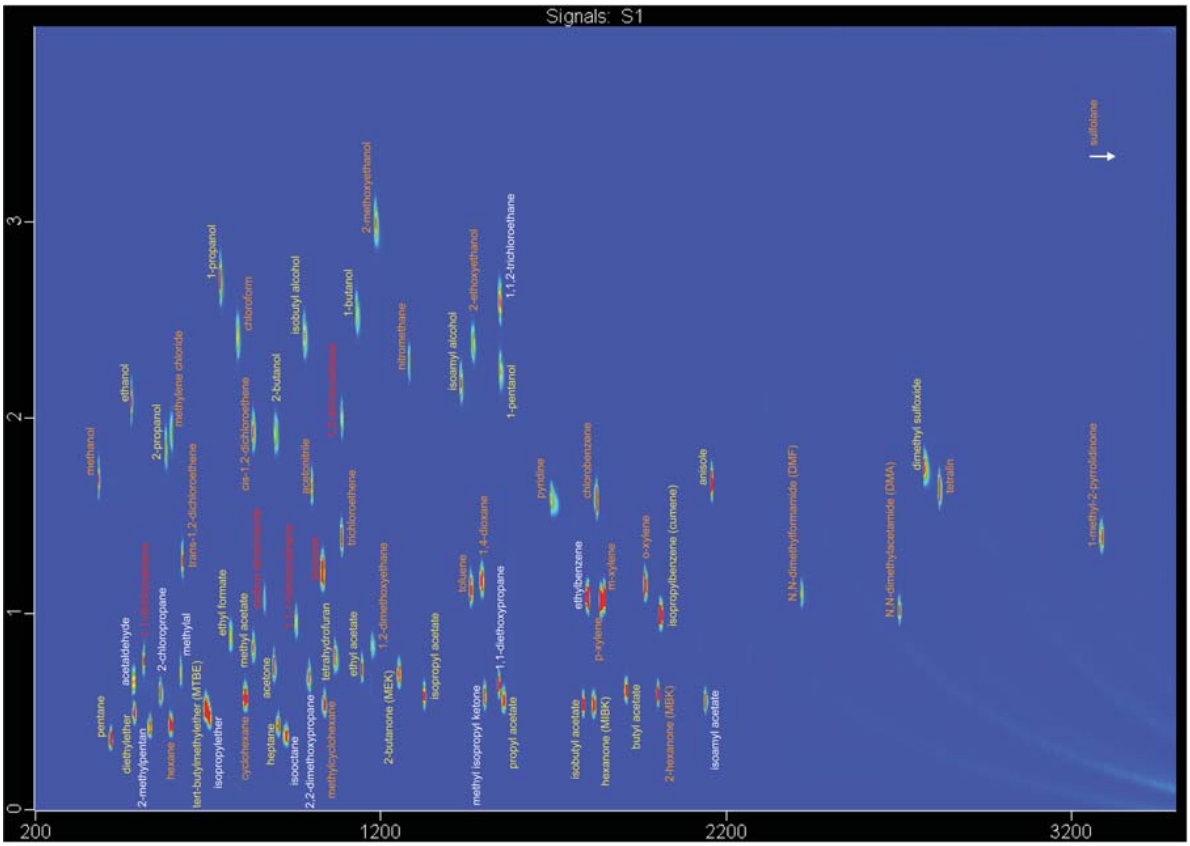
Organic Volatile Impurities
Rtx®-200 & Rtx®-WAX



GC_PH00888

Columns:	Rtx®-200, 60m, 0.25mm ID, 1.0µm (cat.# 15056) Rtx®-Wax, 2m, 0.18mm ID, 0.3µm (custom)
Sample:	0.2µL mix of 69 neat organic volatile impurities
Instrument:	Agilent 6890 with LECO liquid nitrogen cryojet modulator
Inj.:	split/splitless, split ratio 600:1; gas saver: 20mL/min. after 1 min.; 4mm ID split inlet liner w/wool (cat.# 20781); injection with band formation (fast injection)
Inj. temp.:	250°C
Carrier gas:	helium, constant flow
Flow rate:	1.5mL/min.
Oven temp.:	Rtx®-200: 35°C (9 min.) to 220°C @ 3°C/min. (hold 1 min.); Rtx®-Wax: 65°C (9 min.) to 250°C @ 3°C/min. (hold 1 min.)
Modulation:	modulator offset: 30°C; 2nd dimension separation: 4 sec.; hot pulse: 0.3 sec.; cool between stages: 1.7 sec.
Det:	FID @ 250°C; hydrogen: 40mL/min.; air: 450mL/min.; make-up gas: 45mL/min.; sampling rate: 200Hz

did you **know**?

GCxGC Separations

Separation of the complete list of International Conference on Harmonization Class 1, Class 2, and Class 3 organic volatiles requires at least two, and often three, separate analyses on differing capillary GC columns. While many laboratories do not monitor for the complete list, separation of OVIs still is a challenge, often characterized by long runtimes and incomplete separations.

Using comprehensive GCxGC, it is possible to resolve all of these target compounds, in a single analysis, with less than a 1-hour run time. In this approach, results for which are shown above, two columns of differing selectivity are used to separate the compounds in a 2-dimensional plot. Various detectors also can be employed, including time-of-flight mass spectrometry, to yield reliable information for the entire target compound list in a single analysis.

For more about GCxGC, visit our website and review the article on pages 4-5 of **Restek Advantage 2005, vol. 1 (lit. cat.# 59077)**, or enter GCxGC in the search feature.

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