



Dear \$SPALTE1 \$NAME

we are pleased to present Frontier Laboratories' Europe Highlights October 2018:



New F-SEARCH Version 3.6 !

New F-SEARCH 3.6 Polymer & Additive Search Software and Libraries now with 1000 Polymers !

Data interpretation of any kind of chromatogram can be done with the support of chemical compound libraries, for example NIST Standard Reference Database. However, these search results don't tell you the origin of these compounds – what is the polymer or additive before thermal decomposition by pyrolysis ? Also, these databases are missing many chemical compounds derived from polymeric materials or additives. Without F-Search, the interpretation of pyrograms or EGA thermograms is a difficult task, requiring professional intuition and experience. F-Search system consists of search software and four unique libraries and allows users to select among them for specific purposes. F-Search allows you to quickly search different types of data such as pyrograms and EGA data. It can also accommodate various GC/MS data formats for your convenience. The unique search algorithm employed in F-Search is not greatly influenced by the factors such as changes in analytical conditions and separation columns. Two-dimensional multi-ion chromatograms allow you to obtain high quality mass spectra from overlapping peaks. Overlay of multiple TICs is possible ! F-Search allows you to subtract a mass spectrum from a TIC. It is also possible to search NIST library directly from F-Search.

Frontier Laboratories has now upgraded F-Search (Ver. 3.6). Also, 300 polymers have been newly added to the polymer libraries for a total of 1,000 polymers. Further, the Additive library contains approximately 500 additives and Pyrolyzates library provides pyrolyzates information of 268 polymers.



New Technical Notes Available !

The applicability of your GC/MS system greatly expands using Frontier Lab's pyrolyzer and μ -Reactors. We always look for new applications and transfer these into easy-to-read technical notes. Currently, we have more than 100 technical notes downloadable for you in our searchable database - and it is growing continuously. Recently, some new technical notes have been added:

- PYA1-093E :Cure failure analysis of a two-component epoxy resin
- **PYA1-094E: Analysis of phthalates with IEC standard method using non-deactivated stainless steel sample cups**
- PYA5-007E: Multi-Sample UV Irradiator - Part 1 Development
- **PYA5-008E: Multi-Sample UV Irradiator - Part 2 Comparison of degradation degree by sample cup position**
- PYA5-009E: Multi-Sample UV Irradiator - Part 3 Correlation with Micro-UV Irradiator

- **PYA3-027E: Analysis of oil - based black inks - Comparison of good and defective inks**

[click here to download technical notes](#)

**Material Characterization in the Automotive Industry
Using Multi-Mode Pyrolysis GC/MS:**

A COMPREHENSIVE GUIDE FOR PYROLYSIS GC/MS TECHNIQUE
AND ITS USE IN THE AUTOMOTIVE INDUSTRY





New Automotive Booklet !
Application booklet for automotive industry is now available on our website.

[click here to download the automotive booklet](#)



Webinar: PY-GC/MS Data Interpretation for Synthetic Paints - Recorded webinar available until September 2019!

Use of An Expert System for Interpreting Py-GC/MS Data for Synthetic Paint Media

Pyrolysis-gas chromatography/mass spectrometry (Py-GC/MS) is a reliable analytical technique capable of characterizing a wide range of organic materials, yet even reasonably experienced users can be intimidated by the challenges of data interpretation. An expert system utilizing AMDIS (Automated Mass Spectral Deconvolution and Identification System, available from NIST) for marker compound identification and Excel for data interpretation was developed at the Getty Conservation Institute that facilitates accurate characterization of synthetic paint media. The system, which incorporates knowledge from Py-GC/MS experts about marker compounds along with guidelines on how to interpret their distributions in paint samples, can benefit paint chemists and forensic examiners of trace evidence.

Featuring: [Dr. Michael R. Schilling, Getty Conservation Institute](#)

Your benefits:

- **Learn how to use AMDIS for marker compound identification in paint samples**
- **Discover capabilities of Excel for sorting marker compounds in an AMDIS report into different categories of paint media**
- **Employ expert knowledge in the system to determine sample composition**
- **Use customized graphs and tables for meaningful presentation of composition results**



Featured Product

Frontier Laboratories is offering a broad range of innovative products around Analytical Pyrolyzer or μ -Reactor to increase the performance and flexibility of your PY-GC/MS system.

[In this newsletter \(click\): Vent-Free Adapter](#)

Vent-free GC/MS Adapter is a simple and useful interface used for GC/MS analysis, and allows switching of a GC separation columns while the MS detector is in operation by connecting a highly deactivated capillary tube (id 0.15 mm, length 50 cm or 70 cm) between the separation column and the MS detector. Changing columns takes only a few minutes.

Features:

- **It allows fast switching of a separation column and/or an EGA tube without venting the MS detector**
- **The VF tube is rugged and inert and will not absorb polar species when in use which saves time and increases productivity**
- **Vent-free GC/MS Adapter is easily installed by users.**