



# Analysis of 370-550 °C Petroleum Fraction using an Agilent J&W FactorFour VF-5ht UltiMetal Column

## Application Note

### Author

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### Introduction

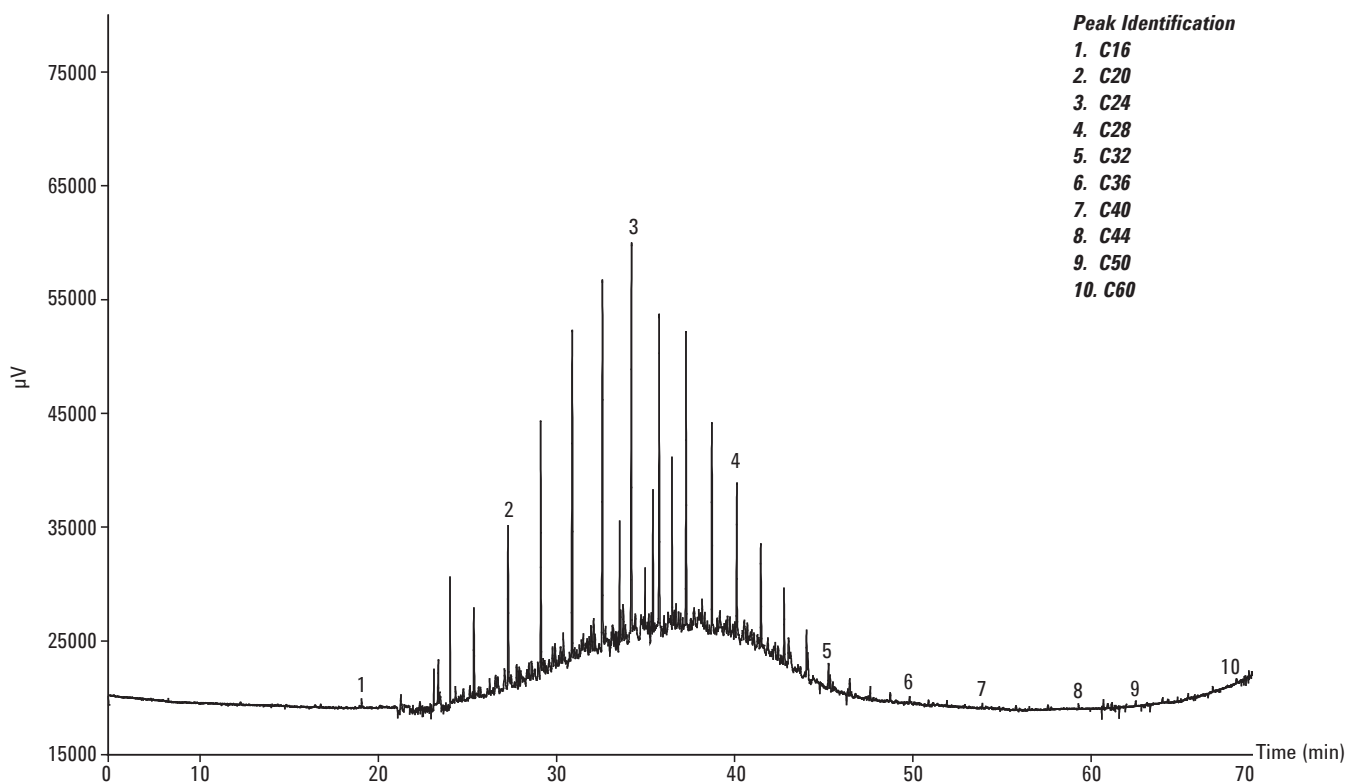
The hydrocarbon boiling point fraction of 370-550 °C mainly covers the C<sub>20</sub>-C<sub>40</sub> hydrocarbons. These type of fractions may include heavy gas oil, petroleum waxes and lube stocks. On-column is the preferred injection mode for analyses of this type. The VF-5ht UltiMetal column can easily withstand the demanding conditions set for this analysis both in terms of robustness of column material and durability, and temperature stability of the VF-5ms liquid phase.



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**Conditions**

|                 |  |                   |                                      |
|-----------------|--|-------------------|--------------------------------------|
| Technique:      | GC   | Carrier Gas:      | Hydrogen, 55 kPa (8 psi)             |
| Column:         | VF-5ht UltiMetal, 30 m x 0.25 mm, df = 0.1 µm (part number CP9092) | Injector:         | 325 °C, on-column                    |
|                 |  | Injection Volume: | 1.0 µl                               |
| Sample:         | Petroleum Fraction 370-550 °C                                      | Temperature:      | 40 °C (0.5 min) to 400 °C @ 5 °C/min |
| Sample Solvent: | 0.1 % in CS <sub>2</sub>   | Detection:        | FID, 340 °C                          |

**Peak Identification**

1. C16
2. C20
3. C24
4. C28
5. C32
6. C36
7. C40
8. C44
9. C50
10. C60

*Low baseline at higher temperature enhancing signal-to-noise ratio and improving detection limits*

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