Application Note

032001X

Ultra High-Speed Analysis of Alkylphenones

Introduction

Alkylphenones are often used for evaluation of HPLC systems because of their reasonable retentions on ODS columns and easy separation with water/acetonitrile mobile phase.

This report outlines the ultra-high speed analysis of Alkylphenones analysis by Ultra High-performance Liquid Chromatography (UHPLC) using with a PDA detector that enables high-speed data acquisition of 100 spectra/sec.

Experimental

Equipment.		Conditions.	
Pump:	X-LC 3180PU x2	Column:	ZORBAX SB-C18 (3.0 mmID x 30 mmL, 1.8 µm)
Degasser:	X-LC 3080DG	Eluent A:	Water
Mixer:	X-LC 3180MX	Eluent B:	Acetonitrile
Column oven:	X-LC 3161CO	Gradient condition:	(A/B), 0 min(40/60) → 0.15 min(5/95) →
Autosampler:	X-LC 3159AS		0.30 min(5/95) → 0.35 min(40/60) 1 cycle; 1 min
Detector:	X-LC 3110MD	Flow rate:	3.8 mL/min
		Column temp.:	40ºC
		Wavelength:	200-300 nm
		Injection volume:	5 µL
		Standard sample:	Acetanilide, Acetophenone, Propiophenone, Butyrophenone, Benzophenone, Hexanophenone, Valerophenone, Heptanophenone, Octanophenone (50 µg/mL each)

Results

Fig. 1 shows the 3D Chromatogram of the alkylphenones standard mixture containing 9 components. Alkylphenones were successfully separated and detected within 12 seconds.

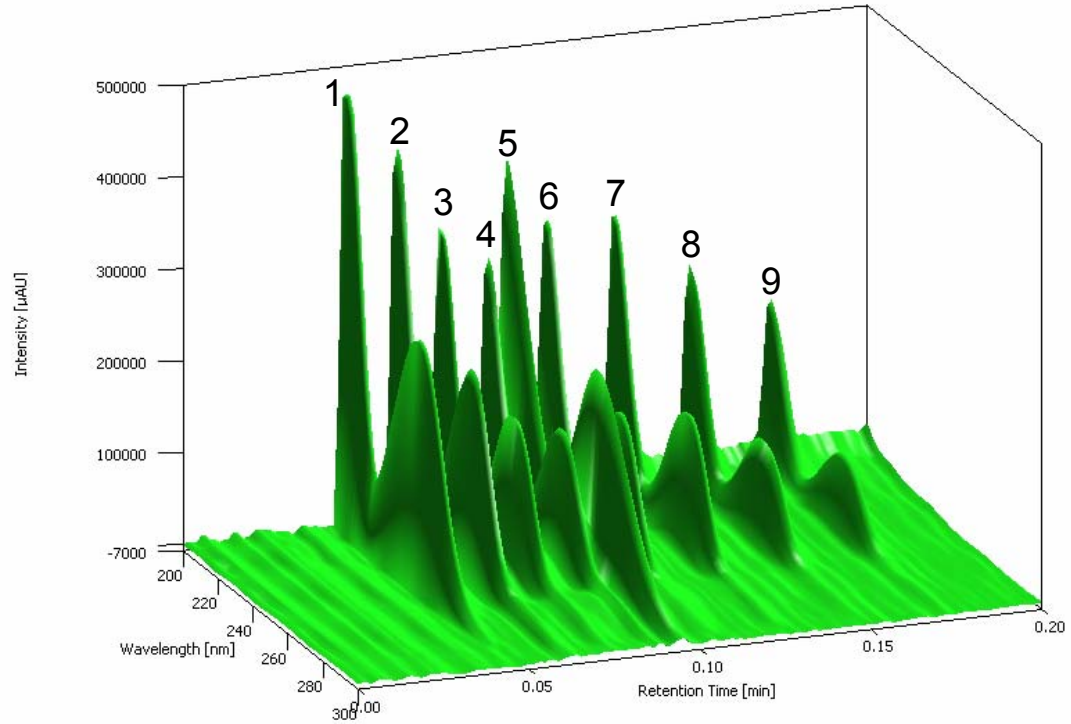

Fig. 1. 3D Chromatogram of standard alkylphenones. 1: Acetanilide, 2: Acetophenone,3: Propiophenone, 4: Butyrophenone, 5: Benzophenone, 6: Valerophenone, 7: Hexanophenone, 8: Heptanophenone, 9: Octanophenone.

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