

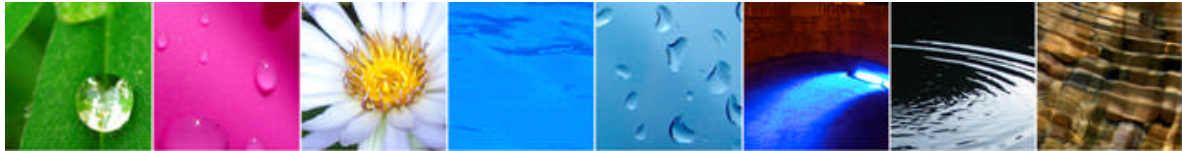
WORKSHOP OBJECTIVES

Fuel Microbiology :

Understanding the nature and cost of uncontrolled microbial contamination in fuel systems and using both new and traditional rapid tools to diagnose fuel systems for uncontrolled microbial contamination: using the ATP test to identify microbial loads in fuels.

The objectives of this workshop are to:

- Provide fuel industry stakeholders with a basic understanding of how uncontrolled microbial contamination in fuel systems can cause fuel quality problems and increase operating costs;
- Provide an executive briefing on the nature of fuel and fuel system microbiology;
- Teach participants how to identify site design and operational factors that contribute to increased microbial contamination risk;
- Train participants how to monitor for microbial contamination and biodeterioration;
- Explain to participants the importance of upstream and downstream management in storage facilities.
- Offer practical guidance on how to reduce the risk of uncontrolled microbial contamination at fuel depots, in pipelines and at fuel retail sites.
- Quality fuels - doing it right is doing it better
- Offer practical guidance on how to reduce the risk of uncontrolled microbial contamination at fuel depots, in pipelines and at fuel retail sites.



WORKSHOP INSTRUCTORS

Frederick J. Passman, Ph.D.

Dr. Passman is an STLE Fellow and Certified Metalworking Fluids Specialist with 35 years experience in environmental-industrial microbiology.

Since 1973, Dr. Passman has conducted research and consulted to government and private industry on topics as diverse as composting municipal sewage sludge, U.S. EPA criteria for various groups of toxic substances in fresh-water systems, microbially enhanced oil recovery, and microbial contamination control in industrial process-fluids. Before founding BCA, Inc., in spring 1992, Dr. Passman was the Business Manager of ANGUS Chemical Company's Biocide Division. Dr. Passman is a member of numerous professional societies.

Within STLE, he has served as Associate Editor for *Tribology and Lubrication Technology*, Chair, STLE Education Committee and Chair, Metalworking Fluid Management Education and Training Subcommittee. He is presently Chair, Certified Metalworking Fluid Certification Steering Committee.

Dr. Passman is the Vice-chair of ATSM Subcommittee D.02.14 on Fuel Cleanliness and Stability. He chairs ASTM Subcommittee D.02.14 Task Force on Fuel Microbiology, is Chair of ASTM Subcommittee E.34.50 Health and Safety of Metalworking Fluids and is an active member of E.35.15 Antimicrobial Pesticides. He has drafted ASTM Standards for each of these committees. He is Editor and Co-author of *ASTM Manual 47: Fuel and Fuel System Microbiology*.

Dr. Passman has received STLE's Wilber Deutsch Memorial Award for writing excellence. He has more than 40 publications to his name.

Dr Aubrey Burrows

Senior Technical Manager – Fuels, Tesco Stores Limited

Aubrey Burrows BSc, PhD held a wide range of senior technical, marketing and general management roles in Europe, the United States, and Asia-Pacific with international petroleum & chemical companies.

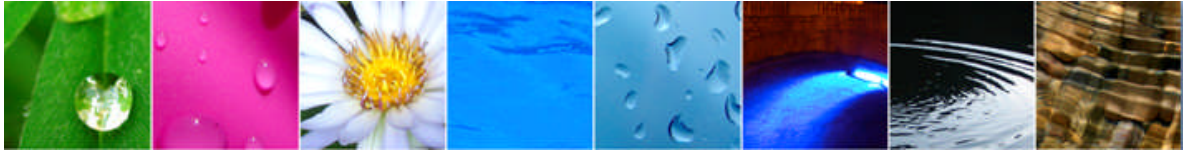
He is currently working with Tesco in the UK as the Fuels Senior Technical Manager with responsibility for implementing new retail fuel quality systems and addressing the operational challenges with bio fuels.

Eng. Pat Whalen

Mr. Whalen is a Canadian Professional Chemical Engineer and the President of LuminUltra Technologies.

He is specialized in treatment and management strategies for industrial water and wastewater, and also has nearly 15 years of experience in the development of novel microbiological assays. Since the launch of LuminUltra in 2003, he has served in all capacities including manufacturing, research, sales, support and management.

More recently, Mr. Whalen has worked with various major energy sector companies on the application of LuminUltra's rapid microbiological testing kits in several upstream and downstream applications, ranging from produced water to finished fuels. Mr. Whalen has authored various technical documents including conference presentations, peer-reviewed papers, and patent applications.



Mr Ian Roos

Having obtained degrees in Digital Electronic Engineering and Radio Engineering, Ian Roos spend the first 13 years of his career working for various government and multi nationals studying and modelling radio propagation to limit the impact of electromagnetic broadcasts on the environment. As part of large scale projects to develop the latest radio technology and regulations insuring safety standards and limits are met, Ian took on roles as Asia Pacific Engineering Director with a leading RF Design Firm followed by a Global Service Director Role with a leading radio optimisation group.

The last five years Ian has been developing the FUELMAG technology further, while incorporating 12 years of research in restricting the impact of EMI and EMR on living organisms into a system that effectively manage single cell organisms without the inherent risks in a environmentally safe manner.

Ian is currently the Technical Director at Purefuel Technologies Ltd ”

Mr Patrick Poelman

Mr Poelman graduated as a biochemistry engineer (with a specialization into fermentation techniques). During this period he performed a study on the aerobe/anaerobe metabolism of yeasts.

Hon. Naval Commander Senior Grade BelNavR : During his military conscript period he performed as responsible for the chemical dpt of the Divison Studies and Research inside the Mine Warfare school Eguermin of the Belgian Navy, studies on board of the oceanographic research ship Mechelen and the Ready Duty Ships, concerning sea pollution and sea fuel pollution fighting methods.

During 17 years he has been active in different functions inside the Petrofina group, a.o. application engineer at Fina Research (previously LaboFina), Laboratory mgr (Oleofina), production mgr (Fina oil and fat plant), international technico-commercial engineer, ...

Since 16 year Mr Poelman is employed by Kreglinger Europe where a.o. since the beginning as mgr industrial chemicals and Pure Fuels for the sales to and contacts with the Fuel industry in the Benelux.

Mr. Marc Raymond

Mr Marc Raymond has a solid technical background in Biological research and held over 15 years different roles as a Marketing and Sales Manager in international scientific companies, where he developed and promoted a portfolio of products dedicated to microbial control of water networks.

His main project during his last function was the development and market approach of a tool for detection and quantification of legionella in cooling towers and hot sanitary water networks.

As a member of the AFNOR committee, this experience served a strive to capitalize his scientific knowledge with his capacity of meeting the needs of the various actors in this area. As a logical issue, he launched in 2006 the company aqua-tools.com, specialized in marketing and sales of kits dedicated to monitoring of microbiological contamination in water, offering also training and audit service to reduce sanitary risks and cost effectiveness in different applications.



LOCATION

Session on Monday, Oct. 26th

SUFFOLK U.K.

Stoke by Nayland Hotel, Golf & Spa

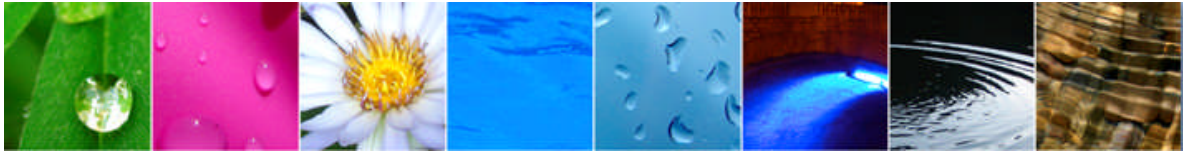
Keepers Lane,
Leavenheath,
Colchester
Essex CO6 4PZ

Session on Tuesday Oct. 27th

GRIMBERGEN (near Brussels) BELGIUM

HOTEL ABBEY

Kerkeblokstraat 5
B - 1850 Grimbergen
Tel .02/270.08.88
www.hotelabbey.be
info@hotelabbey.be



BioFuels – the back side of the green medal

WORKSHOP PROGRAM

MORNING Session

09:15 – 09:45 Coffee and Registration –

09:45 – 10:00 Opening Remarks – Mr Marc Raymond CEO of Aqua-tools

Mr Martin Scott – CEO of Purefuel Technologies Ltd,

10:00 – 11:00 Fuel Microbiology Basics – Dr. Fred Passman (USA)

- Costs associated with microbial growth in fuel systems
- Fuel and fuel system damage caused by microbes
- Microbes that grow in fuel systems
- Where fuel system microbes grow
- How microbes cause damage – biodeterioration
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11:00 – 11:15 Coffee Break

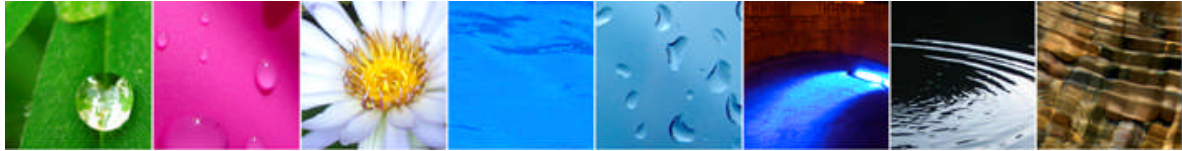
11:15 – 12:15 Upstream and downstream Fuel Management – Dr. Aubrey Burrows (UK)

- How can forecourt retailers and storage managers keep water out, get rid of bugs, and stop clogged filters?
- The challenges with bio fuels
- Bio Fuel must be truly fit for purpose at the point of sale.

12:15 – 12:45 The Microbial Audit - Dr. Fred Passman (USA)

- It's not just microbiology – the factors that contribute to biodeterioration risk
- Depot surveys – the basic steps in a depot microbial audit
- Retail site surveys – the additional steps in retail site audits

13:00 – 13:45 Lunch



BioFuels – the back side of the green medal

WORKSHOP PROGRAM

AFTERNOON Session

13:45 – 14:15 **On-site testing - Dr. Fred Passman (USA)**

- Overview of Gross observations, Physical tests, Chemical tests
- Microbiological tests
- Echelon testing – deciding which tests to run
- **Quantitative determination of biomass using the ATP test**

14:15 – 15:00 **How to take samples correctly – Dr Patriek POELMAN (Belgium)**

- Testing fuel samples
- Storing Samples
- Shipping Samples

15:00 – 15:20 **Hands-on Training – Mr. Pat WHALEN (Canada) - Mr Marc RAYMOND (France)**

- The Aqua-tools ATP test demonstration (QGO-M™)
- Focusing on Training program available from Aqua-tools

15:20 – 16:30 **Customer Experiences – Mr. Ian Roos (UK)**

- Bio Fuels and how it will affect operators
- Maintenance Programs
- Contamination affecting operations and reliability
- Milestones for the UK market

16:30 – 17:00 **Tea Break – and end of the formal proceedings**

Break out Session

16:30 – 17:30 **Hands-on Training – Mr. Pat WHALEN (Canada)**

- The ATP test

Main Reception

16:30 – 18:00 **General Discussion and one to one Question and Answer Session with :**

Dr. Fred Passman, Dr. Aubrey Burrows,

Mr Marc Raymond, Mr. Patriek Poelman and Mr. Ian Roos