Letem PerkinElmer® *For the Better* světem

PE Systems

1937

PerkinElmer®

For the Better

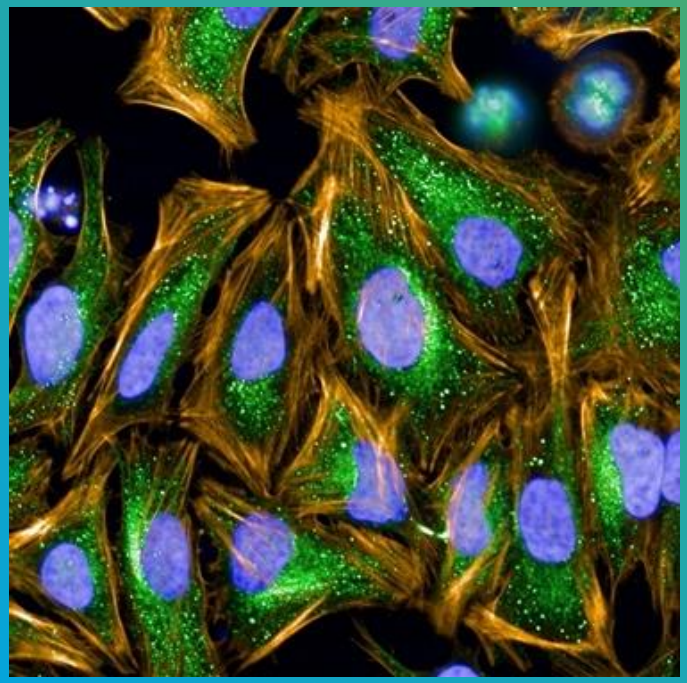
PE Systems

PerkinElmer®
For the Better

ENVIROMENTAL HEALTH
HUMAN HEALTH

DIAGNOSTIKA

ANALYTIKA



LIFE SCIENCE

PE Systems

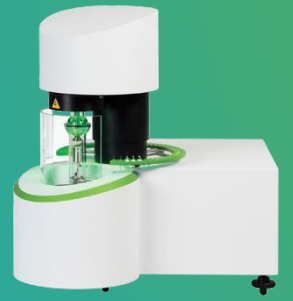
1992

PE Systems

30 roků v ČR


















ANALYTIKA

PE Systems

ANALYTIKA

CHROMATOGRAFIE

HPLC LC300

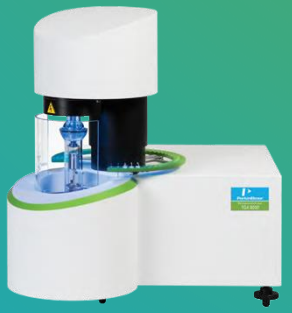
ANORGANIKA

4Q ICP-MS
NexION 5000

SPEKTROSKOPIE

NIR / MIR / FIR
Spectrum 3

TERMÁLNÍ ANALÝZA



TGA 8000

PE Systems

HYPHENATION

SPOJOVÁNÍ

PE Systems

HYPHENATION
SPOJOVÁNÍ

TG-IR

PE Systems

HYPHENATION
SPOJOVÁNÍ

TG-GC/MS

PE Systems

HYPHENATION
SPOJOVÁNÍ

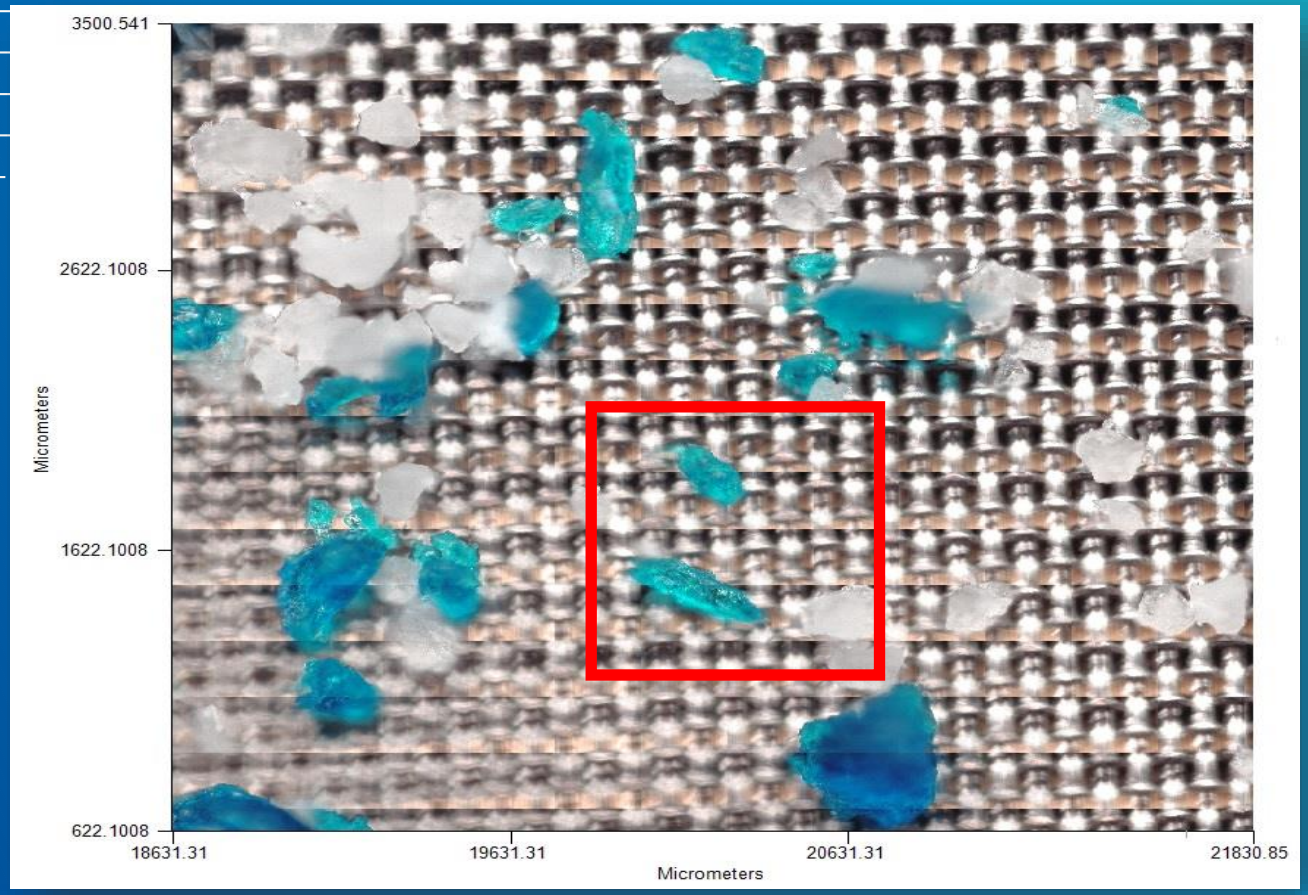
TG-IR-GC/MS

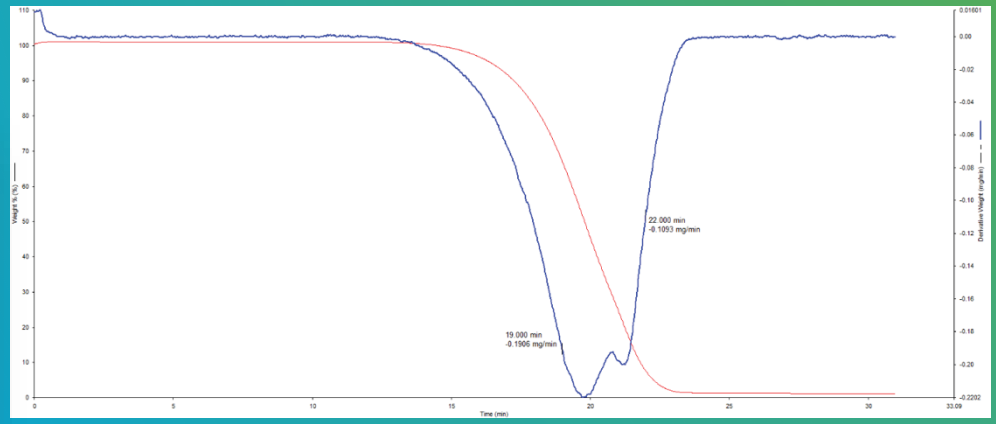
PE Systems

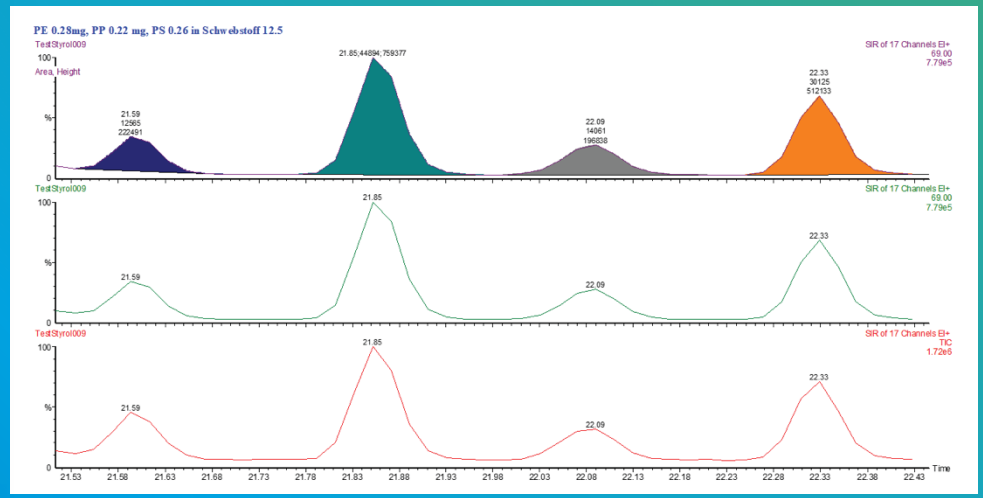
TG-GC/MS

MIKROPLASTY

HYPHENATION
SPOJOVÁNÍ







PE Systems

HYPHENATION
SPOJOVÁNÍ

HPLC-ICP-MS

PE Systems

PE Systems

Přenosný GC/MS

TORION T-9

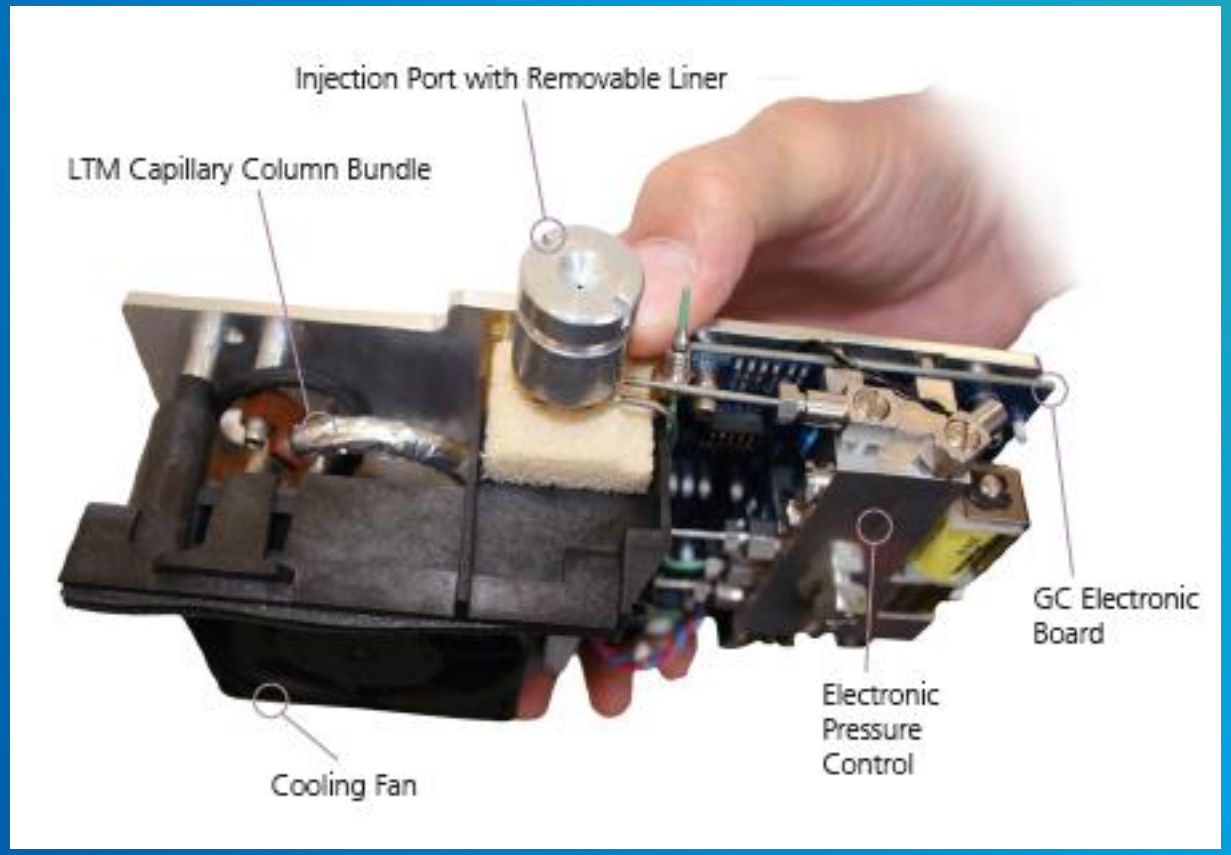
PE Systems

TORION T-9

- Hmotnost 14,5 kg
- Měření za 5 min od zapnutí
- Analýza 5 min.
- Baterie na 2,5 hod.
- Helium pro 150 vzorků

PE Systems

TORION T-9

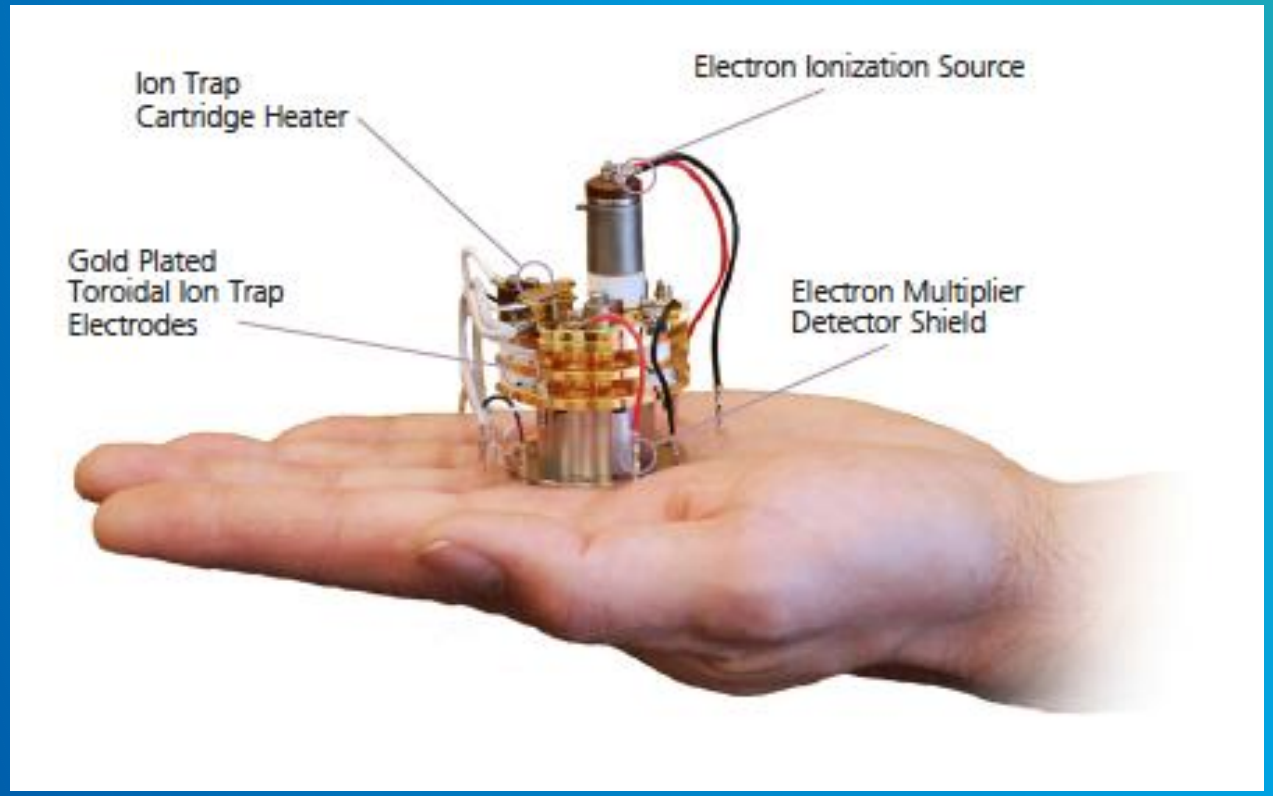


LOW THERMAL MASS CAPILLARY GC

- Rychlé vyhřívání
- Nízká spotřeba

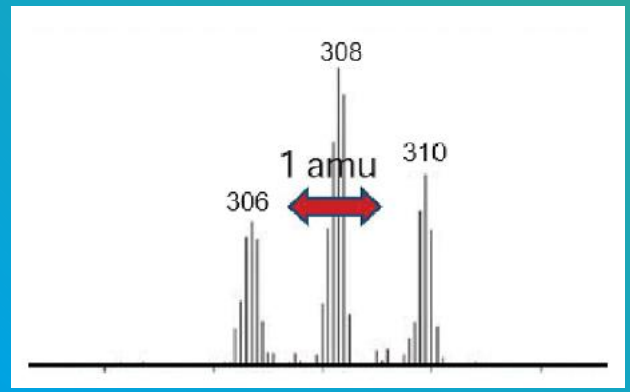
PE Systems

TORION T-9



TOROIDAL ION TRAP

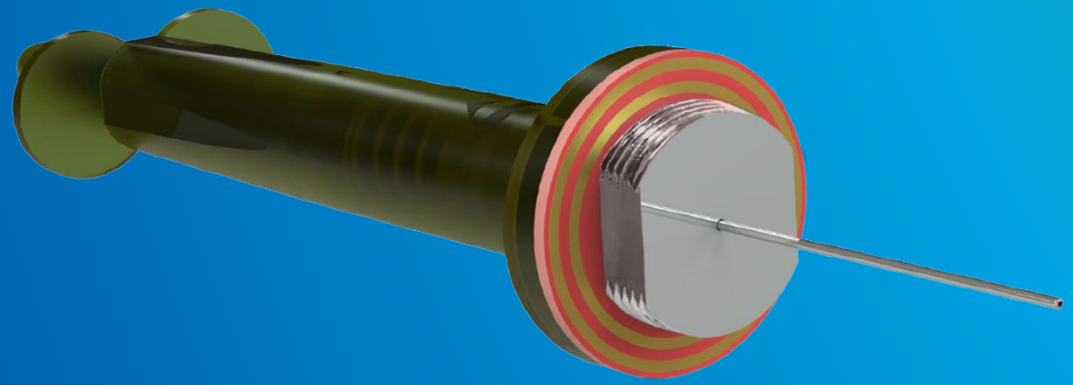
- Vyšší tlak 10^{-3} Torr
- Menší pumpa
- Nízká spotřeba



PE Systems

TORION T-9

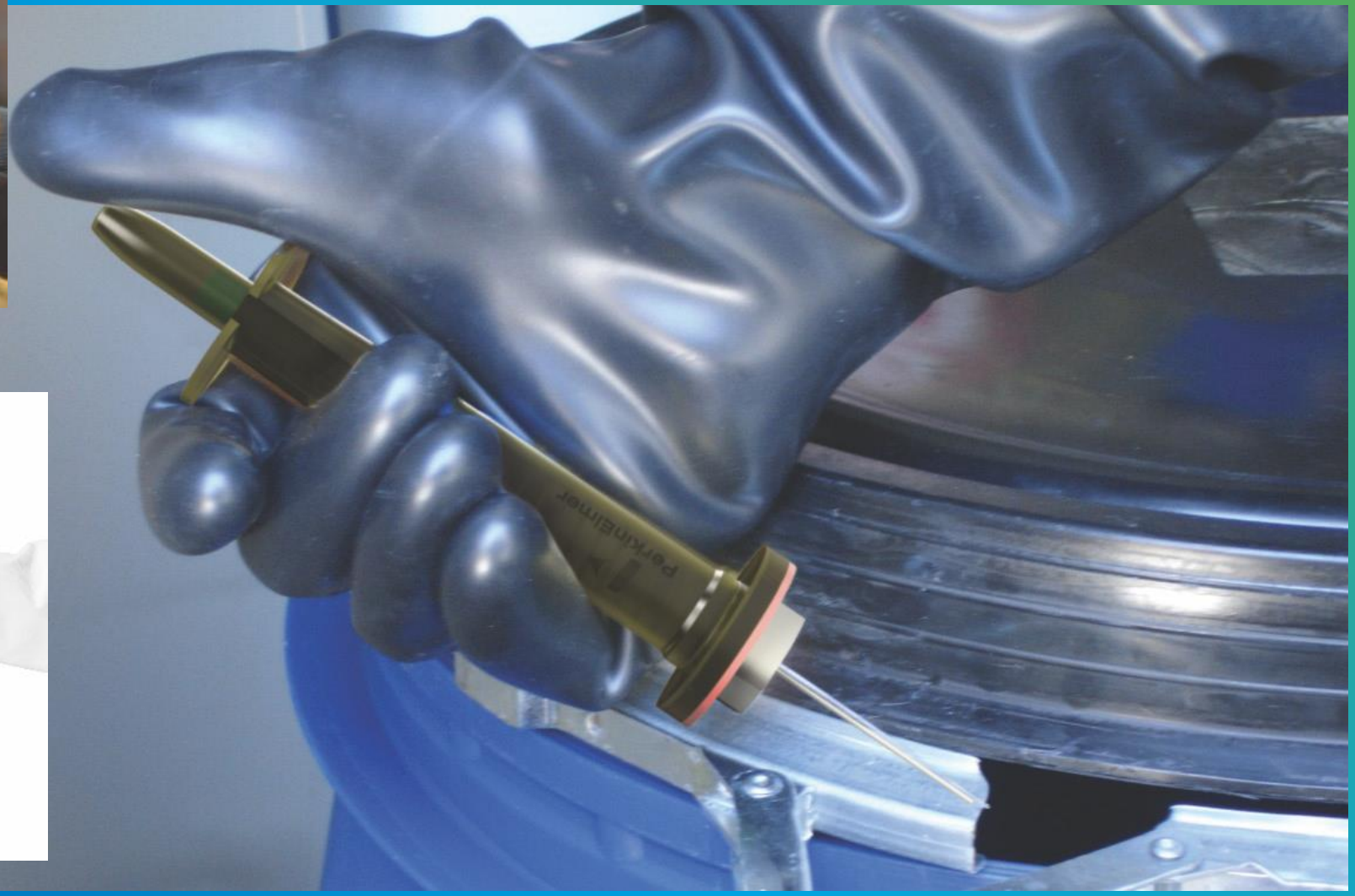
SPME



CME
Coiled Microextraction

PE Systems

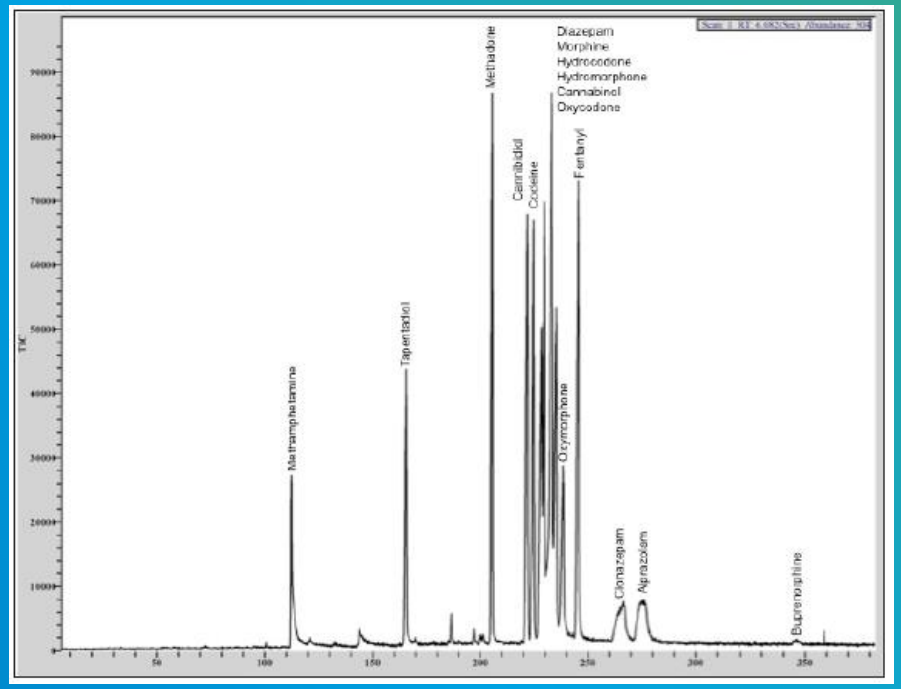
TORION T-9



PE Systems

TORION T-9

Rapid Identification of Illicit Drug Substances Using Thermal Desorption Coupled with a Portable Toroidal Trap GC/MS System



- Methamphetamine
- Tapentadiol
- Methadone
- Cannabidiol
- Hydrocodone
- Morphine
- Hydromorphone
- Codeine
- Diazepam
- Oxycodone
- Cannabinol
- Oxymorphone
- Fentanyl
- Clonazepam
- Alprazolam
- Buprenorphine

PE Systems

TORION T-9

MTBE and BTEX On-Site Rapid Screening of Contaminated Ground Water by Portable SPME-GC/MS Methodology

APPLICATION NOTE

Gas Chromatography/ Mass Spectrometry

Authors:
Portable GC/MS Team
PerkinElmer, Inc.
Shelton, CT

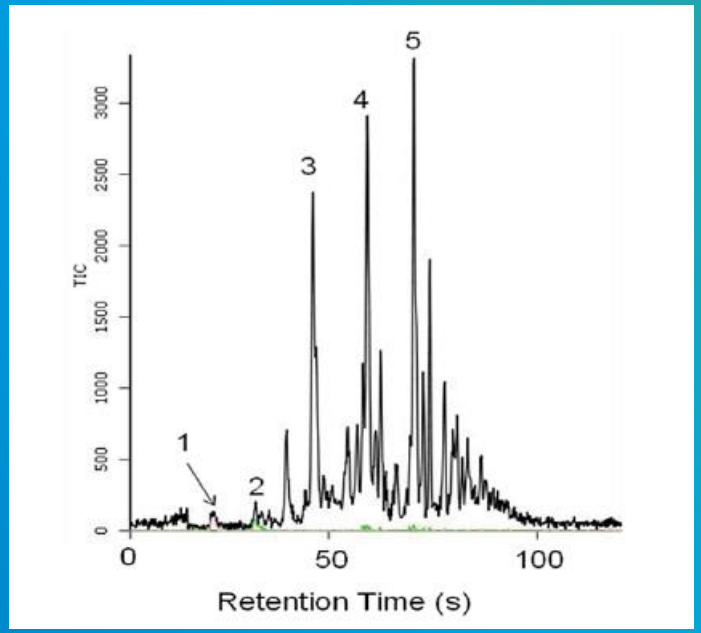
MTBE and BTEX On-Site Rapid Screening of Contaminated Ground Water by Portable SPME-GC/MS Methodology

Introduction

Methyl-tert-butyl ether (MTBE) and the combination of benzene, toluene, ethylbenzene, and xylenes (BTEX), are routinely monitored in soil and ground water to determine whether petroleum contamination has occurred due to industrial runoff, or waste water effluent, in order to protect local tributaries and surrounding property[1,2]. For industrial environmental monitoring programs, the ability to quickly analyze samples taken from nearby ground and water sources is key to environmental protection. The ability to analyze samples at the source, without the need for fixed laboratory analysis, can result in significant time and cost savings, and in the case of a spill, can lead to improved response times.

Sampling using the Custodion® SPME syringe, with separation and analysis using the Torion® T-9 portable GC/MS, allows rapid and on-site sample extraction and analysis, and provides actionable results within minutes. Using the portable Torion T-9 GC/MS, informed decisions can be made in critical situations, and can optimize follow-up activities by providing the user with the appropriate information to determine which, and if, samples should be sent to a laboratory for confirmatory analysis. In addition, on-site sample collection, extraction and analysis, using SPME and the Torion T-9 GC/MS, minimizes target analyte losses, compared to traditional techniques that risk analyte loss during complex storage and transport conditions, therefore ensuring the integrity of critical and valuable samples.

PerkinElmer
For the Better



Sampling:	Solid phase microextraction (SPME)
SPME Phase	Polydimethylsiloxane/divinylbenzene/carboxen (PDMS/DVB/CAR)
GC Inj. Temp	270 °C
GC Column	MXT-5, 5 m x 0.1 mm, 0.4 µm df
GC Carrier Gas	Helium
GC Column Temp	50-200 °C at 2 °C/s
Transfer Line	270 °C
Injection Split	30:1 after 4 sec splitless
Mass Analyzer	Toroidal ion trap (TMS)
TMS Mass Range	41-500 Da
Ionization Mode	In-trap electron impact (EI)
Detector	Electron multiplier
Vacuum	Roughing and turbo molecular pumps
MS Resolution	Less than unit mass to 230 amu, nominal unit mass to 500 amu

PE Systems

ANALYTIKA

HYPHENATION

TORION T-9

PE Systems

Děkuji.

PerkinElmer®
For the Better

PE Systems

WWW.PESYSTEMS.CZ