies. Fourier Transform Infrared (FT-IR), to provide 'molecular fingerprints' of samples; and ion mobility spectrometry (IMS), for rapid trace analysis based on the IONSCAN products extensively deployed in security applications. Booth # 216

[Specialty Gas Report](#)

Specialty Gas Report is the premier magazine for professionals who produce, distribute and use specialty, medical and scientific gases. Now in its tenth year, Specialty Gas Report publishes regularly articles on new advancements in production of pure and mixed gases, analytical instrumentation, and their applications. Our website offers a gold mine of information - with access to all articles published in the past 10 years, searchable by key and name of author. Booth # 920

[Spectro Analytical Instruments](#)

Spectro manufactures ICP and XRF spectrometers for the analysis of elements and metals. Booth # 714

[StellarNet, Inc.](#)

StellarNet manufactures a variety of low cost portable fiber optic spectrometers for the UV-VIS-NIR wavelength ranges. Detector options (190-2200nm) include CCD, PDA, or NIR-InGaAs detector arrays. The SpectraWiz measurement software enables SpectroChemistry, SpectroRadiometry, SpectroColorimetry, OES, OSA, and LIBS spectroscopy, right on your desktop or portable computer via USB-2 interface cable. Booth # 222

[Teklab Inc](#)

Specializing in Gas Chromatography Supplies and consumables, Packed Columns, Cappillary columns, Valco Valves & Accessories, Syringes, Inlet liners, Vials, bottles, closures, filter driers, oxygen traps, swagelok fittings, tedlar sampling bags, ferrules, septa, etc. Booth # 321

[Teledyne Leeman Labs](#)

Booth # 917

[Teledyne Tekmar](#)

Teledyne Tekmar is a leader in the design and manufacturing of analytical instrumentation for the laboratory. Our world-renown Volatile Organic Compound (VOC) product line includes systems for Gas Chromatography Sample Introduction, High-Throughput Purge and Trap sample concentration, Static and Dynamic Headspace analysis, Whole Volume Air Sampling and Sample Automation. Our line of Total Organic Carbon (TOC) and Total Nitrogen (TN) Analyzers provide unparalleled accuracy, precision, throughput and robustness for water samples varying in quality from semiconductor-grade to municipal wastewater. All of our pharmaceutical instruments have available 21 CFR Part 11 software tools for your compliance needs, as well as validation documentation, services and training. We provide productivity-enhancing instrumentation to all industries, including Environmental, Pharmaceutical, Food and Beverage, Forensic, Industrial/Chemical and Polymers/Plastics. Booth # 1002

[Thar Instruments, Inc](#)

SFC is now a critical tool for gasoline, diesel, aviation and other fuel analyses. Thar's new PetroAnalyzer helps the petrochemical industry's environmental and QC labs by giving them more power than GC and more speed compared to LC. Free on-site demonstrations are available or send us your sample! Booth # 1003, 1005

[Thermo Electron Corporation](#)

Thermo Electron Corporation helps our customers in the petrochemical industry advance scientific knowledge, improve manufacturing processes, and protect people and the environment with instruments, scientific equipment and integrated software solutions. Products include sample preparation equipment, liquid handling and automation systems and analytical instruments for chromatography, mass spectrometry, molecular and elemental spectroscopy and microanalysis. These are integrated with informatics solutions and supported by professional and financial services. FTIR, Raman, FT-NIR, UV-VIS, LC, GC, GC/MS, LC and GC Columns, AA, Sulfur, TOC, ICP, ICP-MS, LIMS, Ph Probes, XRD, XRF, temperature control. Booth # 303

[Thermo Fisher Scientific - GSC Group](#)

The glass and specialty consumable group provides chromatography and environmental sampling consumables for the scientific and technical communities. GSC comprises the National, Sun & SRI, EP, I-Chem and Chromacol brands. Booth # 721, 723

[United Chemical Technologies](#)

UCT manufactures highly reproducible cartridges from our proprietary polypropylene, allowing the analytical chemist a consistent extraction technique. We have a strong reputation for dependable service, competitive pricing, innovative technology and reproducible products, as well as unsurpassed technical support. Our environmental line includes the Universal Oil & Grease cartridge for EPA method 1664, various specialty cartridges, and micro-centrifuge tubes for use with the QuEChERS method. Bulk products, such as copper granules are also available. Booth # 716

[VHG Labs, Inc.](#)

Calibration Standards and Reference Materials including metallo-organic standards for the analysis of wear metals, metal additives and contaminants by ICP, RDE, DCP or XRF; sulfur, chlorine and nitrogen standards for ASTM methods; reference materials for the analysis of viscosity, soot, flash point, pour point, cloud point, freeze point, TAN and TBN in accordance with ASTM methods. Consumables for spectrochemical analysis including ICP autosampler tubes, pump tubing, quartzware and cones; XRF sample cups and film. Booth # 419

[VWR International](#)

VWR International is a leader in the global research laboratory industry with worldwide sales in excess of \$3 billion US dollars. VWR's business is highly diversified across products and services, geographic regions and customer segments. The Company offers products from a wide range of manufacturers, to a large number of customers primarily in North America, Europe and other locations. VWR's principal customers are major pharmaceutical, biotechnology, chemical, technology, clinical, food processing and consumer product companies, universities and research institutes, governmental agencies, environmental testing organizations, and primary and secondary schools. VWR distributes a diversified product mix, including chemicals, glassware and plasticware, equipment and instruments, furniture, protective apparel, production and safety products, and other life science and laboratory products and supplies. VWR supports its customers by providing storeroom management, product procurement, supply chain systems integration, technical services and laboratory bench top delivery. VWR maintains operations in over 20 countries and employs over 6,000 people worldwide. VWR International is headquartered in West Chester, Pennsylvania. Contact them at www.VWR.COM Booth # 421,423

[Waters Corporation](#)

Waters Corporation provides a wide range of solutions that incorporate the latest technologies for sample extraction and clean-up, chromatography and detection, including mass spectrometry. Waters is the market leader in high resolution gas chromatography/mass spectrometry (HRGC/MS) for environmental analysis. For more information on the system that will fit your analysis needs, please visit www.waters.com. Booth # 314

[XOS](#)

Booth # 117

[Zip Scientific](#)

We don't manufacture GCs, we make them go faster! Using our patent pending Current Sense Technology we have developed Fast GC Accessories for heating and cooling that are easy on your budget. Our products are Simple, Reliable and Cost Effective. Increase your sample throughput, streamline lab operations and add more profit to your bottom line with the GC Racer and GC Chaser. At Zip Scientific we're a small company with a winning strategy; Good people, top-notch products and excellent service. Booth # 1004

2007 Gulf Golf Tournament

Monday
October 15th, 2007

Galveston Country Club

14228 Stewart Road
Galveston, Texas 77554

8:30 AM Shotgun Start

2006 SPONSORS

Platinum

[Matheson Tri-Gas, Inc](#)

Gold

[BSI Inspectorate](#)

[PAC](#)

Silver

[Ametek-Petrolab](#)

[Analytical Instrument Recycle](#)

[Chemplex Industries](#)

[Compass Instruments](#)

[DC Scientific Glass](#)

[Elementar Americas](#)

[GE Analytical Instruments](#)

[Horiba Instruments](#)

[Miller & Weber, Inc](#)

[PANalytical](#)

Bronze

[Analytik Jena USA](#)

[CSI Technologies](#)



2007 Sponsorships Still Available

Please call Anita Metcalf at 281-256-8807, Jim Hepp at Compass Instruments 630-556-4835, or Bob Stamp at PAC 281-580-0339 for more information.

Register Today To Play In The 2007 Tournament!

www.gulfcoastconference.com

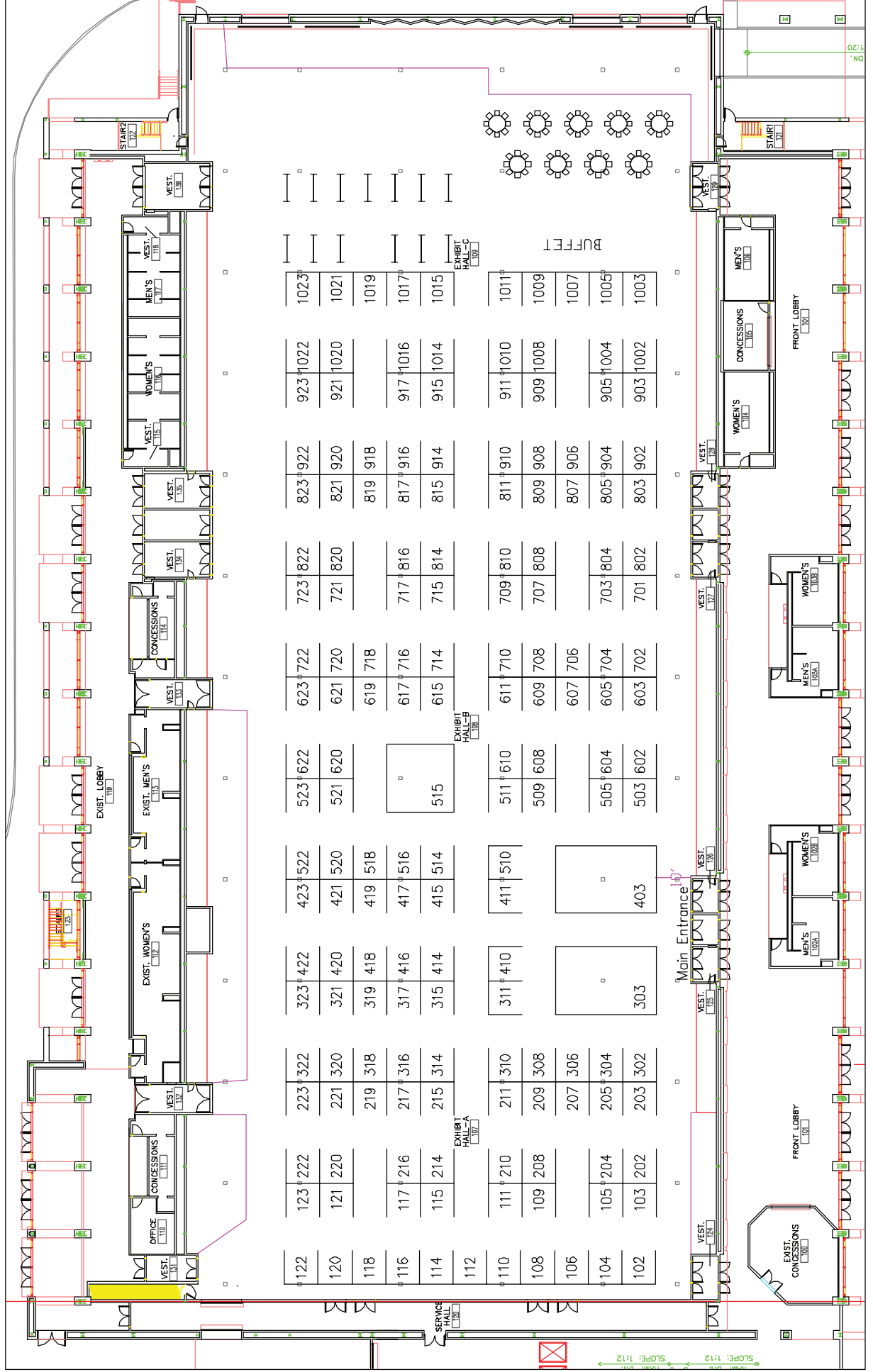
Gulf Coast Conference 2007

October 16-17, 2007

Moody Gardens Convention Center Halls A, B, and C



Revised
11-02-06



2008 Gulf Coast Conference

October 14-15
Galveston Island
Texas

For Chemical Analysis
in Petrochemical,
Refining, & Environmental
Laboratories -
This is the
"IDEA CONFERENCE"

Register Today Online!

www.gulfcoastconference.com



2008 Gulf Coast Conference Schedule

March 1, 2008	Call For Papers
July 1, 2008	Paper Submission Deadline
July 1, 2008	Program Advertising Deadline
October 13, 2008	GCC Golf Tournament
October 13, 2008	Exhibitor Move In
October 14, 2008	Conference Opens
October 15, 2008	Conference Closes

Chemplex®.... "The name you can trust"

SPECTROCERTIFIED® XRF SAMPLE PREPARATION EQUIPMENT, ACCESSORIES & SUPPLIES

XRF Sample Cups
Thin-Film Windows; Rolls & Circles
SpectroMembrane® Thin-Film Frames
SpectroMill® Grinders & Mixers
Comminution Vials & Ball Pestles
GyralGrinder® Sample Grinding Machines
Grinding Dishes
Manual Press; Self-Centering Dies
Automatic Press; Self-Centering Dies
Automatic Integrated Die Press
Stainless Steel Die Sets; All Diameters
Tapered & Straight-Walled PelletCups®
Grinding & Briquetting Additives
Borate Fusion Fluxes
AutoFluxer® Fusion Machines
Platinum Crucibles & Molds
Organo-Metallic SpectroStandards®
Sulfur SpectroStandards® Standards
SpectroPellet® Reference Materials
SpectroSet-Up® Reference Materials
Accessories
Application Laboratory Services
Consultation



Chemplex® INDUSTRIES, INC.

2820 SW 42nd AVENUE; PALM CITY, FL, 34990; USA

Phone: (772) 283-2700 ■ Fax: (772) 283-2774

Toll Free: (800) 4-CHEMPLEX

ORDER ON LINE
www.chemplex.com



Free
CD CATALOG
VISIT BOOTH 709
GULF COAST CONFERENCE