Refinery gas analysis

Application Note

Energy & Fuels

Authors

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Introduction

The Agilent Micro-GC solution is used for the analyses of refinery gas and related products. The analysis shown is a hydrocarbon type sample in nitrogen. Four independent GC channels analyze the sample in less than 150 seconds. The analysis includes permanent gases, hydrogen sulfide and all individual saturated and unsaturated hydrocarbons up to C5. Heavier hydrocarbons are reported either as individual components or as groups.

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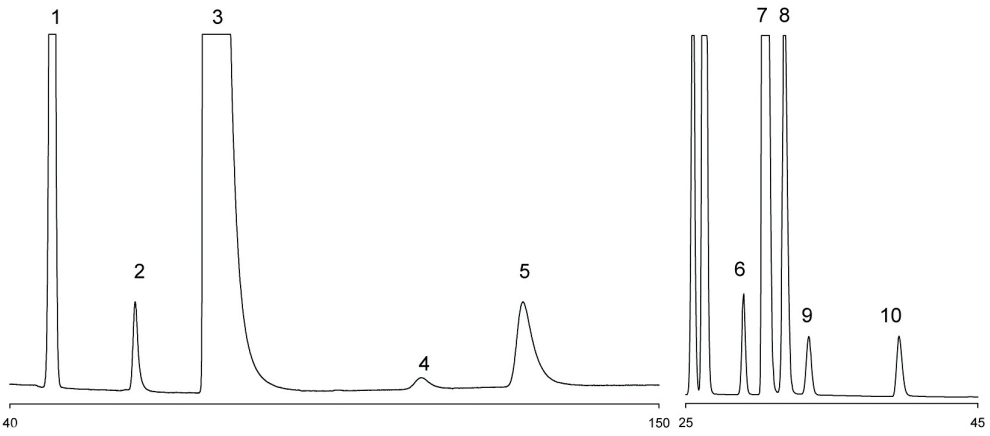
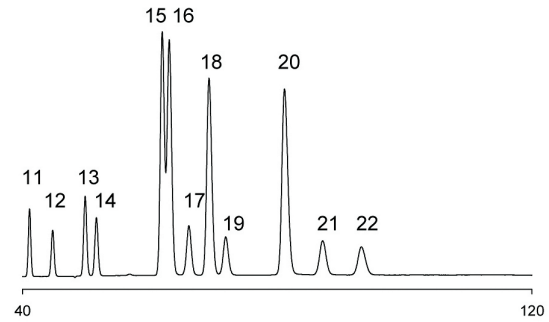


Channel 1. Permanent gases

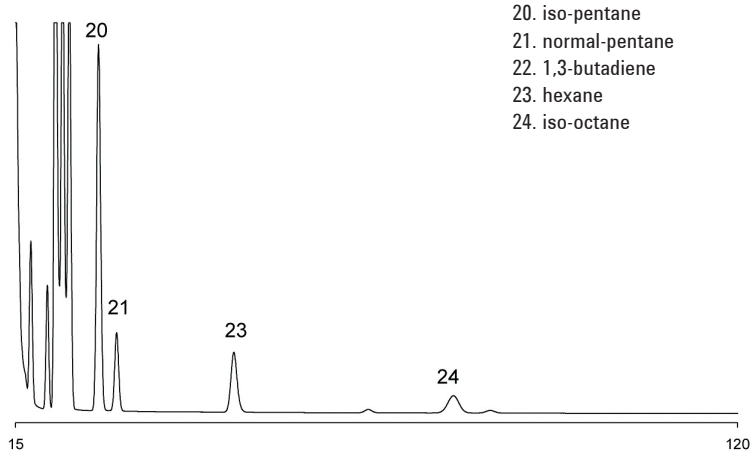
Channel 2. C_2 hydrocarbons, CO_2 and H_2S

Peak identification

1. hydrogen
2. oxygen
3. nitrogen
4. methane
5. carbon monoxide
6. carbon dioxide
7. ethylene
8. ethane
9. acetylene
10. hydrogen sulfide
11. propane
12. propylene
13. iso-butane
14. normal-butane
15. trans-2-butene
16. 1-butene
17. iso-butene
18. cis-2-butene
19. neo-pentane
20. iso-pentane
21. normal-pentane
22. 1,3-butadiene
23. hexane
24. iso-octane



Channel 3. C_3 up to C_5 hydrocarbons



Channel 4. C_5 and heavier hydrocarbons

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