

Applications Note

PC-003

Restek Corporation • 110 Benner Circle, Bellefonte, PA 16823-8812 •

New Rtx[®]-1PONA Column for Analysis of Petroleum Products

To meet demanding resolution and retention criteria, Restek has developed unique quality control tests and specifications for the Rtx[®]-1PONA column.

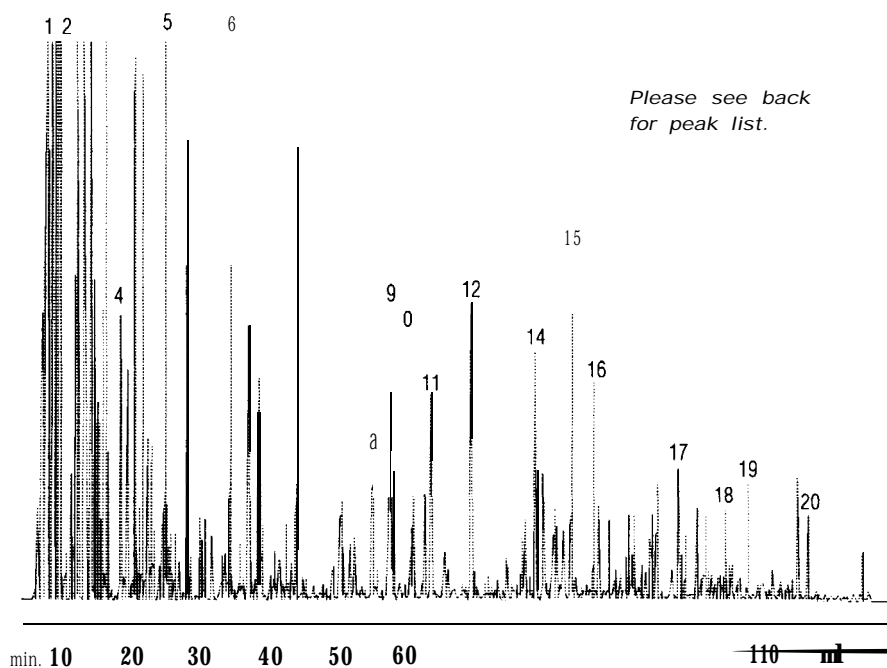
Questions?
Call Restek Technical
Service at
800-356-1688,
ext. 4

Gasoline is a complex mixture containing hundreds of individual hydrocarbons including alkanes (paraffins), alkenes (olefins), cyclic alkanes (naphthenes) and aromatics. Using high resolution gas chromatography (HRGC), it is possible to resolve and identify over two hundred individual components in a single analysis. Once the hydrocarbons are identified and quantified, the results can be reported in various ways including: detailed hydrocarbon analysis (DHA), hydrocarbon type analysis, and special calculations such as vapor pressure and octane number.

Because the task of calibrating hundreds of peaks is extremely time consuming, committees such as the American Society of Standards and Materials (ASTM) and the Canadian General Standards Board (CGSB) have developed standardized methodology for detailed hydrocarbon analysis.² These methods specify a 100 meter column which must be reproducible if laboratories are to obtain accurate results. The Restek Rtx[®]-1PONA column meets or exceeds the demanding resolution and retention time requirements specified in these methods.

Figure 1

A 100 meter Rtx[®]-1PONA column resolves hundreds of individual hydrocarbons in gasoline.



Please see back
for peak list.

**Run Conditions for
Figures 1&2**

100m. 0.25mm ID Rtx-1PONA
Rtx[®]-1PONA
(cat.#101957)
20ul split injection of
gasoline

Oven temp:
40°C
Inj/det. temp:
250/300C
Detector:
FID
Carrier gas:
helium
linear velocity: