

**CoreFocus**  
**Report**  
**No.391**

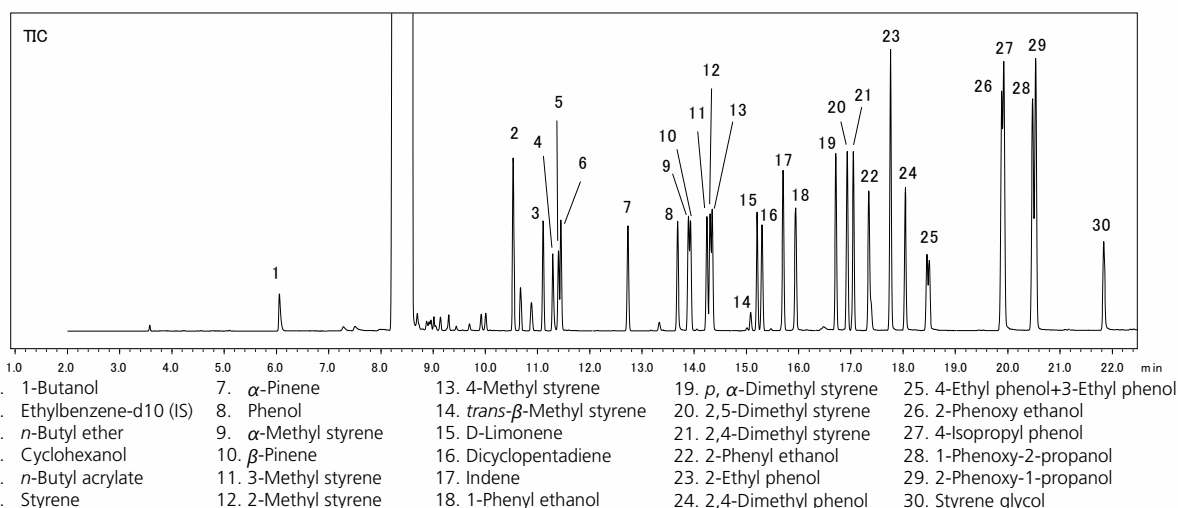
GCMS

AOC

SH Series

**SH-1/SH-5MS**  
**Determination of Chemical Species in**  
**Marine Fuel Oil in Accordance with ASTM**  
**D 7845**

**Keywords: Environment, Fuel, Aromatic compounds**



**System Configuration**

Model	: GCMS-QP™2020 NX/AOC-20i Plus
Injection Port	: PTV-2030
Detector	: MS/FID-2030
Detector splitting unit	
1st Column	: SH-1 (30 m x 0.25 mm I.D., 0.25 $\mu$ m) P/N : 221-75719-30
2nd Column	: SH-5MS (60 m x 0.32 mm I.D., 0.5 $\mu$ m) P/N : 227-36126-02
Restrictor	: VSD tubing (1.0 m x 0.15 mm I.D.)

**Analysis Conditions**

Injection volume	: 0.5 $\mu$ L
Column oven temp.	: 200 °C (14 min) - 200 °C/min - 400 °C (9 min)
Carrier gas	: He
Carrier gas control	: Pressure, 260 kPa (19.5 min) - 400 kPa/min - 15 kPa (3.89 min)

Total flow rate	: 35 mL/min
Split flow rate	: About 25 mL/min*
Purge gas	: 3.0 mL/min
Column temp.	: 50 °C (2 min) - 7 °C /min - 200 °C
APC pressure	: 103 kPa
FID temp.	: 240 °C
H <sub>2</sub> flow rate	: 32 mL/min
Air flow rate	: 200 mL/min
Makeup flow rate	: 24 mL/min
Ion source temp.	: 200 °C
Interface temp.	: 250 °C
Tuning mode	: High concentration mode
Ionization method	: EI
Measurement mode	: Scan/SIM (FASST mode)
Event time	: Scan 0.1 s/SIM 0.2 s

\* The split flow rate is set based on the total flow rate, the column inlet pressure and the column length.

Source : Application News M304A ([JP](#), [ENG](#))

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