

Enhanced Rtx®-1PONA GC Column Improves Detailed Hydrocarbon Analysis

Guaranteed Retention - Efficiency - Peak Symmetry - Selectivity

by Gary Stidsen, GC Columns Marketing Manager, and Barry Burger, Petroleum Applications Chemist

- Reduce analysis time by 30%!
- Selectivity specific for detailed hydrocarbon analysis (ASTM Method D-6730-0).
- Each column tested to meet method-specific resolution criteria.
- Unsurpassed peak symmetry for oxygenated compounds.

To meet the demanding resolution and retention criteria in American Society for Testing and Materials (ASTM) and Canadian General Standards Board (CGSB) methodology for detailed hydrocarbon analysis, Restek chemists reformulated the Rtx®-1PONA column. The enhanced column meets or exceeds all criteria in these standardized methods, in 30% less time: retention time for C13 is 97 minutes, using

helium as the carrier gas. Measured values for retention (k), efficiency (n), peak symmetry, and stationary phase selectivity (RI) are stringently controlled, enabling us to guarantee performance and reproducibility from column to column.

To achieve critical resolutions in detailed hydrocarbon analysis, a 5-meter 5% diphenyl/95% dimethyl polysiloxane tuning column is connect-

award-winning **innovation!**



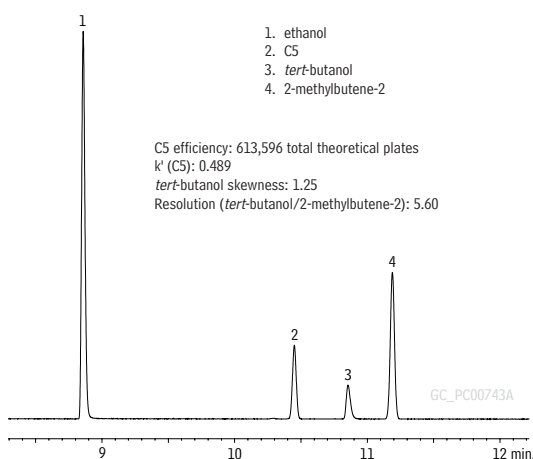
**2004
Concluded
Research
Award goes to
Barry Burger**

The award was presented at the 2004 Gulf Coast Conference, for Restek's second generation Rtx®-1PONA capillary GC column for detailed hydrocarbon analysis according to American Society for Testing and Materials and Canadian General Standards Board methodology. For the full story, visit us online.

ed to the analytical column and adjusted to the needed length through a series of trial analyses.

This work earned the Restek Innovations chemists the Concluded Research Award, sponsored by DCG Partnership 1 Ltd., at the 2004 Gulf Coast Conference. When you use an Rtx®-1PONA column, we think you'll agree that the award is well justified.

Figure 1 Sharp, symmetric peak for ethanol (gasoline oxygenate), using an Rtx®-1PONA column.



Rtx®-1PONA, 100m, 0.25mm ID, 0.5µm (cat.# 10195)
w/ Rtx®-5 tuning column, 2.62m, 0.25mm ID, 1.0µm,
connected via Press-Tight® connector (cat.# 20446)

Sample: custom detailed hydrocarbon analysis (DHA) mix, neat
Inj.: 0.01µL, split (split ratio 150:1),
4mm cup inlet liner (cat.# 20709)
Inj. temp.: 200°C
Carrier gas: helium, constant flow
Linear velocity: 28cm/sec. (2.3mL/min.)
Oven temp.: 35°C
Det.: FID @ 250°C

Pittcon® presentation

This information will be presented by Barry Burger, Poster Session 10, Sunday afternoon, February 27.

Rtx®-1PONA Column (fused silica)

(Crossbond® 100% dimethyl polysiloxane)*

ID	df (µm)	temp. limits	100-Meter
0.25mm	0.50	-60 to 300/340°C	10195

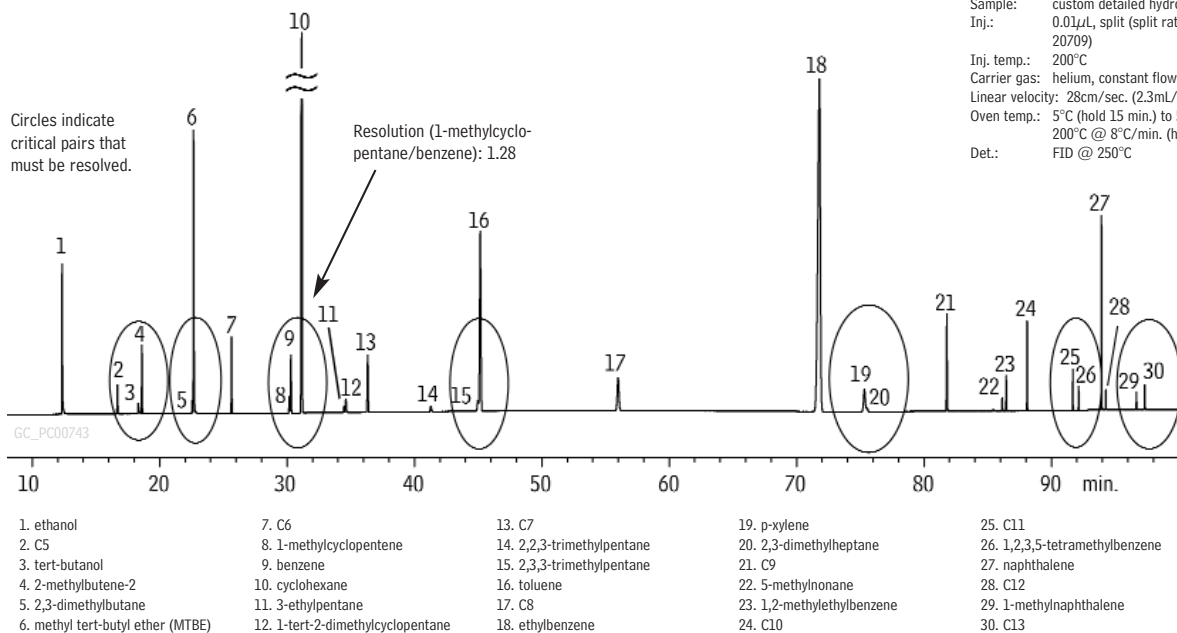
*Optimized phase for hydrocarbon analysis

Rtx®-5PONA Tuning Column (fused silica)

(Crossbond® 5% diphenyl/95% dimethyl polysiloxane)

ID	df (µm)	temp. limits	5-Meter
0.25mm	1.0	-60 to 330/340°C	10196

Figure 2 Critical pairs of gasoline components resolved per ASTM specifications, using an Rtx®-1PONA column.



**Reliable connections
made simple!**
See page 22 for
information on
Vu2Union™
Connectors.