

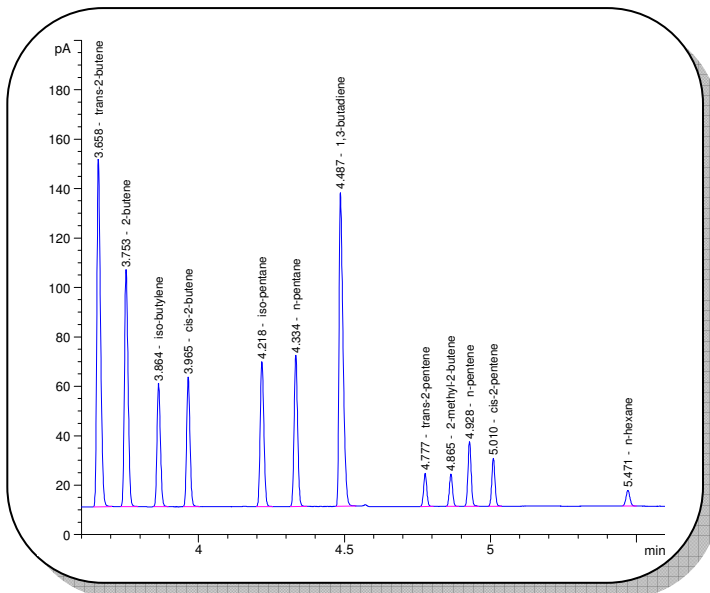
Application Note

INTRODUCTION

The application specialists from AC Analytical Controls extended the analysis of the AC HiSpeed RGA up to C9 Aromatics.

The standard capillary PLOT column, used for hydrocarbon separation, is programmed to a slightly higher temperature, while the second column oven is left unaltered.

This modification allows the standard AC HiSpeed RGA hardware to analyze hydrocarbons up to C9 Aromatics in 28 minutes, while still remaining great separations on the individual components.

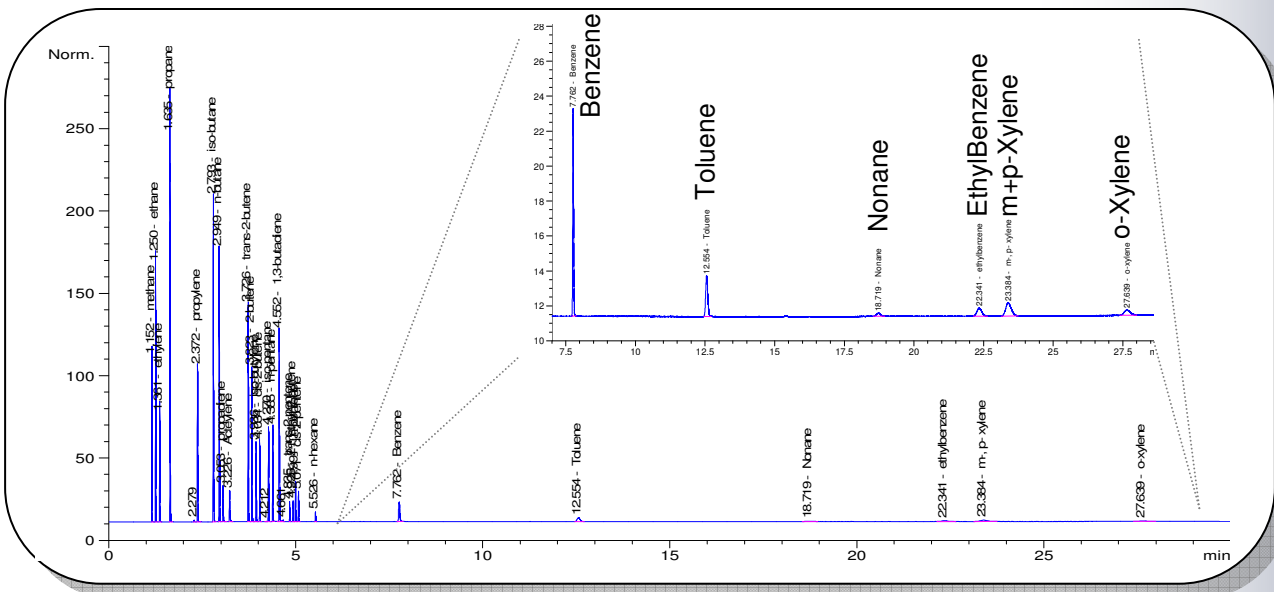


AC HiSpeed RGA Analysis – Excellent separation of C4 and C5 olefin

System Description

The AC Hi-Speed RGA system contains six columns and is subdivided into three separate analytical channels:

- One channel determines helium and hydrogen,
- The second channel is used to determine oxygen, nitrogen, carbon monoxide and carbon dioxide.
- The third channel separates the hydrocarbons on the PLOT column using the FID for detection.
- GASXLNC software for advanced calibration and reporting options.



Extended run for analysis up to Xylenes on AC HiSpeed RGA

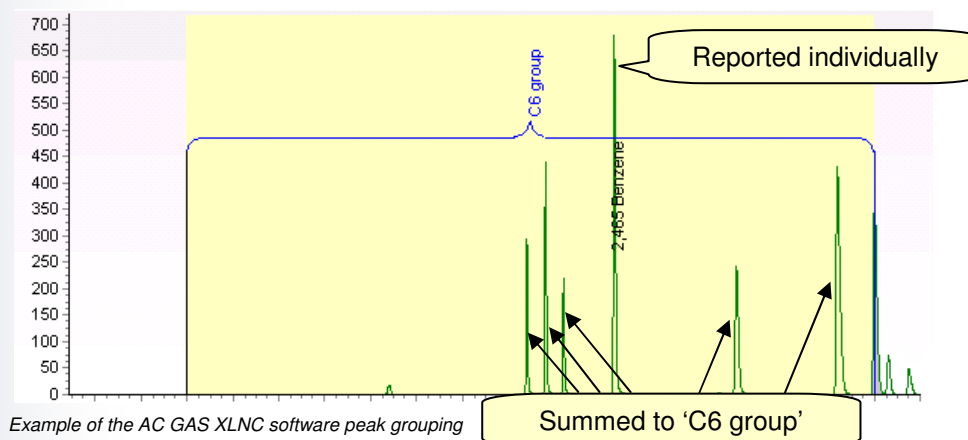
DISCUSSION

The flexible design of the AC HiSpeed RGA allows for individual optimization of one of the three channels without affecting chromatographic conditions for the other two channels.

Therefore, the extension of the Hydrocarbon channel can be performed without affecting the helium, hydrogen and oxygen, nitrogen, carbon monoxide and carbon dioxide analysis.

The AC GAS^{XLNC} software allows for direct and indirect calibration components with absolute or relative response factors, and contains the components up to o-Xylene by default, so the extended analysis can easily be implemented in the software.

Moreover, the grouping function in the software give fast access to group reporting this might be applicable/desirable for the higher carbon numbers.



CONCLUSION

Using the same hardware allows operators to switch between the Standard (5 minutes) and the Extended (28 minutes) HiSpeed RGA method in a single sequence without any user interventions required. Therefore, switching between the two modes can be fully automated, without the need of manual recalibrations or calculations. Simply select the correct mode/method in the sequence module.

The published data represent typical results.

For further information, contact your local PAC Sales Office or representative.

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In close cooperation with our end users, AC introduces innovative applications that are globally approved by ASTM, CEN, DIN, GPA, IP, ISO and UOP standardization organizations.

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