



# Determination of trace mineral oils in hexane using large volume PTV injection

## Application Note

Environmental

### Authors

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### Introduction

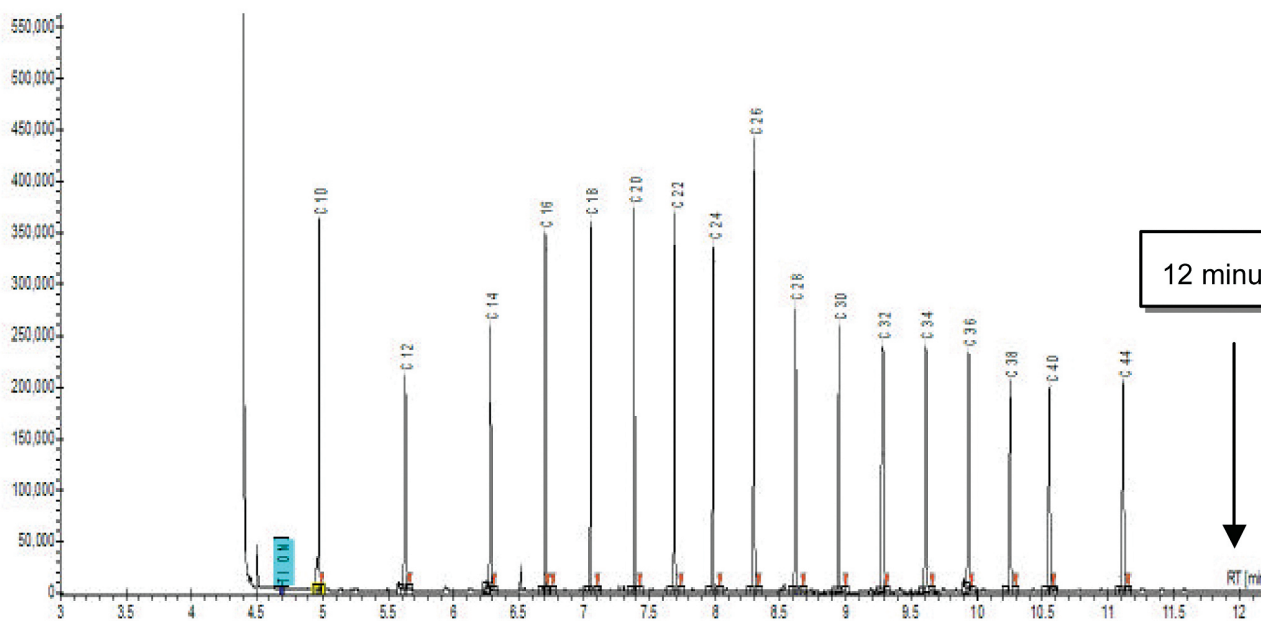
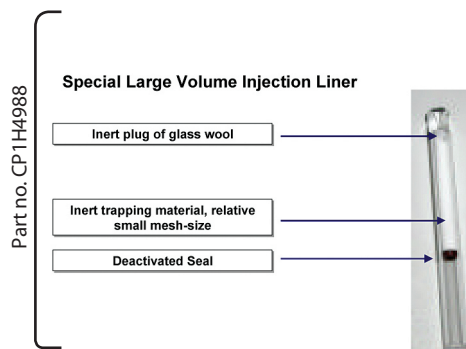
The Agilent 1079 PTV injector, in combination with a specially designed and optimized liner, allows the quantitative determination of mineral oils down to ppb levels using the large volume injection technique.



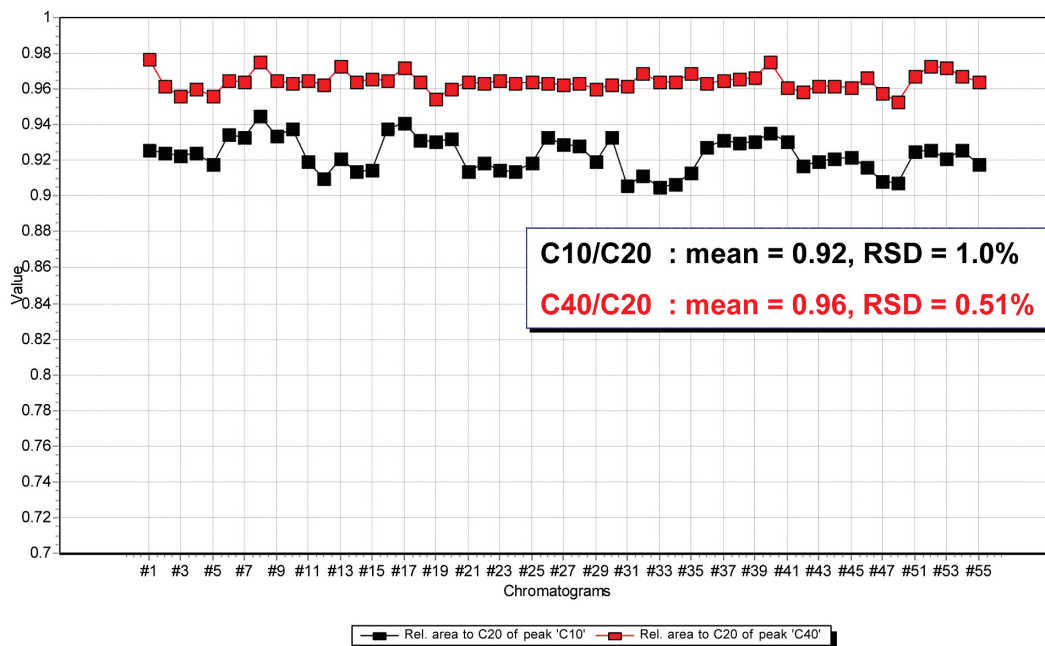
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## Conditions

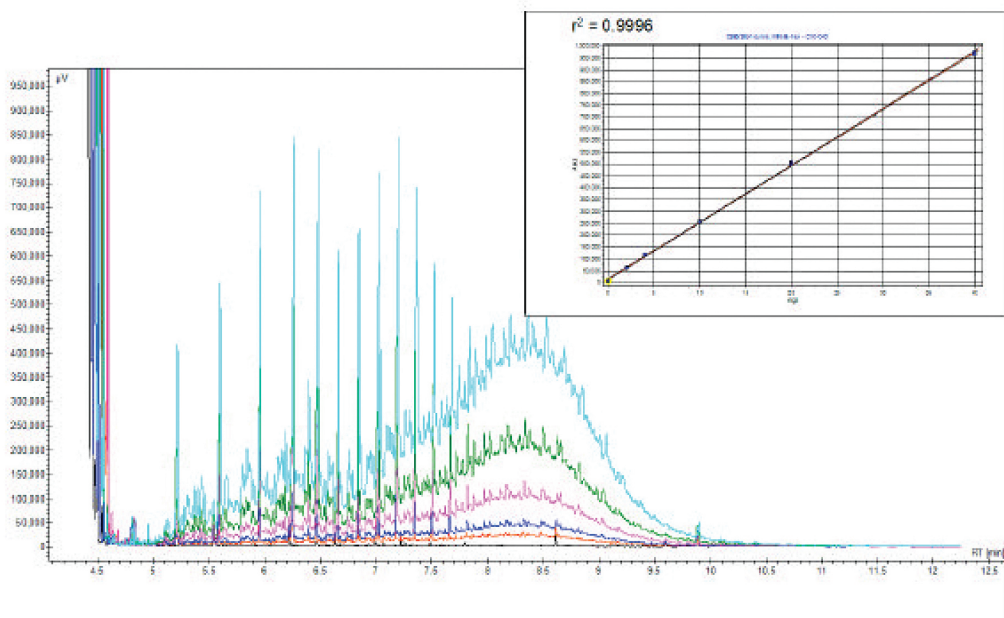
Technique : GC  
Column : Agilent Select Mineral Oil, 0.32 mm x 15 m  
(Part no. CP7492)  
Oven Program : 35 °C for 4 minutes, 300 °C at ballistic speed  
Carrier Gas : Helium, 50 kPa, constant flow, 2 mL/min  
Pressure Puls : 110 kPa, during time split is closed  
Injection : PTV 1079 with optimized liner  
PTV-program : 45 °C, 30 s to 350 °C, 200 °C/min  
Injected amount : 150 µL  
Split : 75 mL/min, split closed after 30 s, open after 3 min  
Detector : FID  
Sample Concentration 50 ppb in petroleum ether



Peak area ratio of  $C_{10}/C_{20}$  (black) and  $C_{40}/C_{20}$  (red), 55  
 consecutive injections alkane standard in hexane, injection  
 volume: 150  $\mu$ L



PTV Injection: 150  $\mu$ L, levels; 0, 2, 4, 10, 20, 40 ppb



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