



## Ultra High-Speed Analysis of Alkylphenones

### Introduction

Alkylphenones are often used for evaluating HPLC systems because of their reasonable retention times on ODS columns and easy separation with a 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.



JASCO X-LC system

## Experimental Equipment:

Pump:	X-LC 3185PU x 2
Degasser:	X-LC 3080DG
Mixer:	X-LC 3180MX
Column oven:	X-LC 3067CO
Autosampler:	X-LC 3159AS
Detector:	X-LC 3110MD

## Conditions:

Column:	ZORBAX SB-C18 (3.0 mmID x 30 mmL, 1.8 $\mu$ m)
Eluent A:	Water
Eluent B:	Acetonitrile
Gradient condition:	(A/B), 0 min(40/60), 0.15 min(5/95), 0.30 min(5/95), 0.35 min(40/60) 1 cycle; 1 min
Flow rate:	3.8 mL/min
Column temp.:	40°C
Wavelength:	200-300 nm
Injection volume:	5 $\mu$ L
Standard sample:	Acetanilide, Acetophenone, Propiophenone, Butyrophenone, Benzophenone, Hexanophenone, Valerophenone, Heptanophenone, Octanophenone (50 $\mu$ g/mL each)

## Results

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

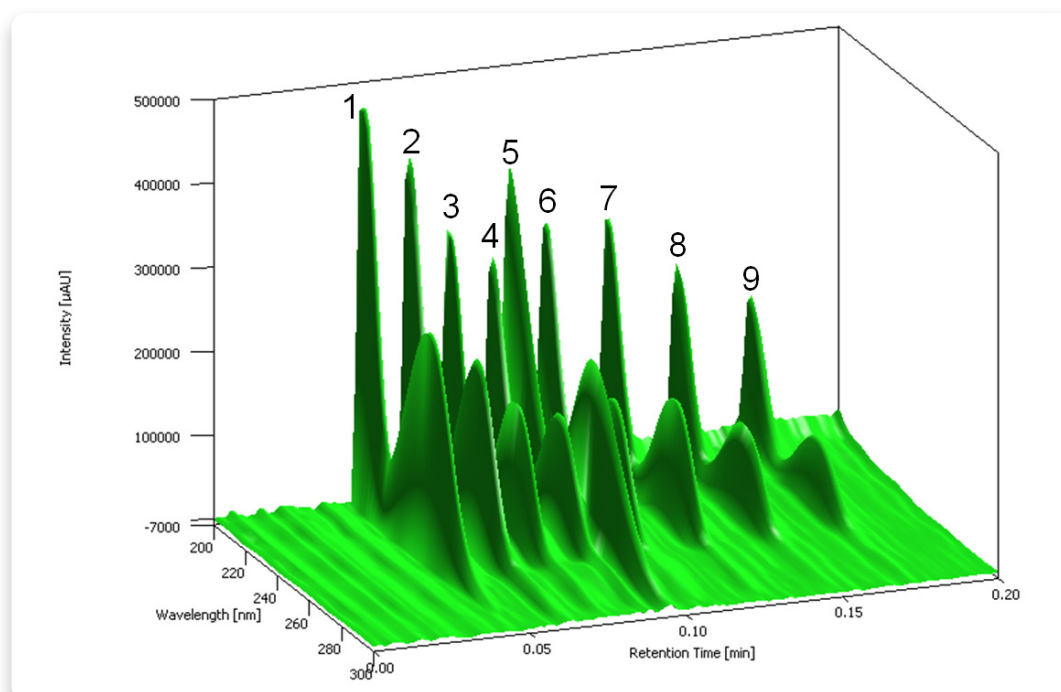


Figure 1. 3D Chromatogram of standard alkylphenones. 1: Acetanilide, 2: Acetophenone, 3: Propiophenone, 4: Butyrophenone, 5: Benzophenone, 6: Valerophenone, 7: Hexanophenone, 8: Heptanophenone, 9: Octanophenone.