Application Note

CD-0019

CD measurement of α-pinene gas in vacuum UV range by J-1500 CD spectrometer

Introduction

J-1500 CD spectrometer is the system optimized to the most suitable CD measurement by high-efficiency of the nitrogen purge function that is realized by fluid simulation calculation, the optical system improved for higher throughput and the electrical system using latest digital lock-in detection. By this system, the CD spectra can be obtained with high S/N ratio even in the vacuum UV range or for the sample with high absorption, enabling as a result to improve the accuracy of protein secondary structural analysis or the measurement of the samples with small g value that have been very difficult until now.

The measurement of CD spectra in the vacuum UV range of (1*R*)-(+)-α-pinene gas and (1*S*)-(-)-α-pinene gas is reported as below.

Keywords: Vacuum ultraviolet CD, Gas measurement, α-pinene

Measurement conditions

Instrument:	J-1500 CD spectrometer		
Measurement wavelength range:	245 - 163 nm		
Data sampling interval:	0.1 nm	Response:	1 second
Spectral bandwidth:	1 nm	Scanning speed:	20 nm / min
Accumulation:	1 time	Cell:	Cylindrical quartz cell (optical pathlength 10 mm)

Results

The vacuum ultraviolet CD spectra of (1*R*)-(+)-α-pinene gas and (1*S*)-(-)-α-pinene gas are shown in Fig. 1. As shown, the mirror symmetrical CD spectra with high S/N ratio were obtained in the range down to as low as 163 nm, and the sharp peaks specific to the gas sample were also observed.

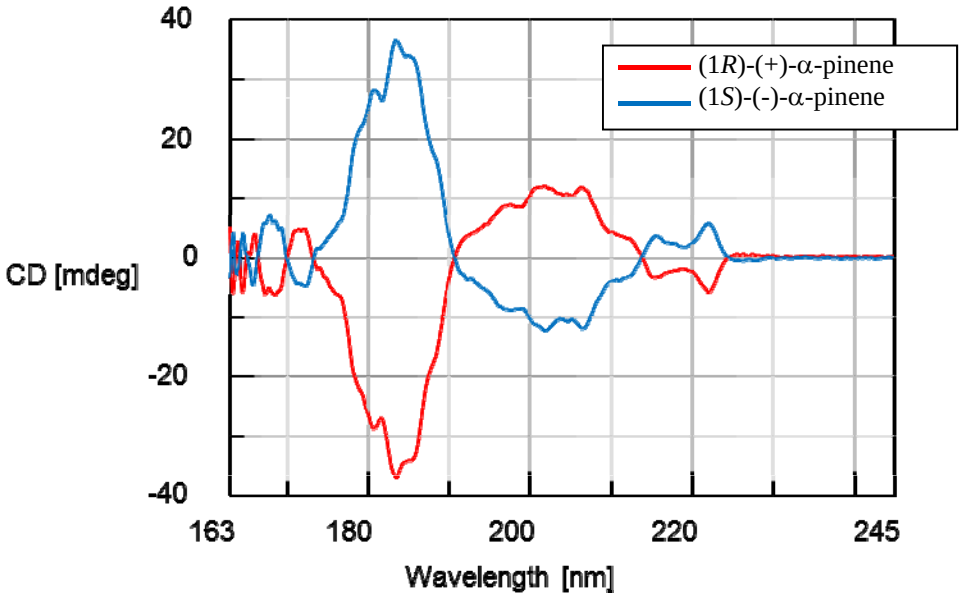

Fig. 1 Vacuum UV CD spectra of α-pinene gas

JASCO INTERNATIONAL CO., LTD

11-10, Myojin-cho 1-chome, Hachioji, Tokyo 192-0046, Japan
Tel: +81-42-649-3247, Fax: +81-42-649-3518