Application Note
Date: No. 820004H-E

Analysis of aldehydes and keetones in automobile exhaust

Aldehydes and ketones in automobile exhaust were analyzed by HPLC after solid phase extraction (2,4-dinitrophenylhydrazine (2,4-DNPH)). Fig.1 shows the procedure of sample collection and derivatization by using 2,4-DNPH Cartridge (SUPELCO). Fig.2 shows the chromatogram of automobile exhaust analyzed by HPLC where formaldehyde and acetaldehyde with high concentration were detected.

Conditions:

Column : CrestPak C18S
Eluent : A: $H_2O/CH_3CN/THF$ (60/30/10)
B: H_2O/CH_3CN (40/60)

Time(min)	0	1	11	25	26
A(%)	100	100	0	0	100
B(%)	0	0	100	100	0

1cycle 40min

Wavelength : 360nm
Flow rate : 1.5ml/min
Column temperature: 40 degree celsius
Sample : Automobile exhaust
Injection volume : 20µl

Keywords: 1.2,4-DNPH derivertives of aldehydes and ketones, 2.automobile exhaust, 3.ODS, 4.UV, 5.JIS K 0303

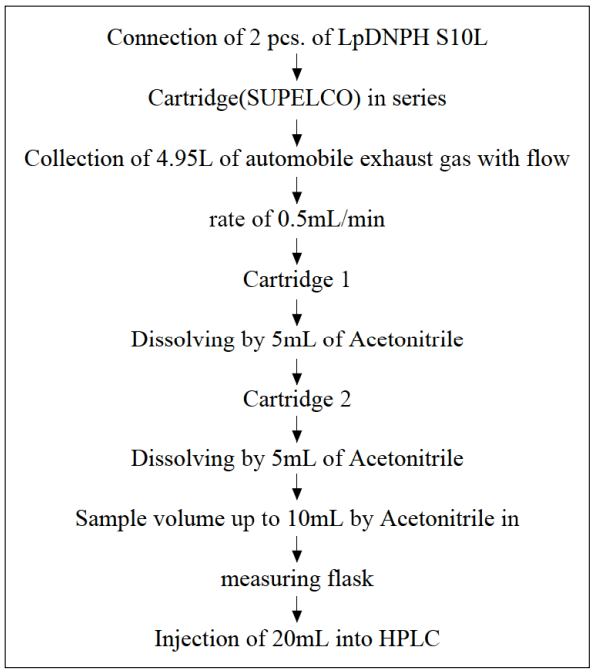

Fig. 1 Procedure of sample collection and derivatization

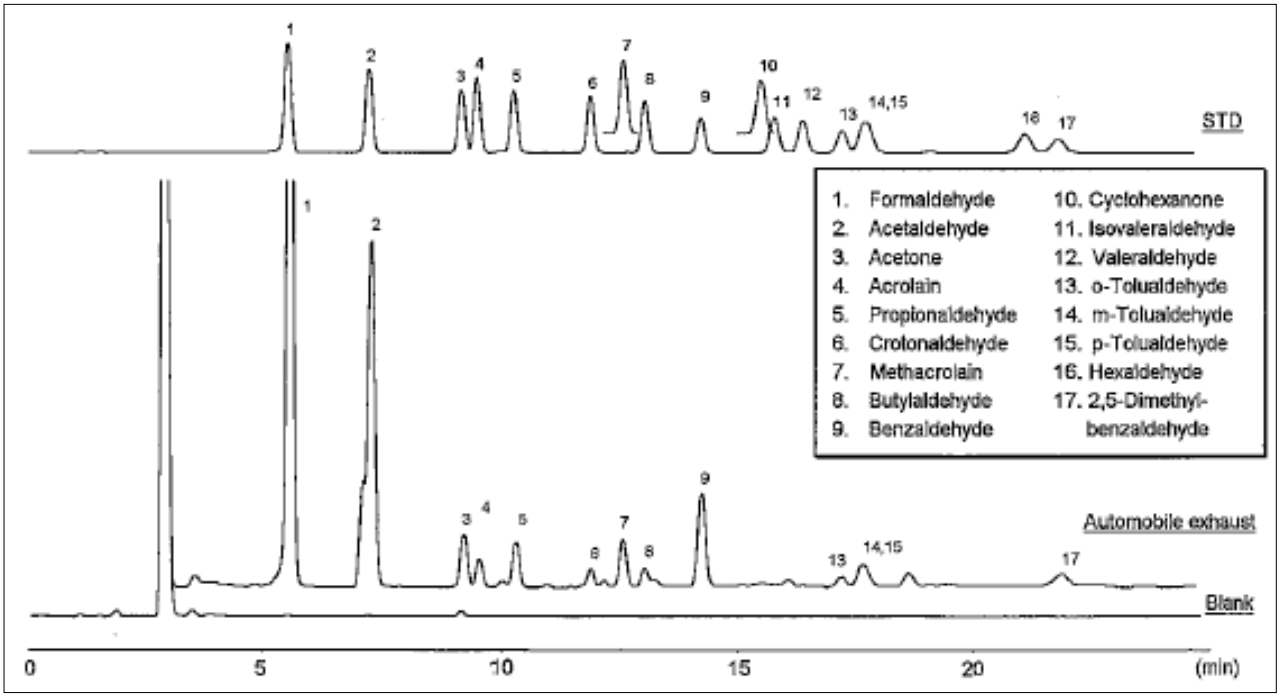

Fig. 2 Chromatogram of automobile exhaust

JASCO INTERNATIONAL CO., LTD.
4-21, Sennin-cho 2-chome, Hachioji, Tokyo 193-0835, Japan
Tel: +81-42-666-1322, Fax: +81-42-665-6512