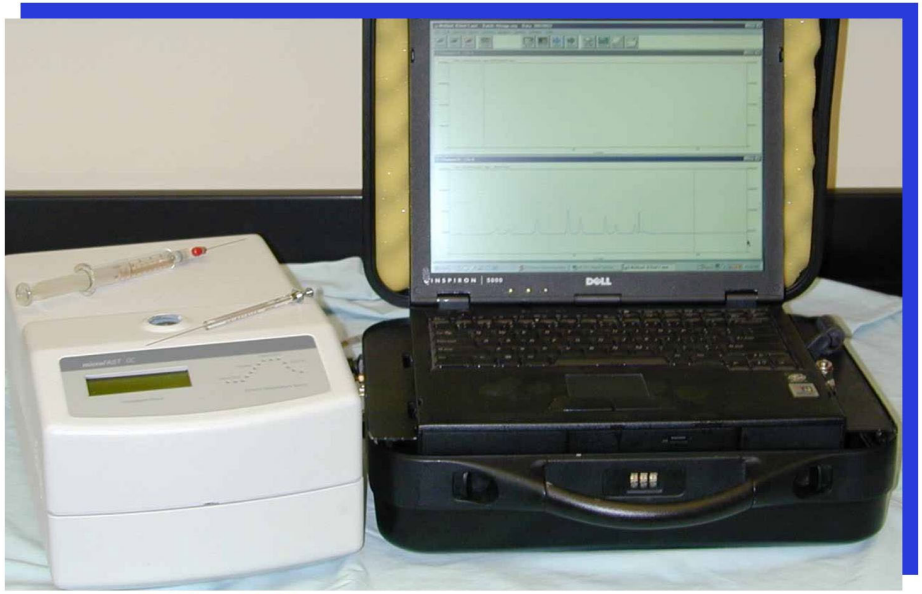
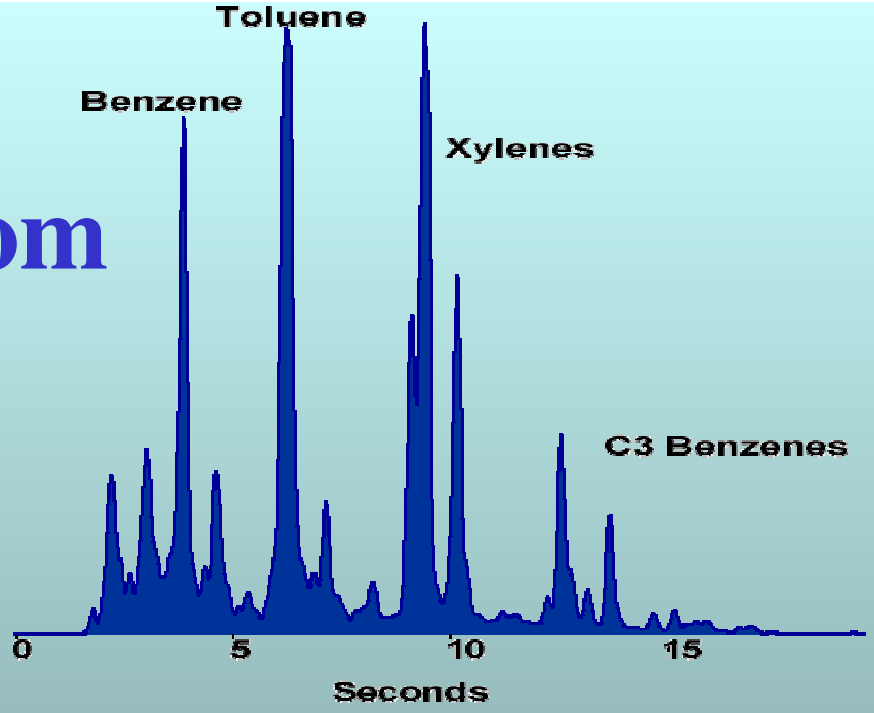


the microFAST GC

from ASI

in the lab
or
in the field

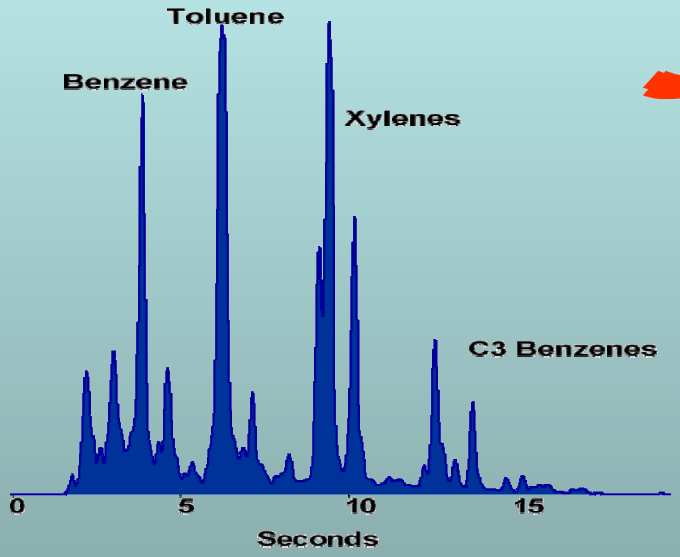
microfastgc.com



FAST GC

up to 25°C/second

Really FAST GC

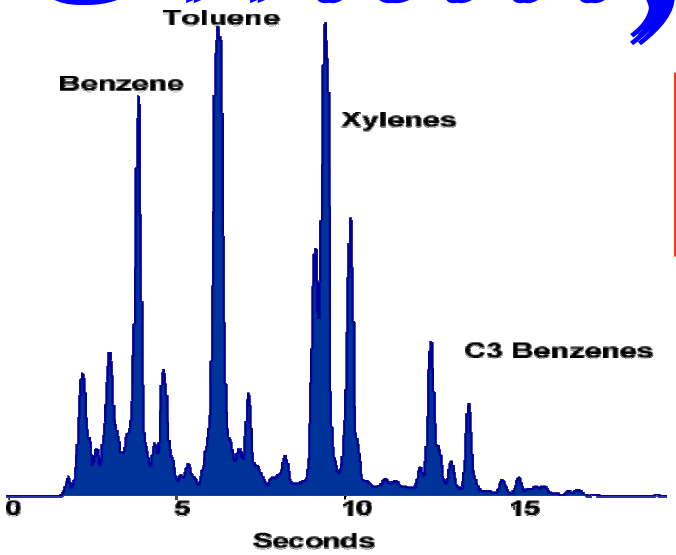


try the

microFAST™ GC

from ASI

Small,



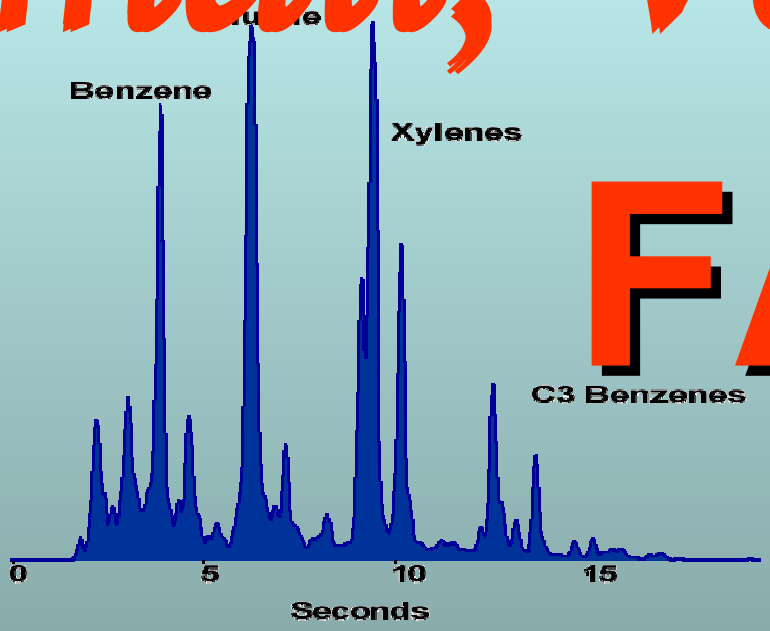
FAST GC

try the

microFAST™ GC

from ASI

Small, Versatile

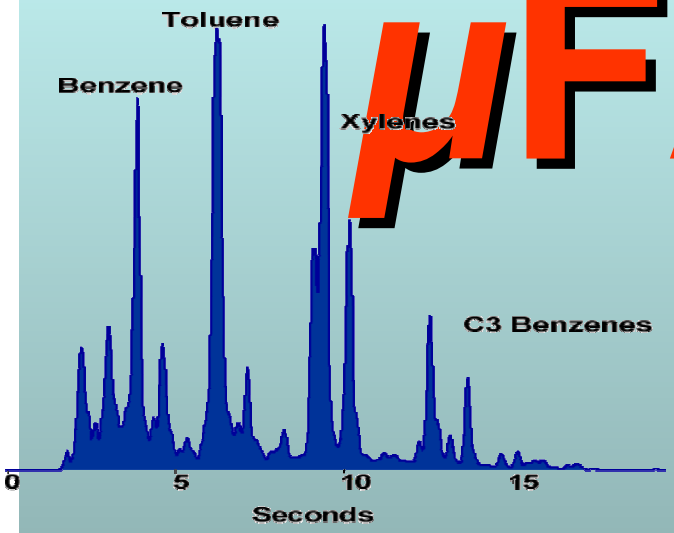


FAST GC

microFAST™ GC

from ASI

small, fast, versatile



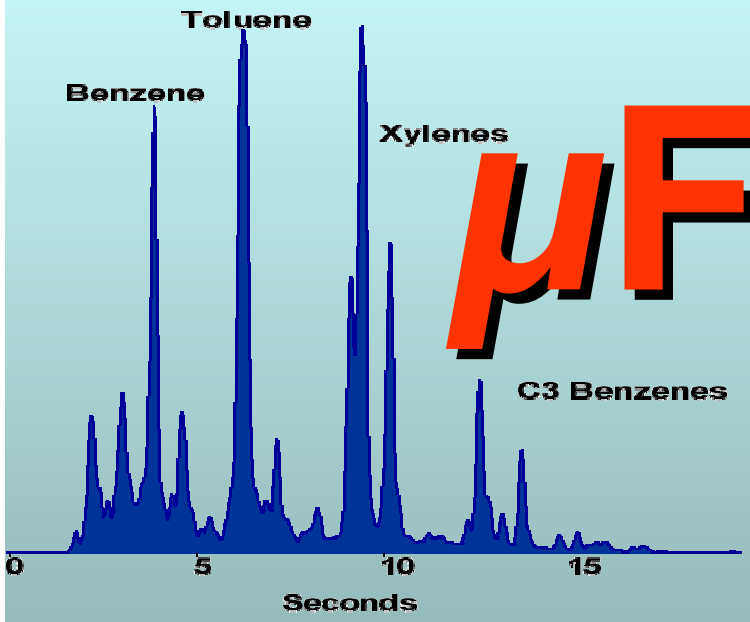
μFAST™ GC

by ASI

- Field and Lab
- Gases and Liquids
- Large and Small Volumes
- Dilute and Concentrated

Volatiles and Semivolatiles

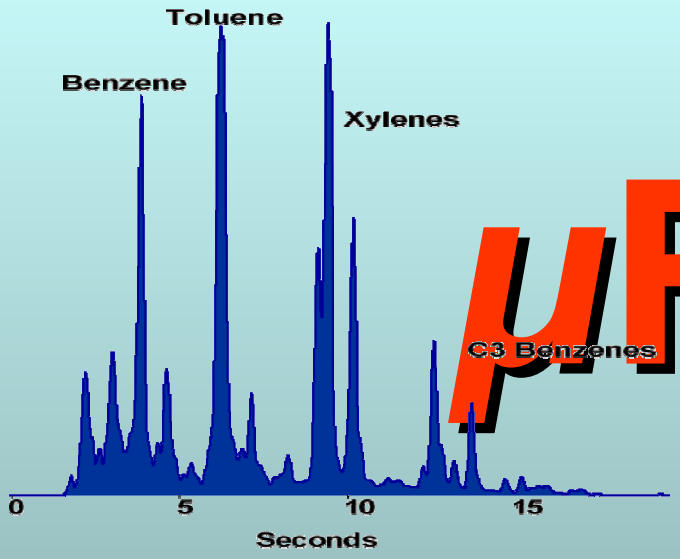
small, fast, versatile



μFAST™ GC

by ASI

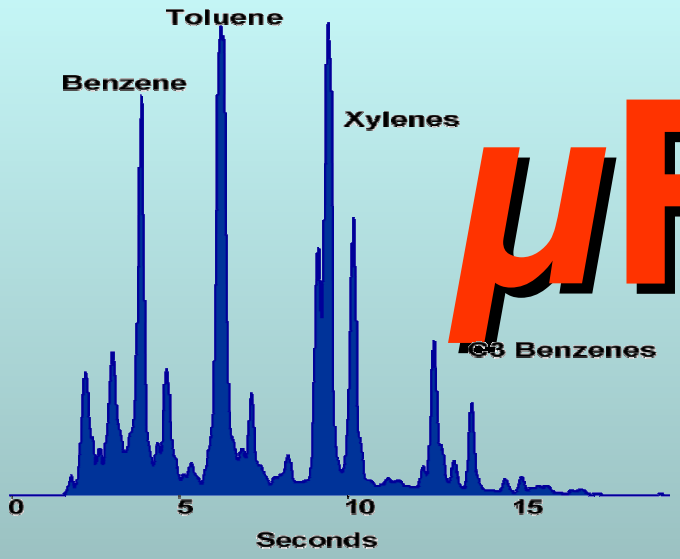
- Fast Temp. Programming
- Rates from 1°C to 25°C/second
- Electronic Pressure Control
- Two Narrow Bore Columns
- Dual Flame Ionization Detection



μFAST™ GC

- Low Thermal Mass Oven
- Rapid Cool-Down Times
- Cycle Times 3 to 5 minutes
- Portable Operations
- Small footprint
- Autosampler available

small, fast, versatile

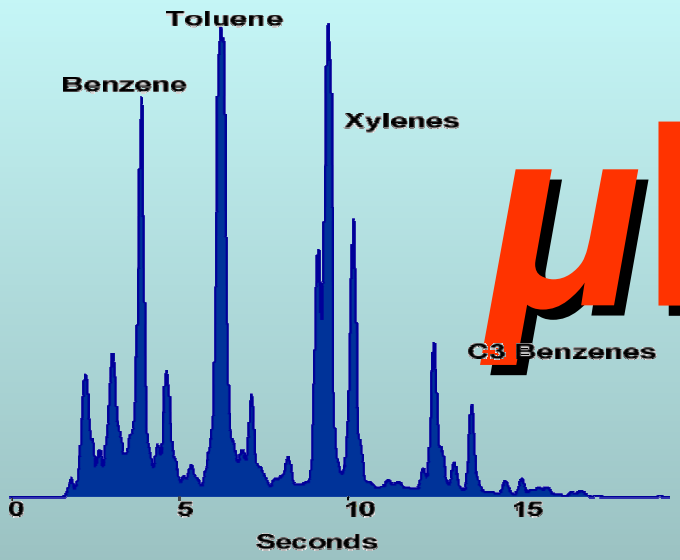


μFAST™ GC

by ASI

- Solid Sorbent Trap Injector
- Back-Flushing Desorption
- Automatic Purging/Clean-Out Cycle
- Flash Evaporator for Liquids
- Sampling Valve for Gases
- Optional Sample Loop Valve

small, fast, versatile

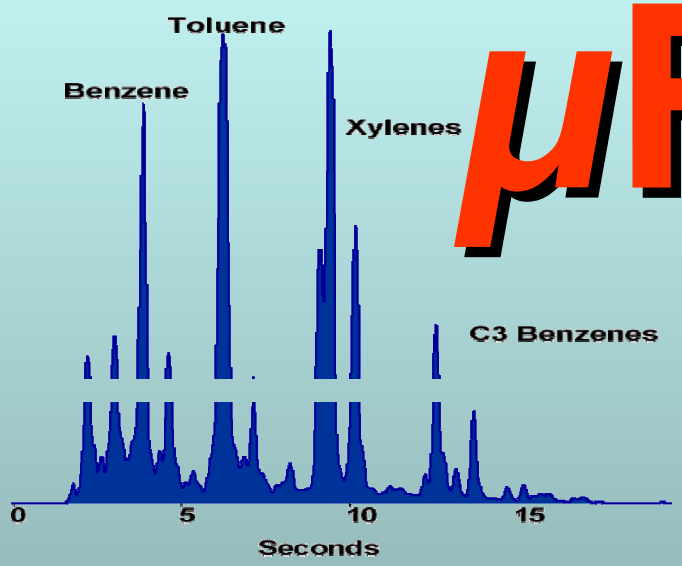


μFAST™ GC

by ASI

- Gases and Dilute Gases
- Large and Small Volumes
- Purge and Trap
- Static & Dynamic Headspace
- SPME & Membrane Extractions

small, fast, versatile



μFAST™ GC

by ASI

- Organic Solvent Extracts
- Large Volume Extracts
- Neat Liquids
- Aqueous Liquids
- Thermal Desorption Tubes

The Ultimate Field Analyzer

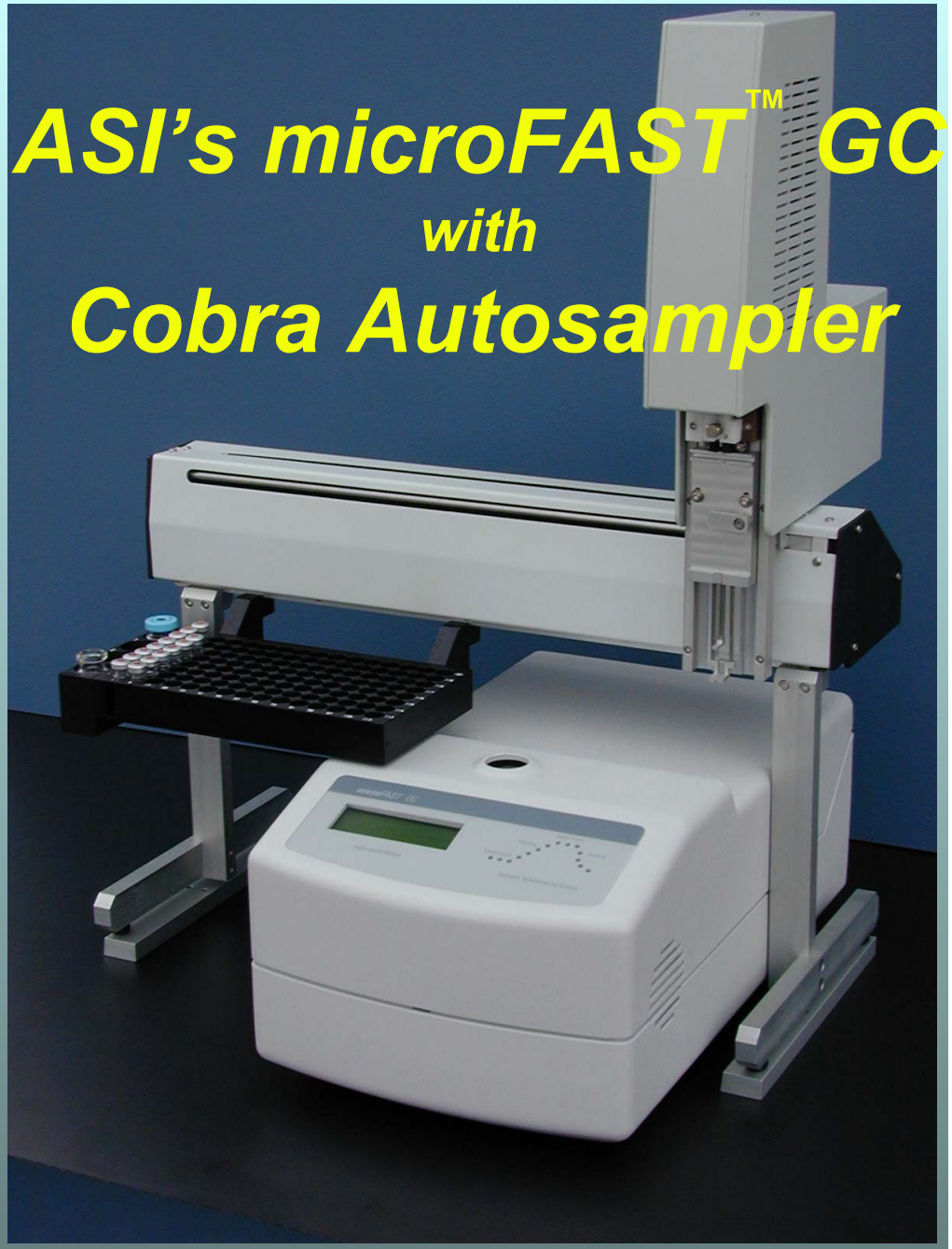
ASI's microFAST GC

microfastgc.com

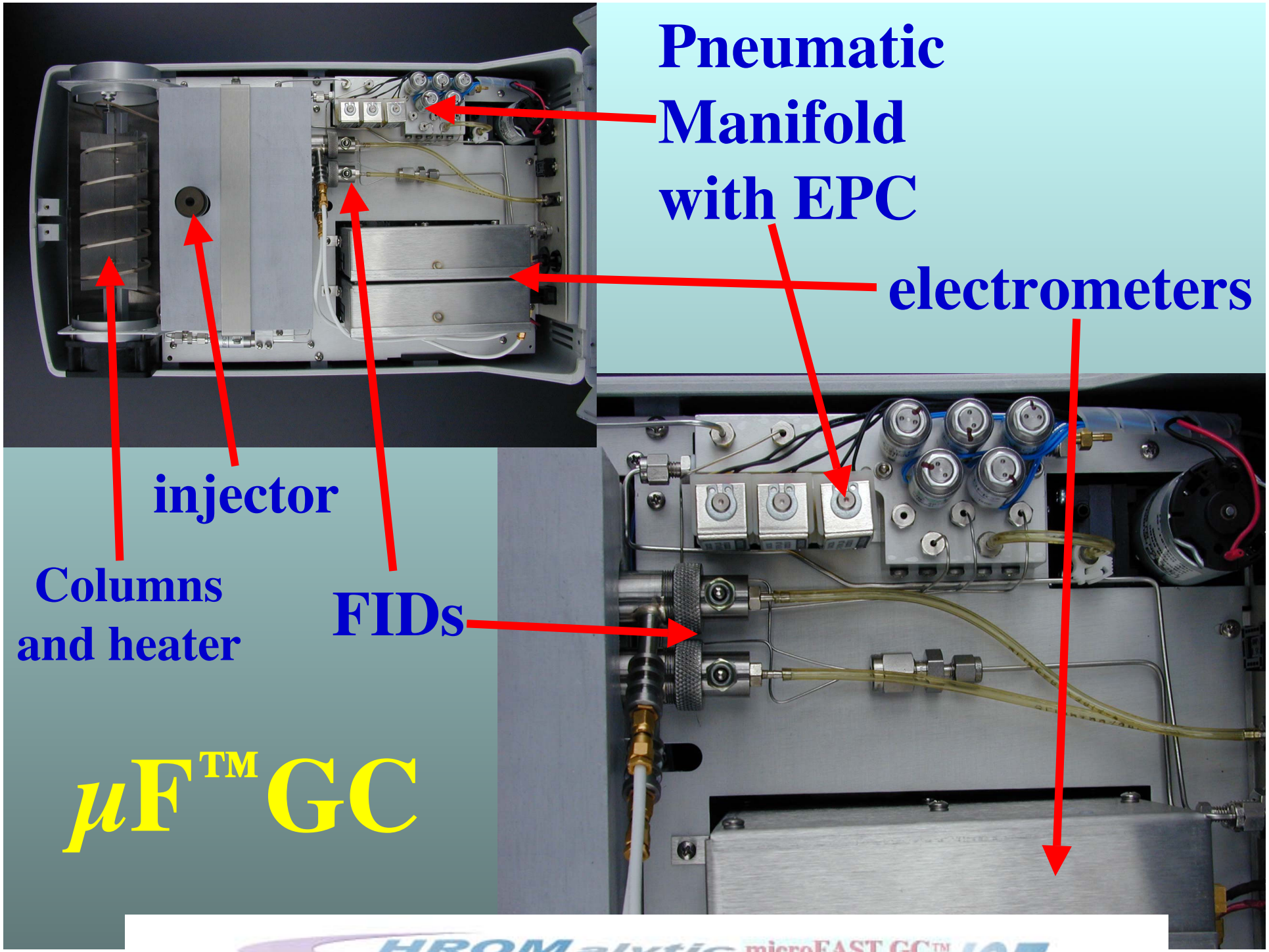
Contact:

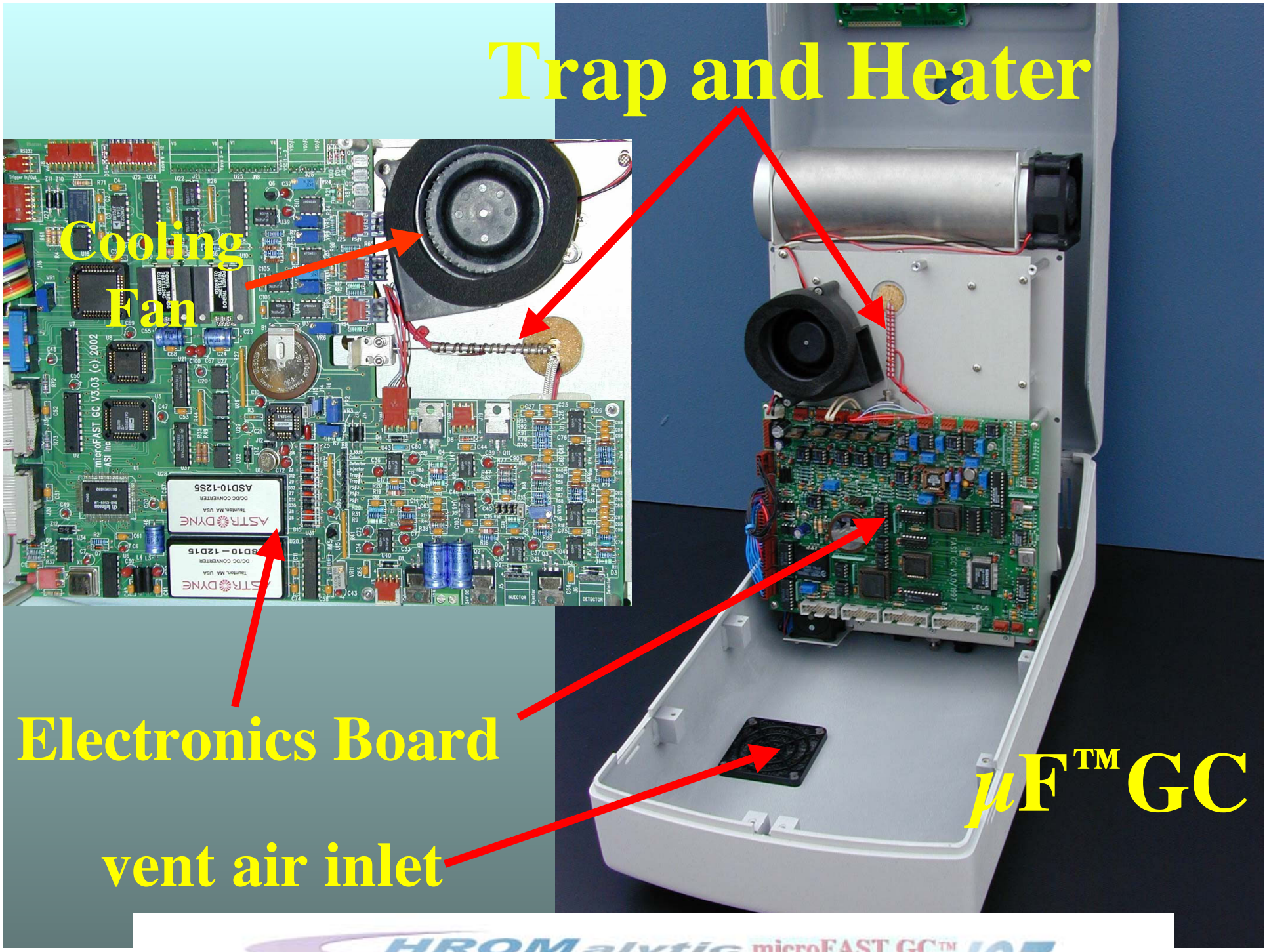
Analytical Specialists Inc. (ASI

ASI's microFAST™ GC with Cobra Autosampler



Fast, Compact Laboratory GC Analyzer

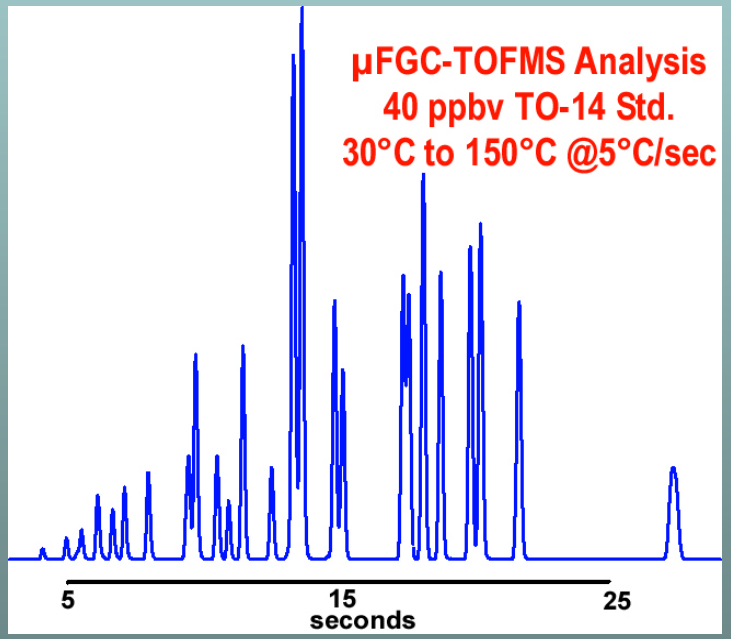




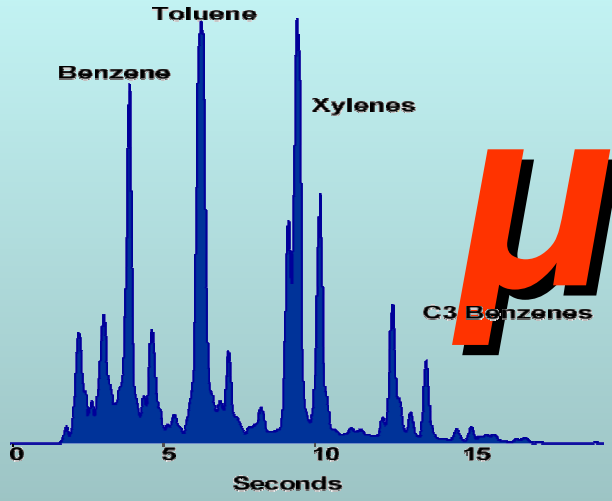
fast, versatile

μFAST™ GC

by ASI



small, fast, versatile



μFAST™ GC

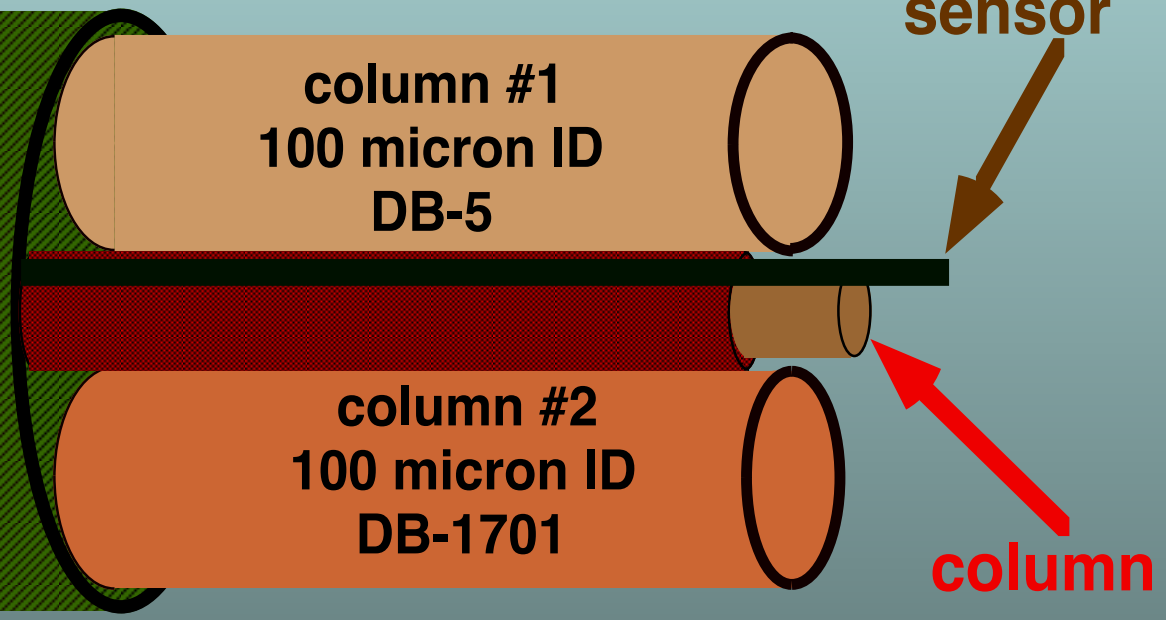
by ASI

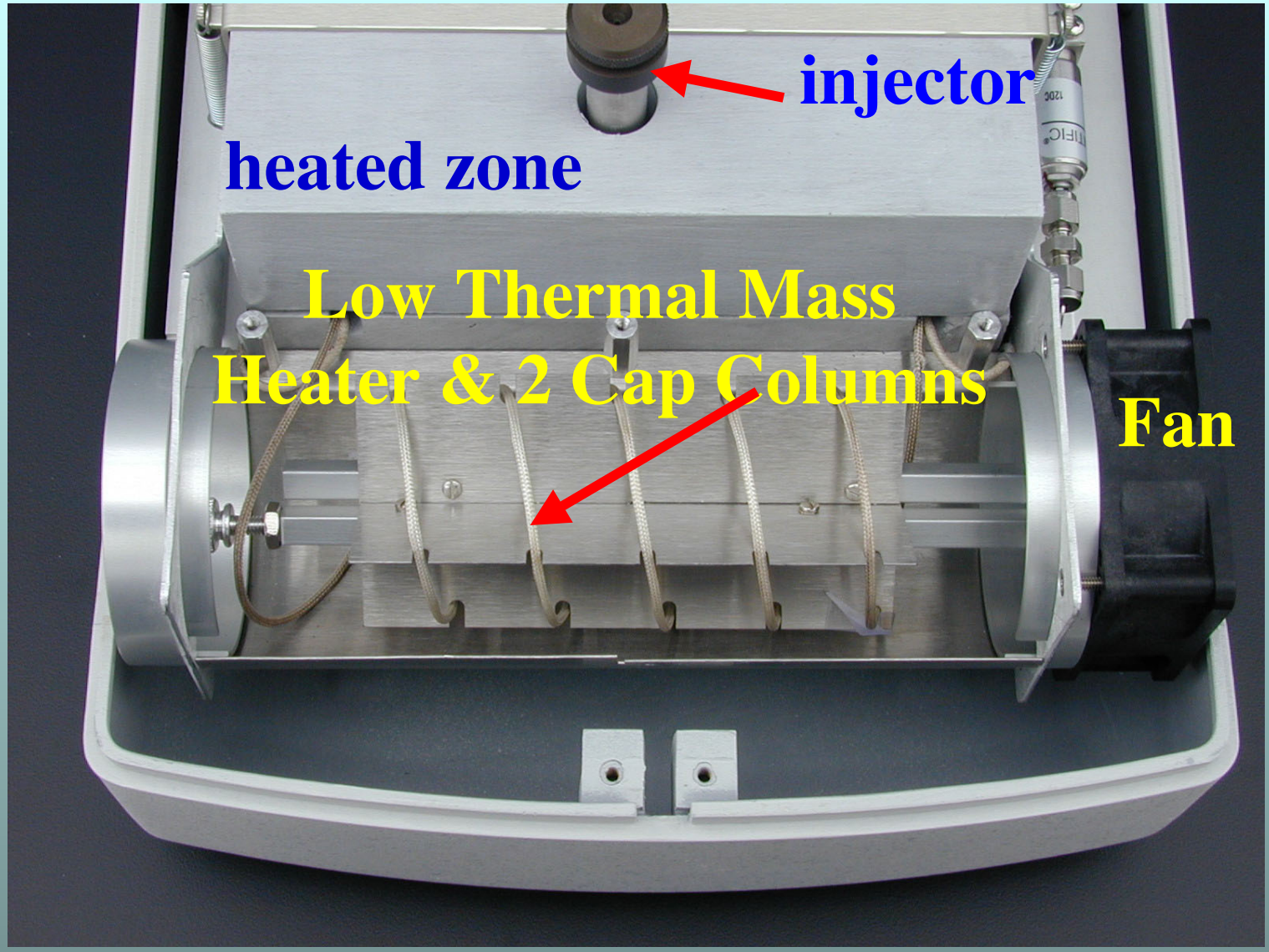
Contact:

Analytical Specialists Inc. (ASI

microFAST GC2 analytical columns assembly

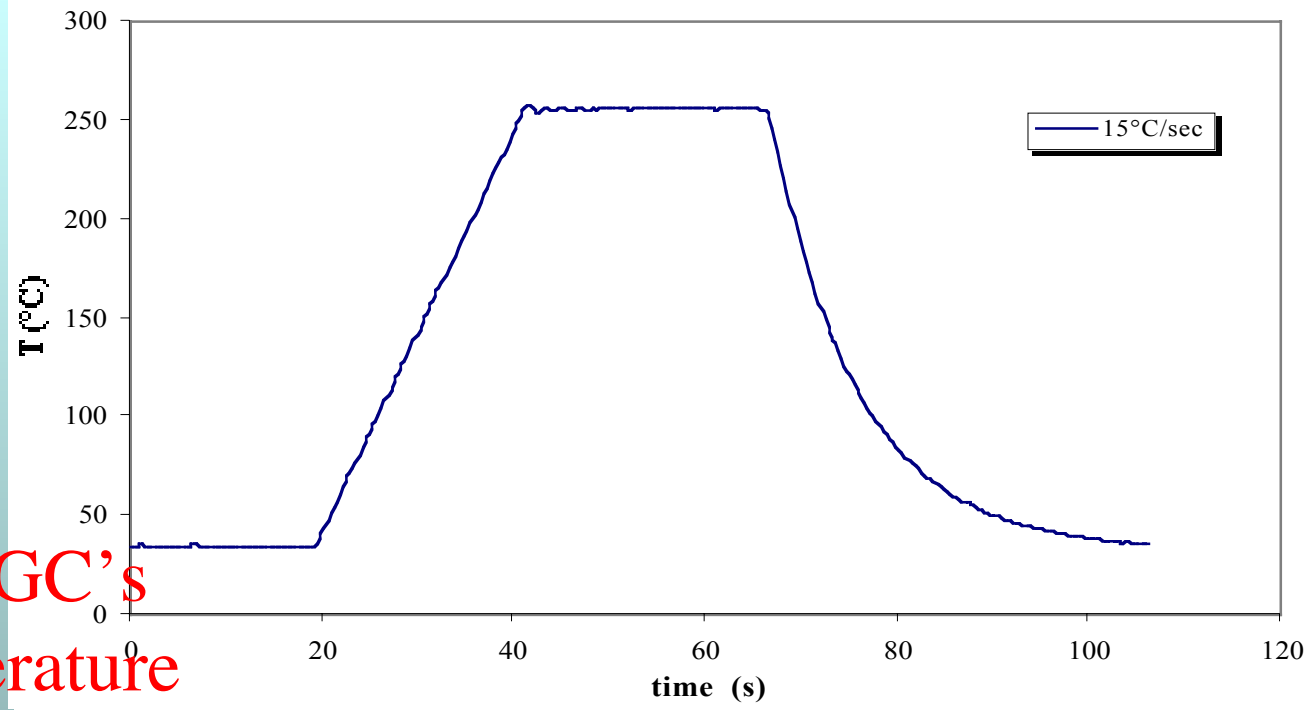
columns oven sheath 1mm ID

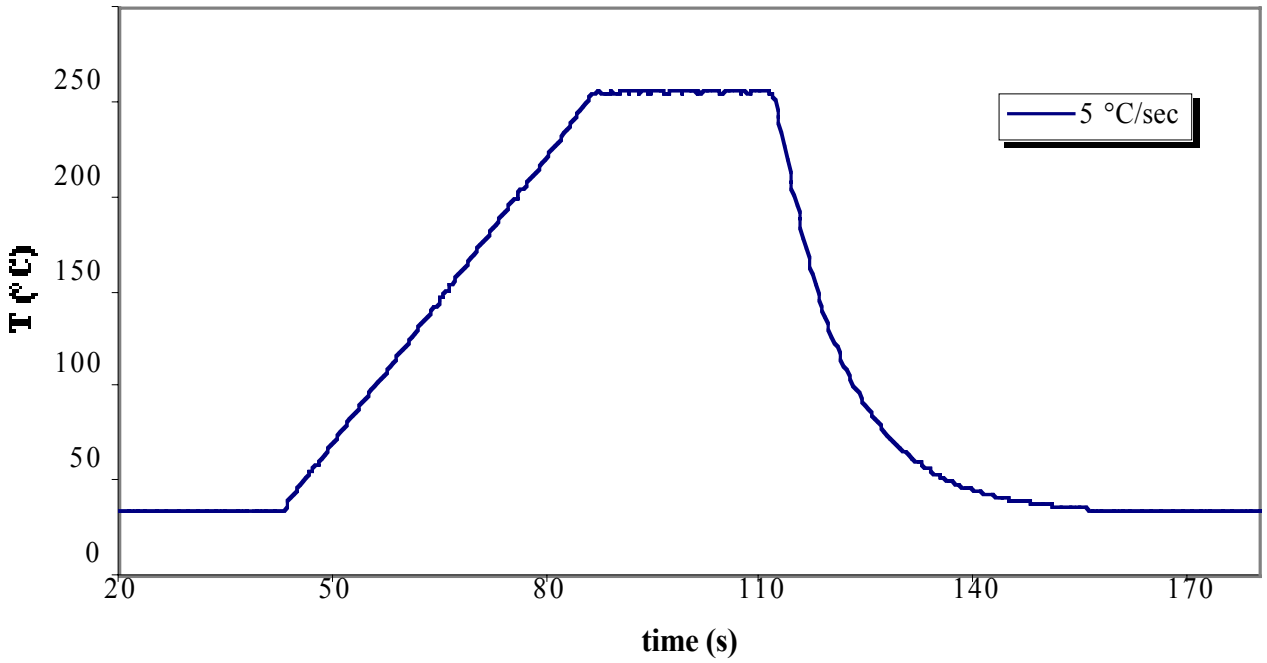


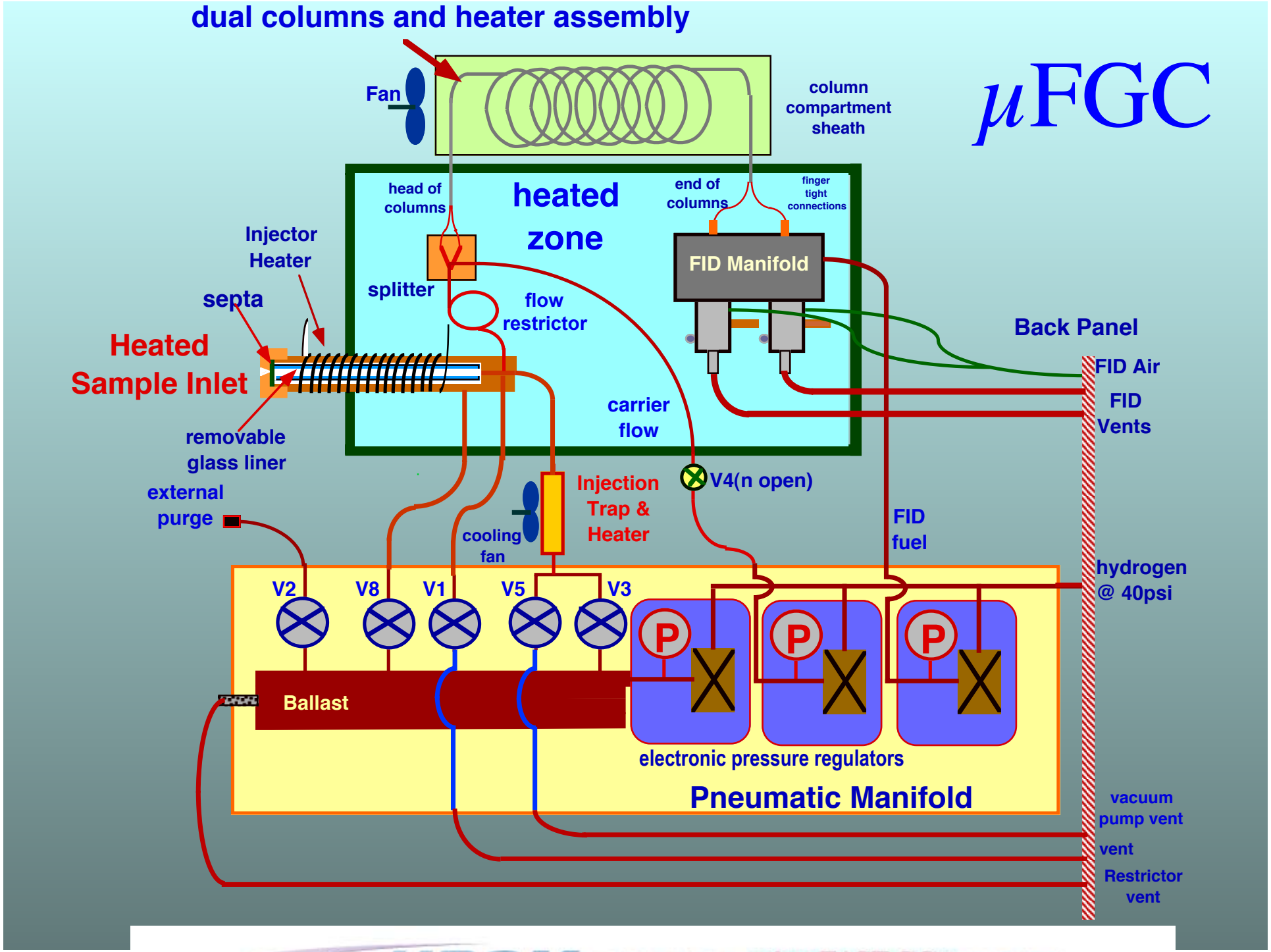


ultra fast temperature programming
up to 25°C/second

microFAST™ GC's Column Temperature Verses Heating Rates

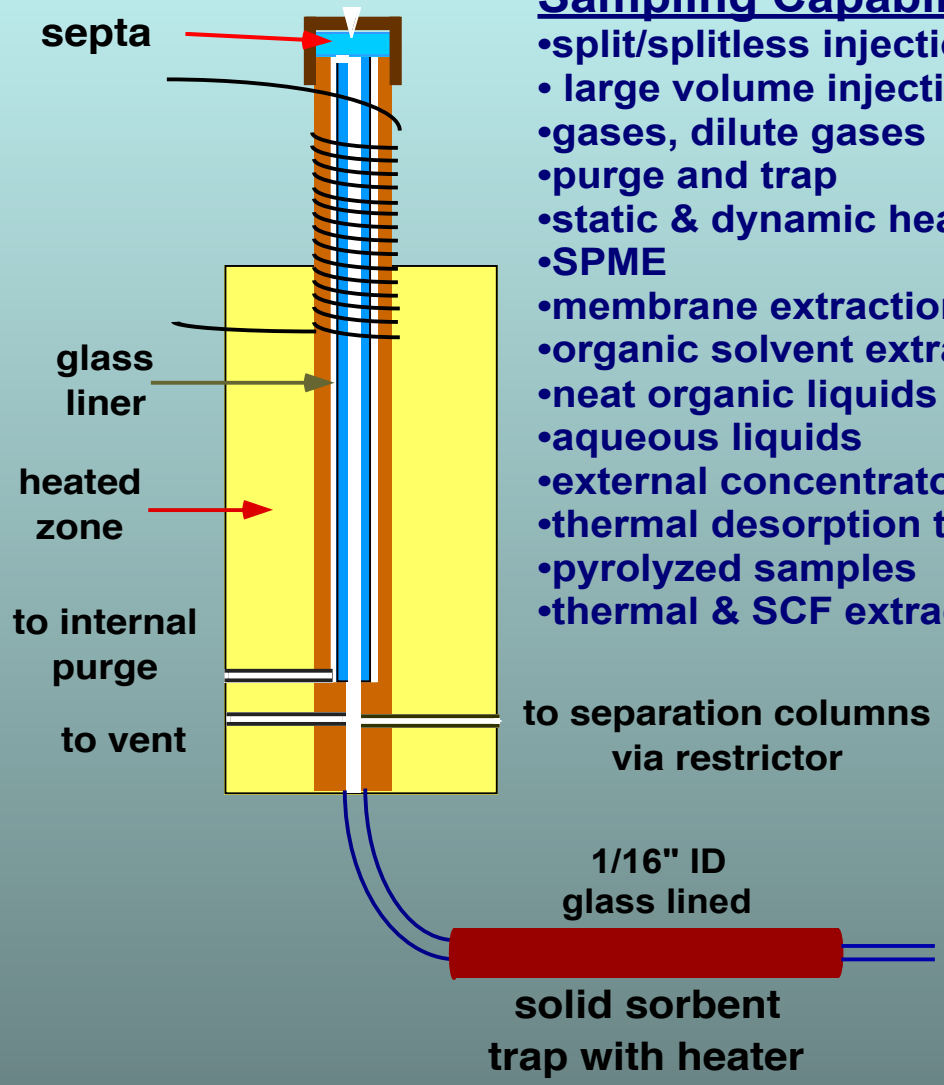






microFAST GC Injection System

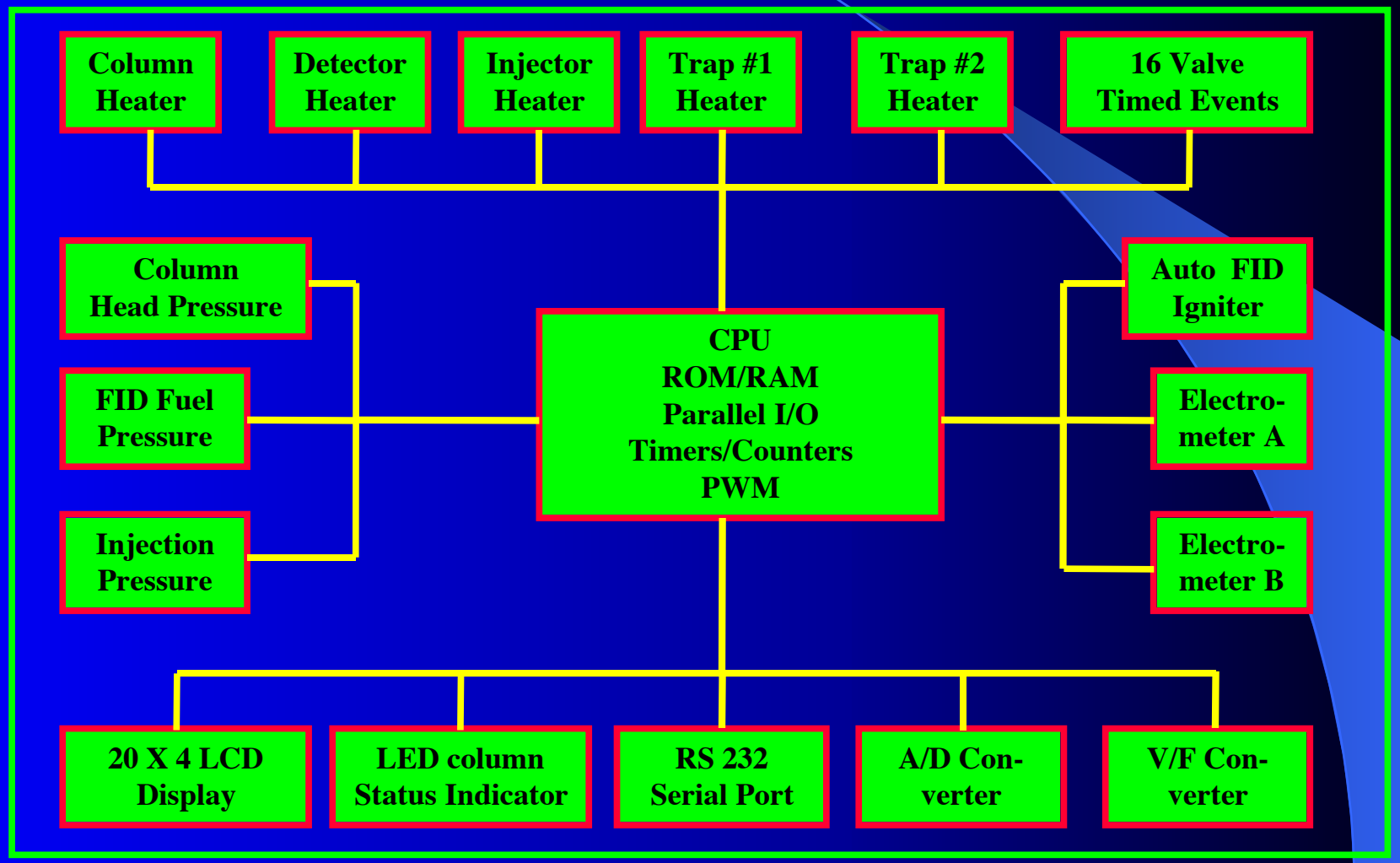
Volatile and Semivolatile Analytes



Sampling Capability

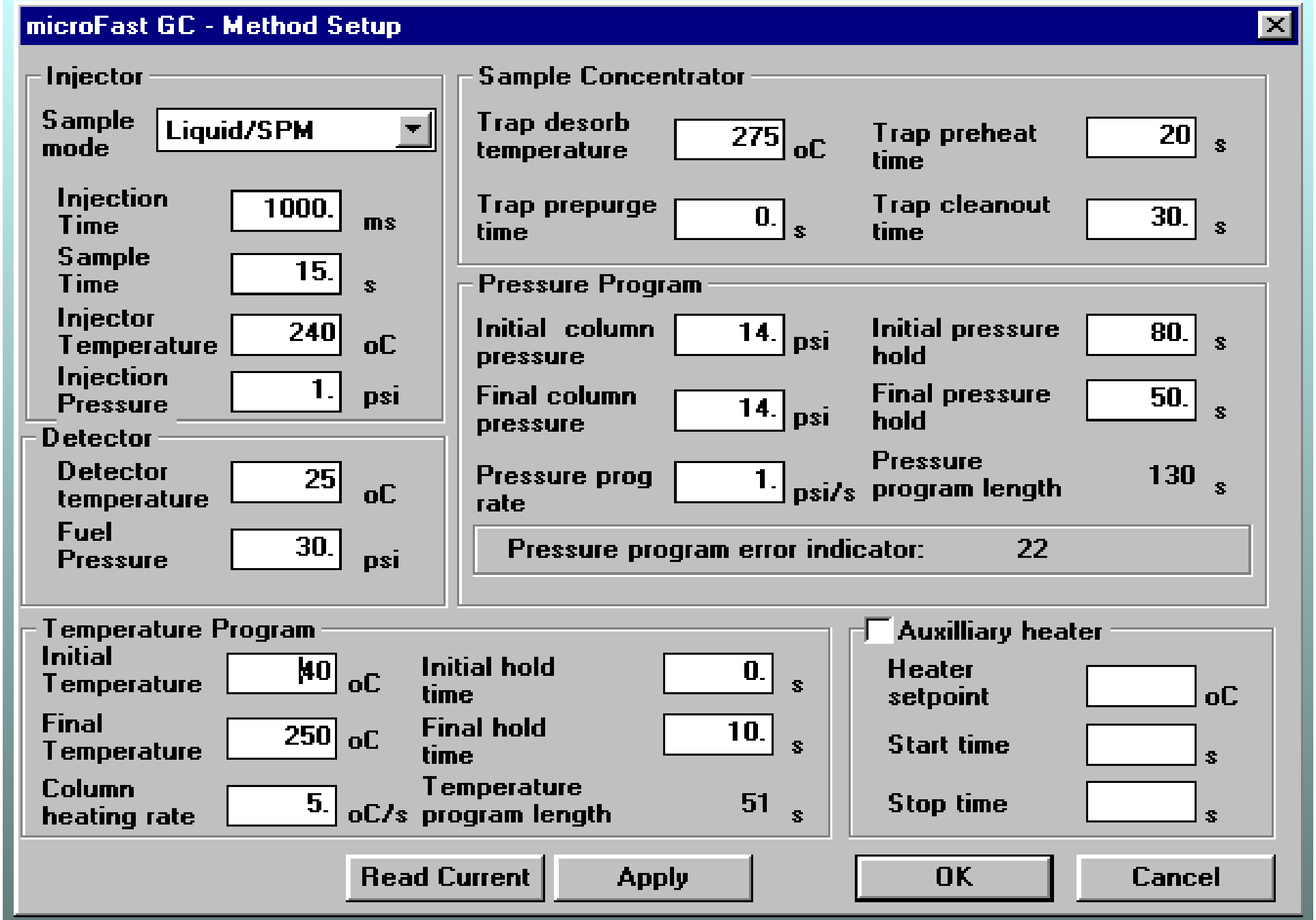
- split/splitless injections
- large volume injections
- gases, dilute gases
- purge and trap
- static & dynamic headspace
- SPME
- membrane extractions
- organic solvent extracts
- neat organic liquids
- aqueous liquids
- external concentrators
- thermal desorption tubes
- pyrolyzed samples
- thermal & SCF extracts

GC Board Block Diagram



GC Control Frequency

Control	Interval	Frequency	Accuracy
Column Temperature	10 ms	100	±0.1°C
Column Head Pressure	40 ms	25	±0.1psi
Injector Temperature	80 ms	12.5	±0.5°C
Detector Temperature	80 ms	12.5	±0.5°C
Trap Temperature	80 ms	12.5	±0.5°C
Injection Pressure	80 ms	12.5	±0.1psi
FID Fuel Pressure	80 ms	12.5	±0.1psi
Valve Events	10 ms	100	
LED Display/Column Status	250 ms	4	
LCD Display	1000 ms	1	

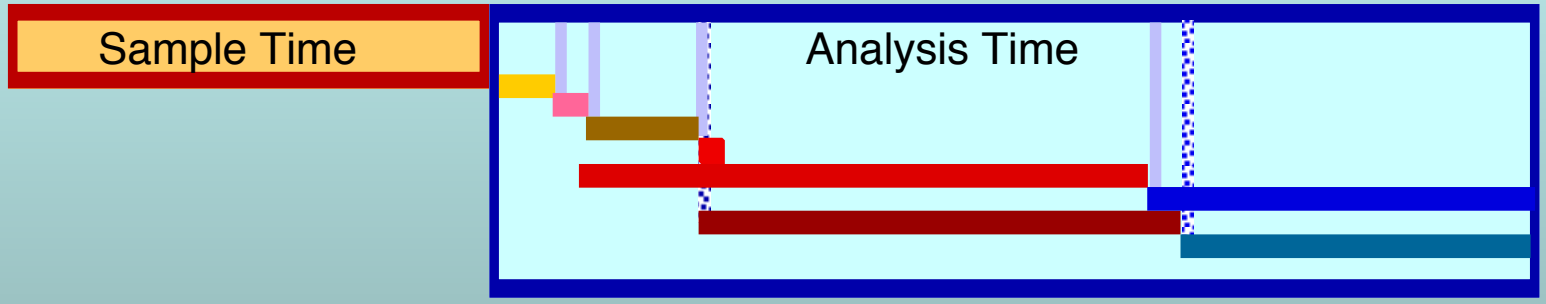


Analytical Cycle

(typically, 3 to 5 minutes)

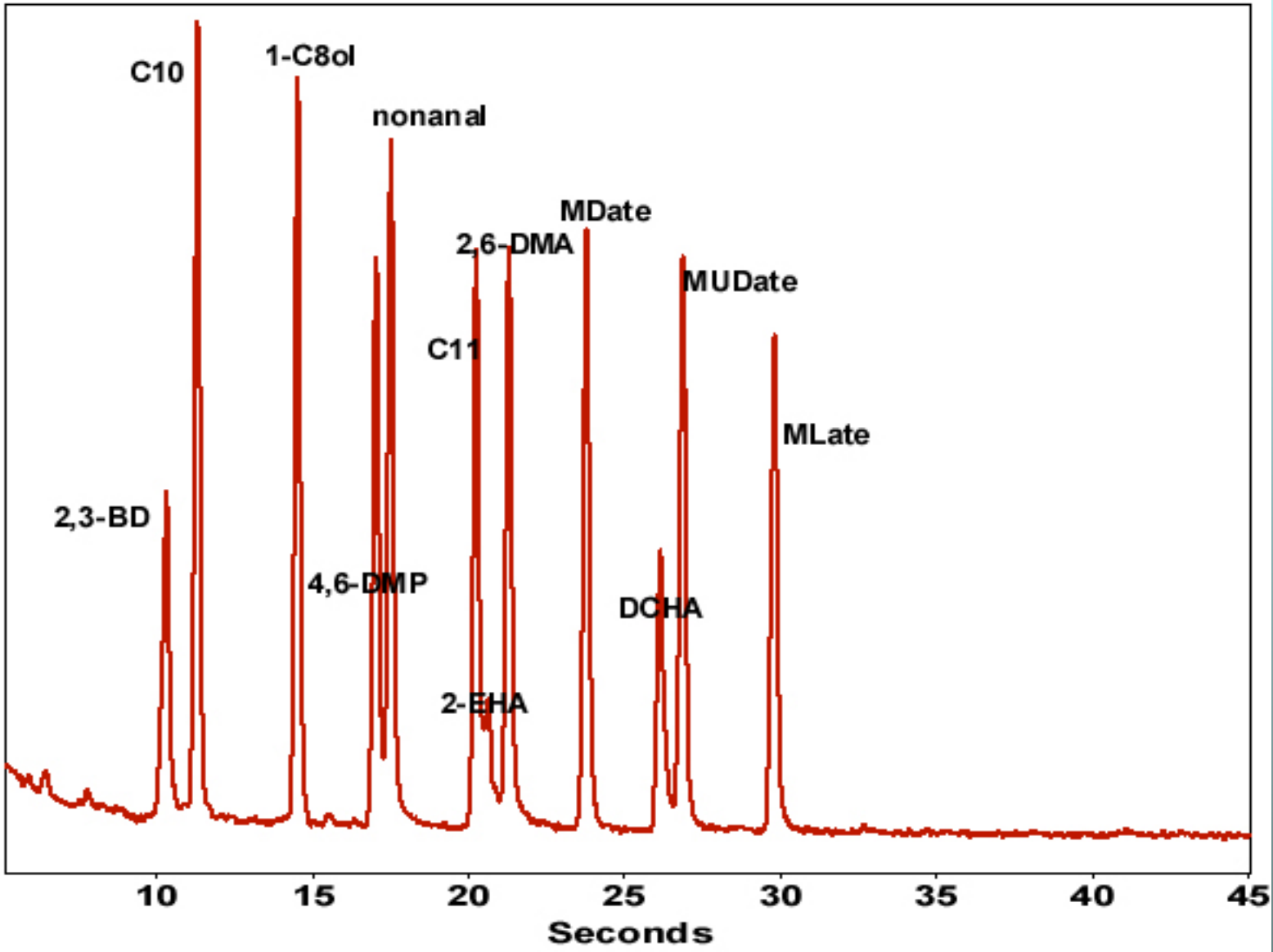
analytes passed through & adsorbed onto trap material

analytes desorbed from trap, injected into and separated by columns

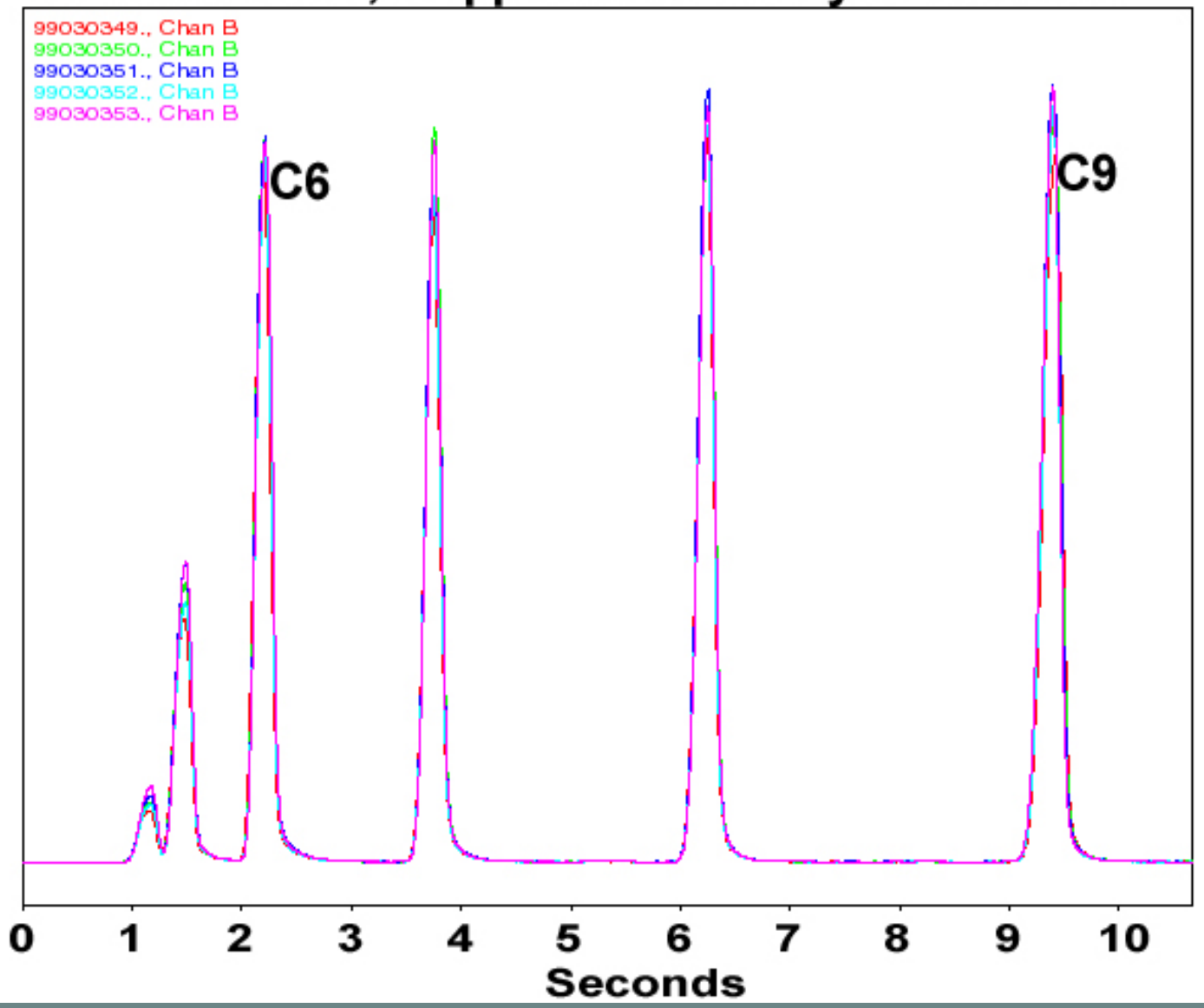


Trap prepurge time-------- V8+, V5+ at beggining, off at end of "Trap prepurge time"
Equilibrate time---------- V8-, V5-, back flow into injector through restrictor
Trap preheat time--------- trap heater on, inj. starts at end of "xx" sec "Trap preheat time"
Injection time---------- V4- for "xx" ms inj time, V3+, V5+ at end of "Injection Time"
Trap cleanout time---------trap heater turned on for "xx" sec duration of "Trap cleanout time"
trap cooldown time------- trap heater turned off for cooldown
Column separation time--- column temperature/pressure programs begins
column cooldown time----- column heater turned off, pressure resets to "Initial column pressure"

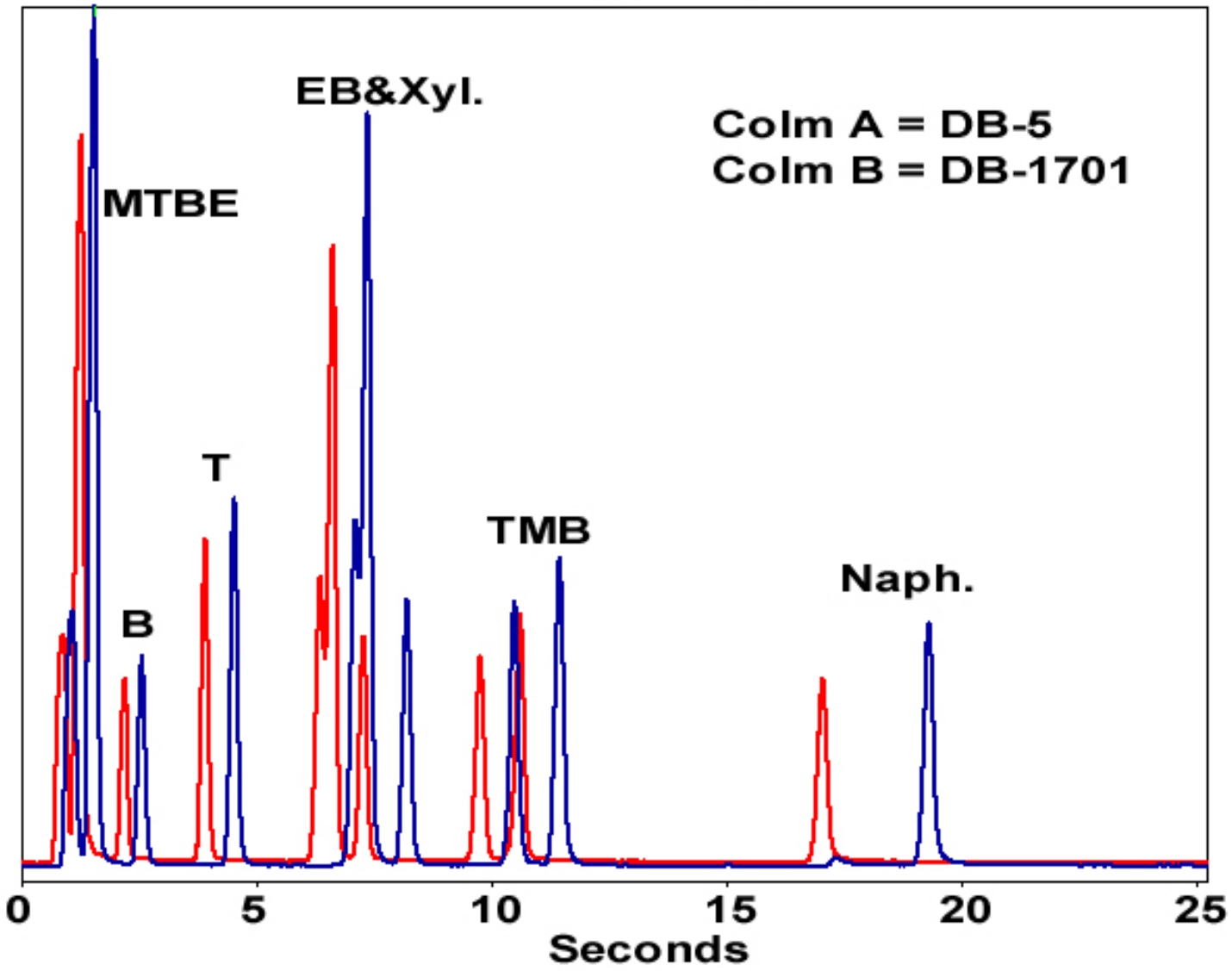
microFAST GC2: 40°C to 250°C @ 5°C/sec.
Grob Test Mixture

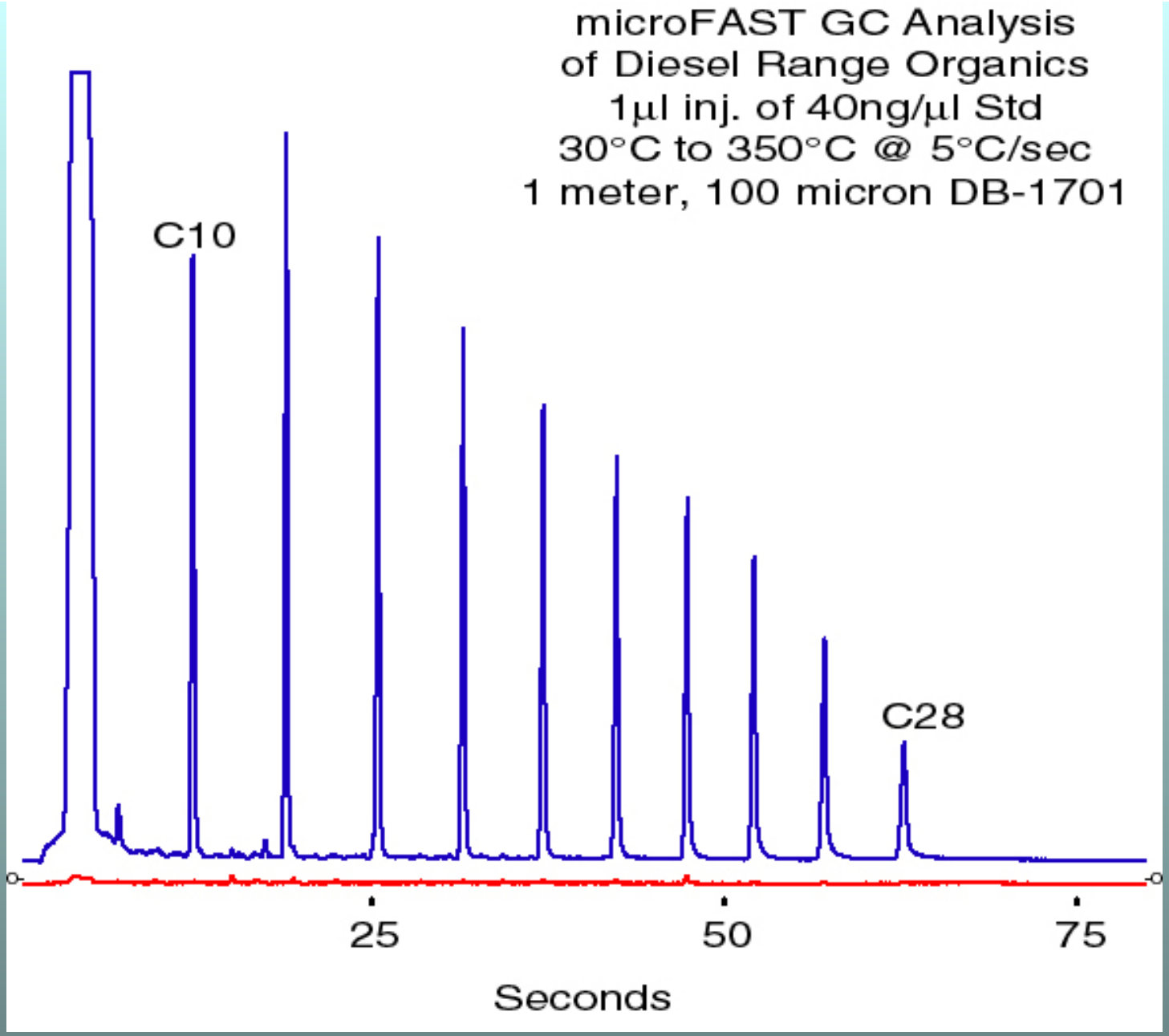


5 Replicate microFAST GC2 Analyses, 40°C to 140°C @ 5°C/sec.
VOC Standard, 20 ppm C5 to C9 Hydrocarbons

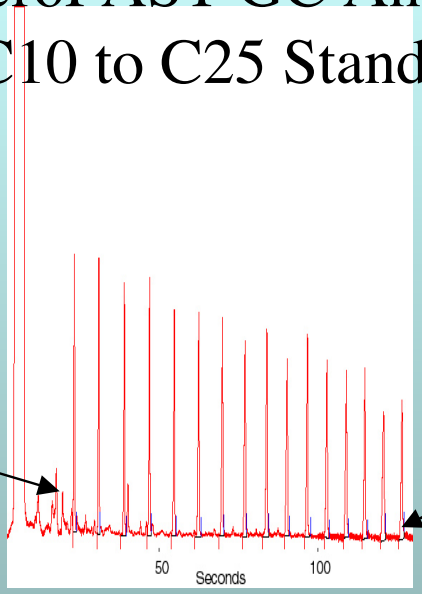


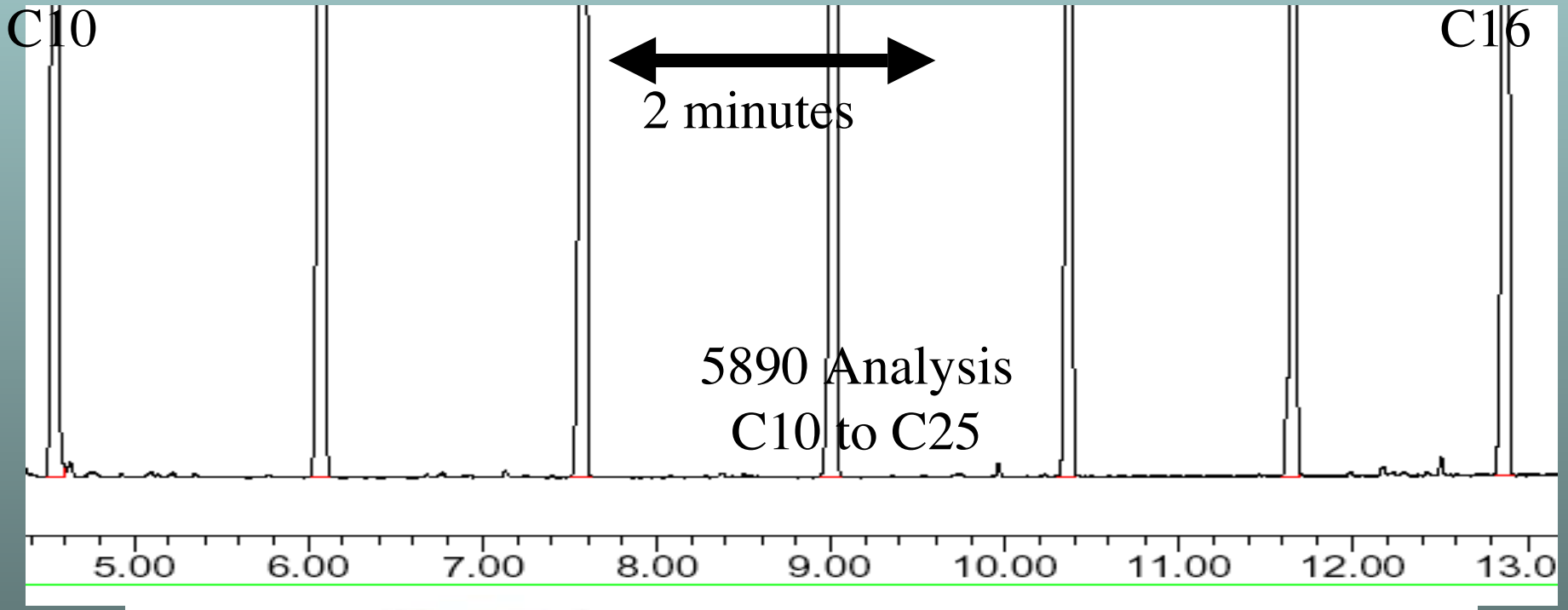
microFAST GC2 Analysis @ 5°C/sec, 40°C to 150°C
Gasoline Range Organics

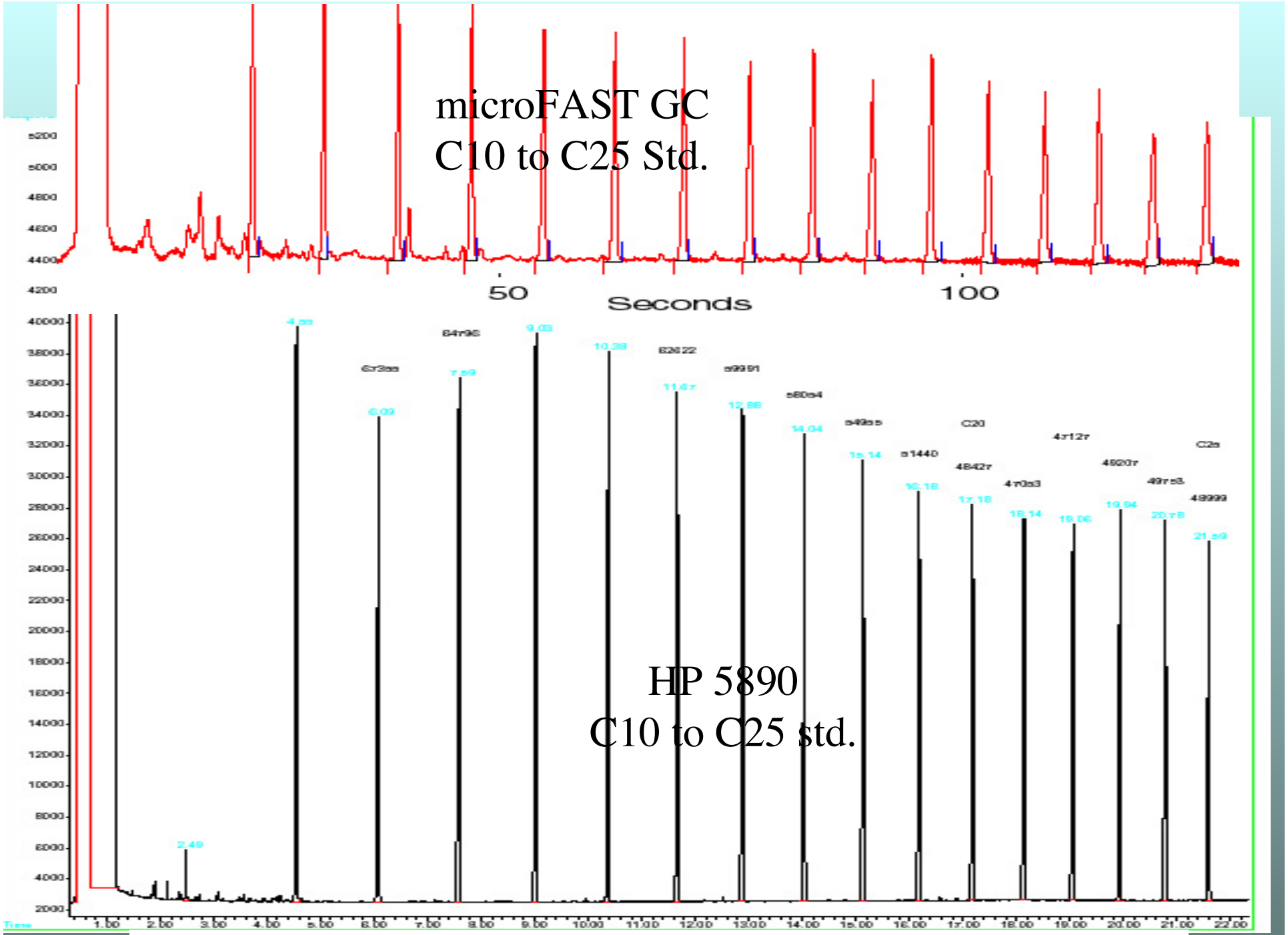




microFAST GC Analysis
C10 to C25 Standard

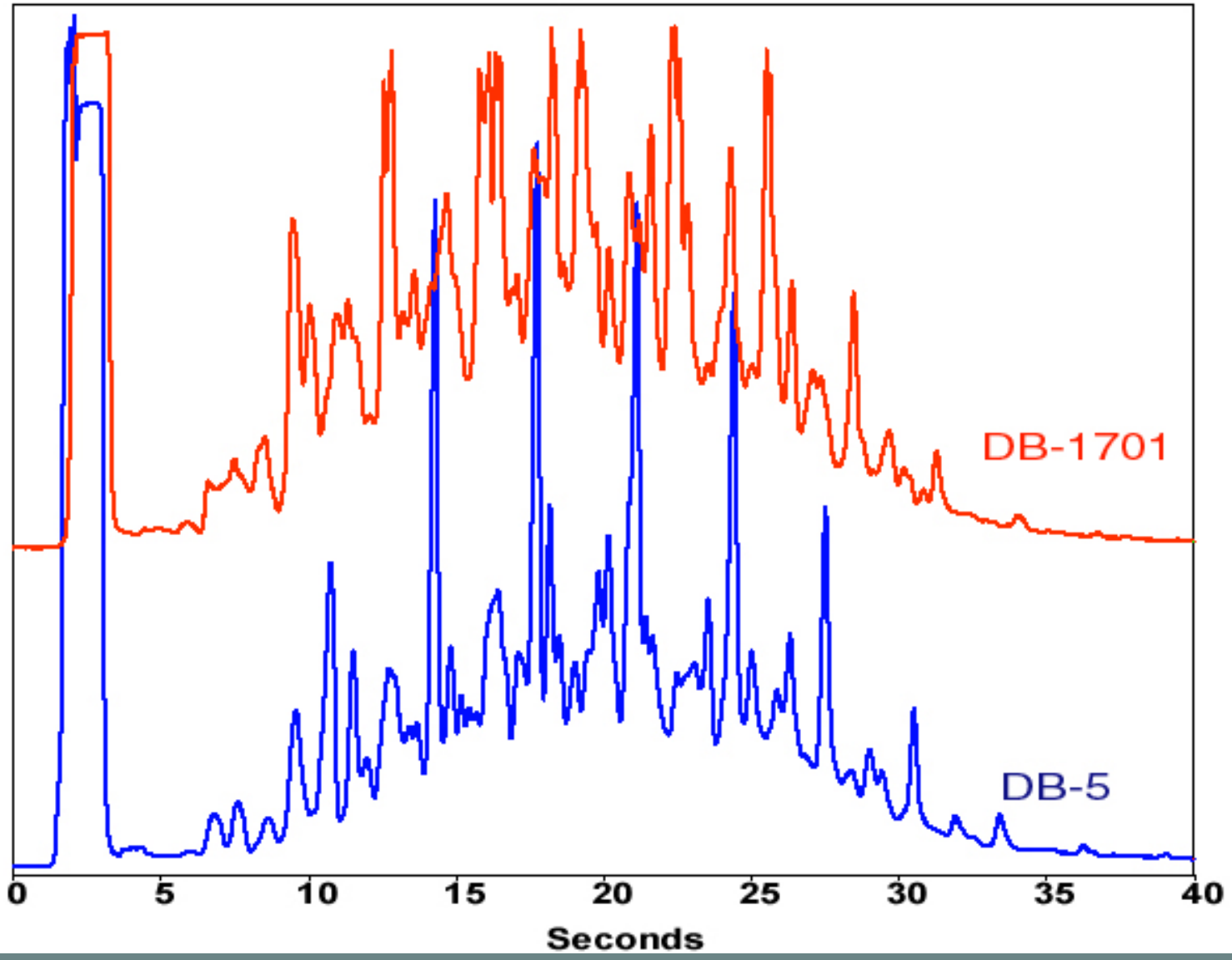






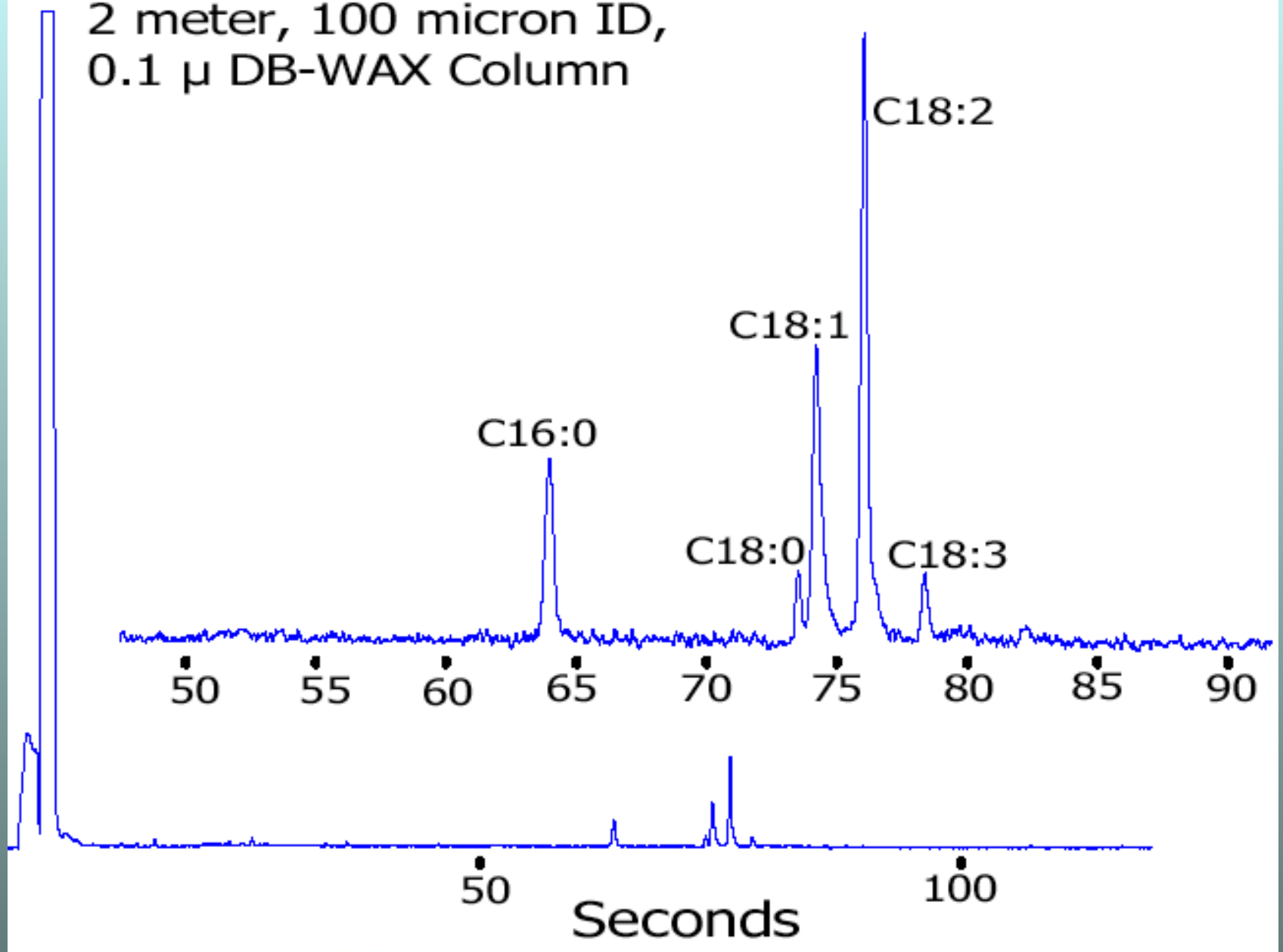
microFAST GC2: 40°C to 250°C @ 5°C/sec.

Military Jet Fuel

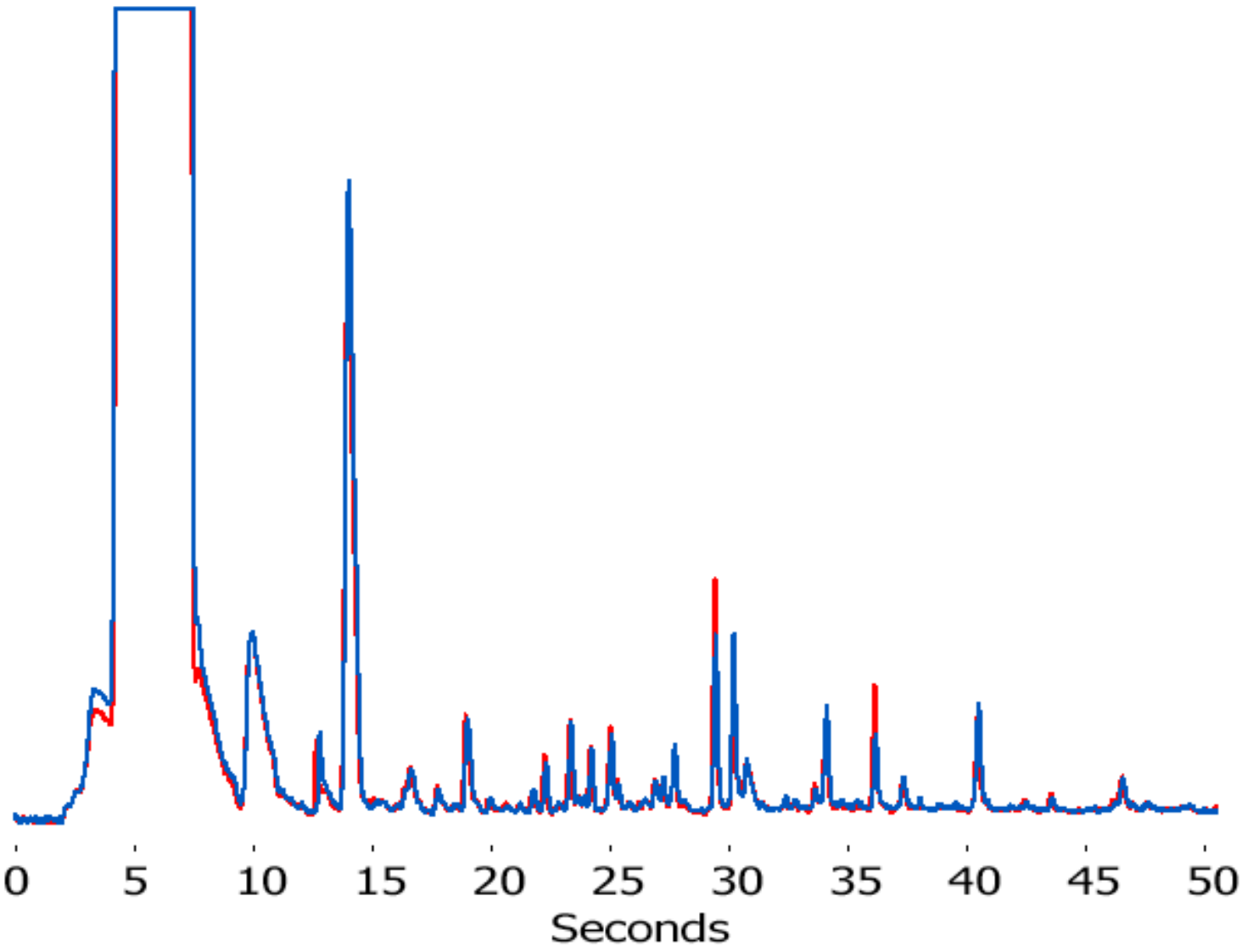


microFAST GC Analysis of FAME Standards

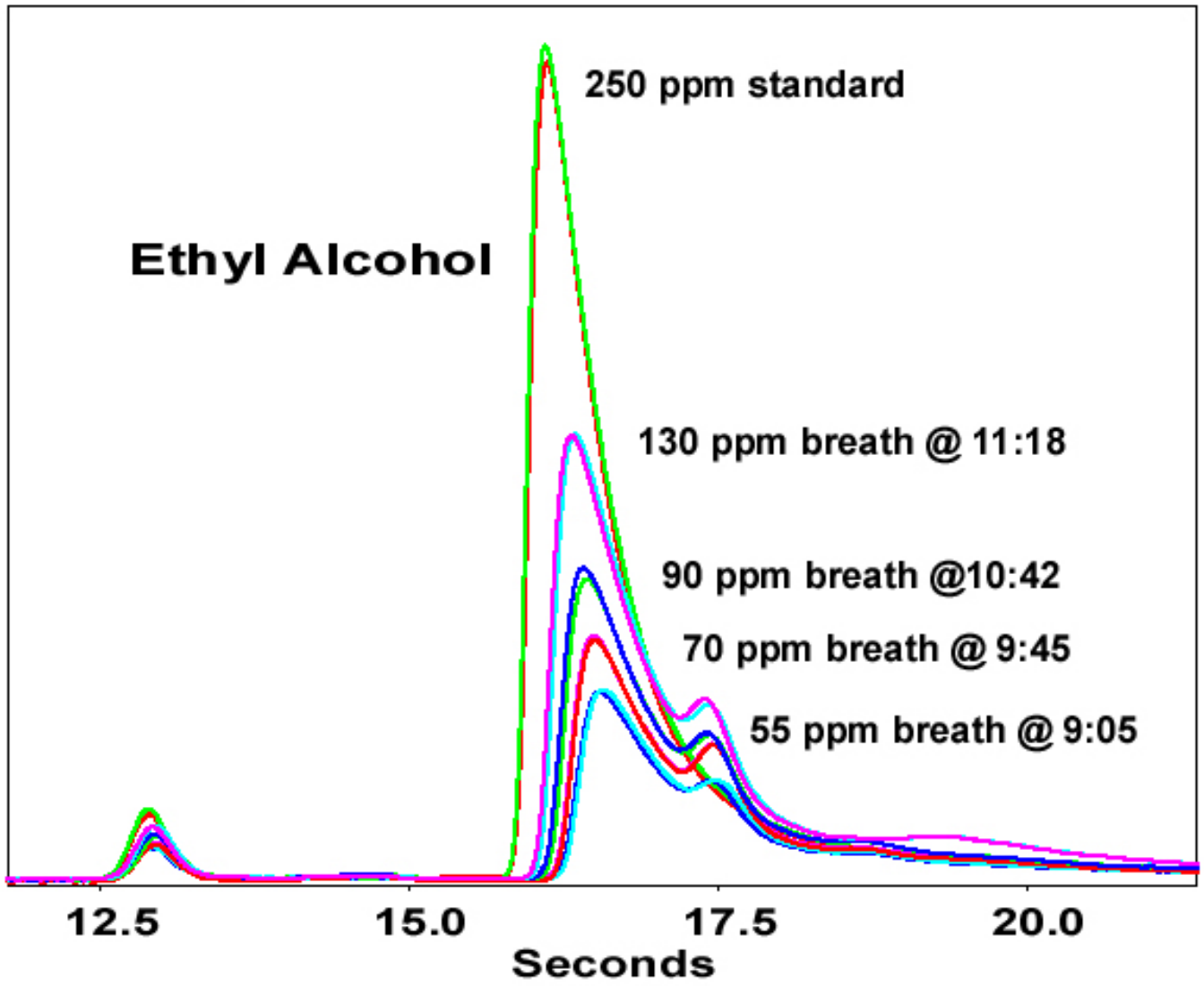
35°C to 250°C @ 5°C/sec., FID
2 meter, 100 micron ID,
0.1 µ DB-WAX Column



microFAST GC Analysis of Two .8 µl neat Johnny Walker Red Samples
35°C to 260°C @ 5°C/ second, 2 meter, 100 micron OV1701 Column

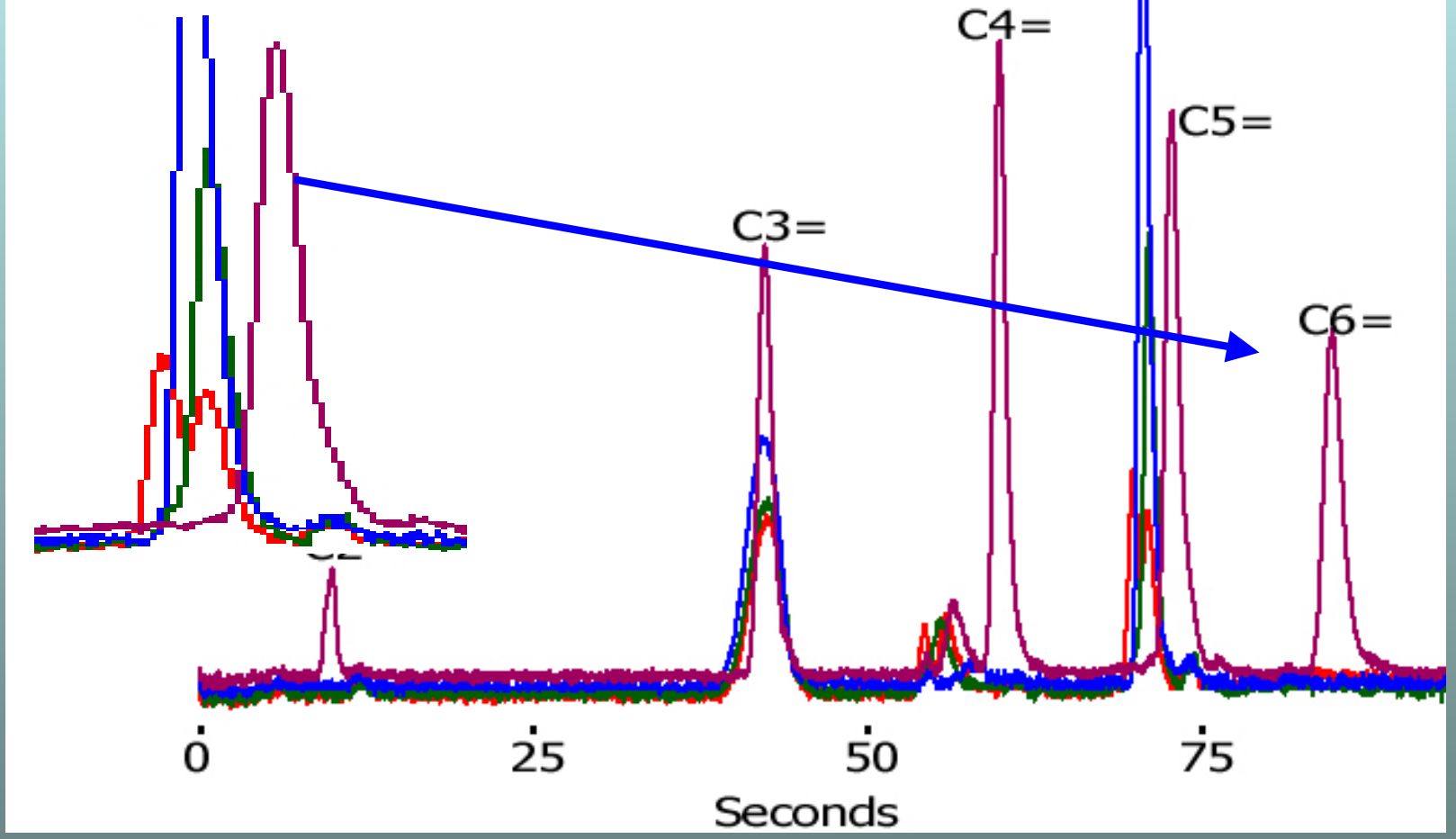


microFAST GC Analysis of Breath Alcohol Samples
30°C to 150°C @ 10°C/sec, 1m, 350 micron GSQ Column



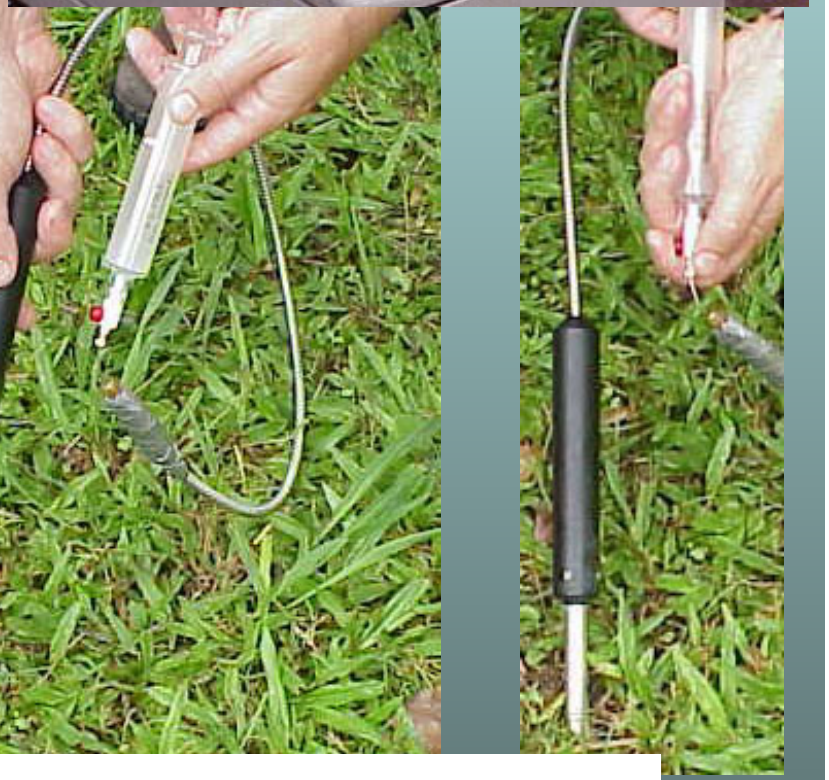
microFAST GC Analysis

of 10 ml Alkene 250 ppb Std. (C2 to C6)
and 10ml Deep Breath Samples
taken from 3 Different Males

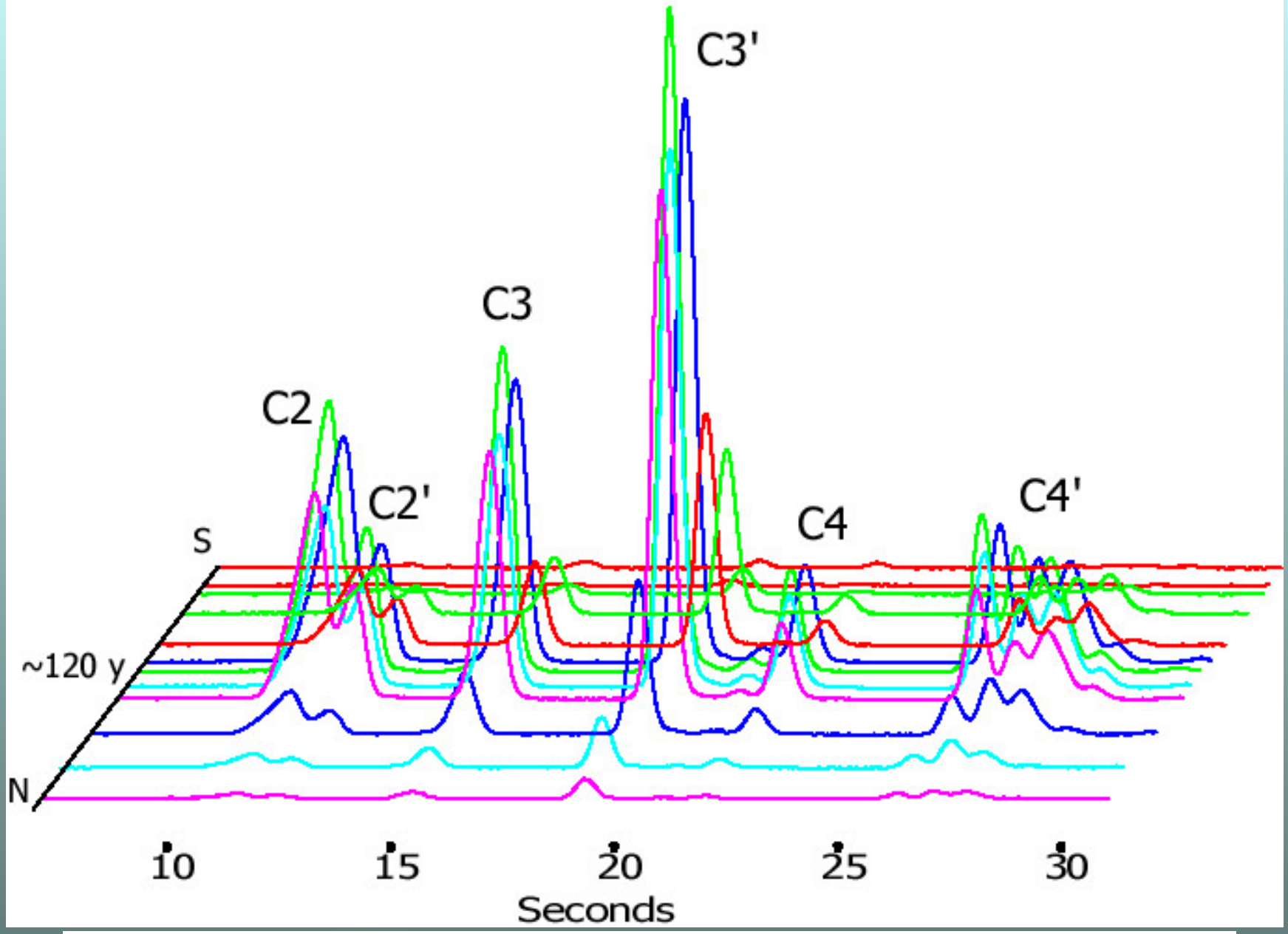


Soil Gas Sampling and Analysis

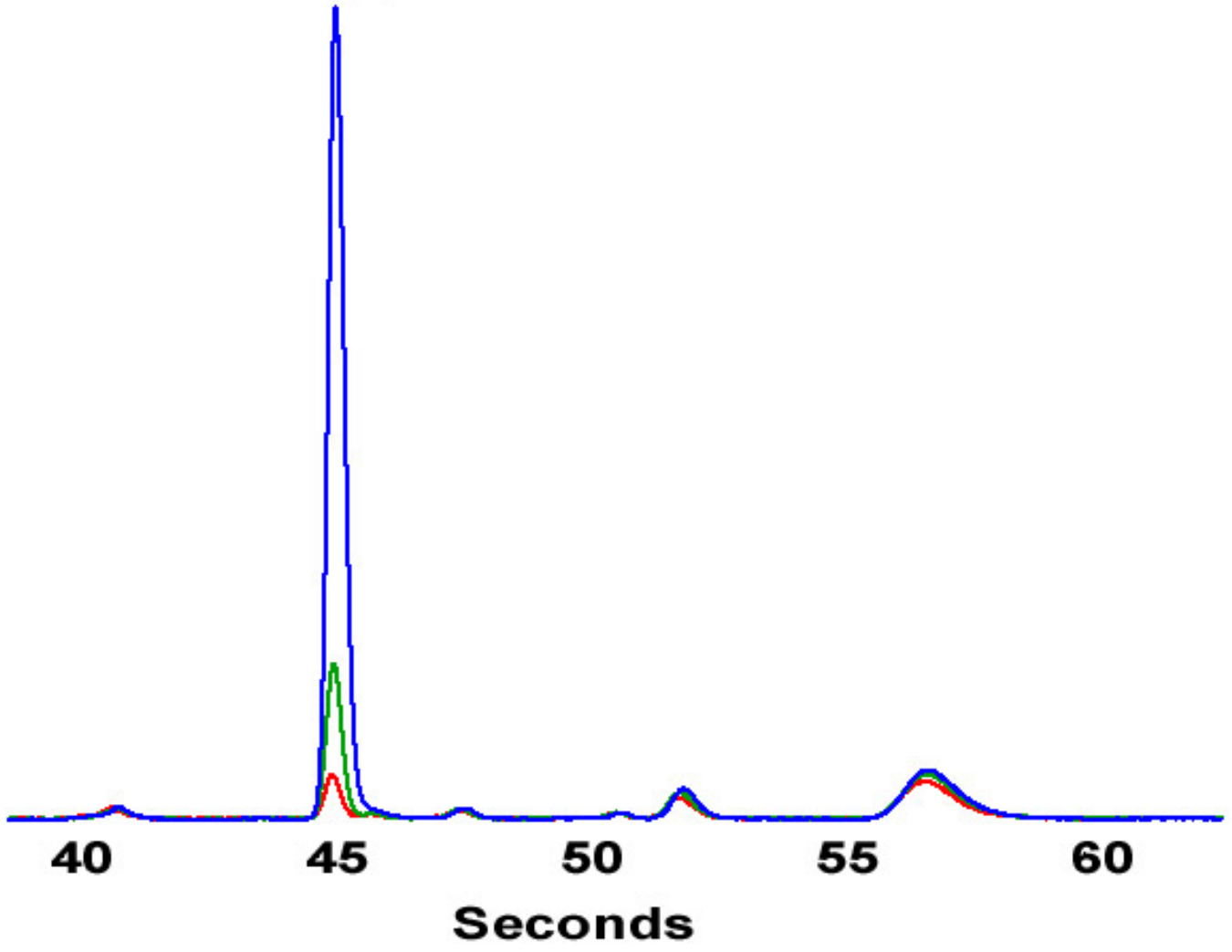
In 15 minutes or less



microFAST GC Analysis of Soil Gas Across Baton Rouge Fault



microFAST GC Analysis of Vinyl Chloride in 5ml of air @ 1000 (blue), 100 (green), & 10 (red) ppb Spherecarb trap, 1m 320 micron GSQ Column



microFAST™ GC

Used On-Site During Benzene Pipeline Spill July '01, Geismar LA