

Measurement of Banana (3D Fluorescence Spectra)

INTRODUCTION

The fluorescence of banana peel was analyzed. When the surface of the peel was irradiated by ultraviolet ray at 300 - 400 nm, a blue fluorescence having a peak at 430 nm was observed. There has been a report that when a banana ripens, even more intense fluorescence is observed around the sugar spots and thus, the fluorescence can be used as an index of the ripeness. When the excitation and fluorescence wavelengths are unknown, the 3D spectrum is effective. F-7000 fluorophotometer, with the fastest scan speed for the instrument class, allows the high-throughput analysis of 3D fluorescence spectra.

SAMPLE

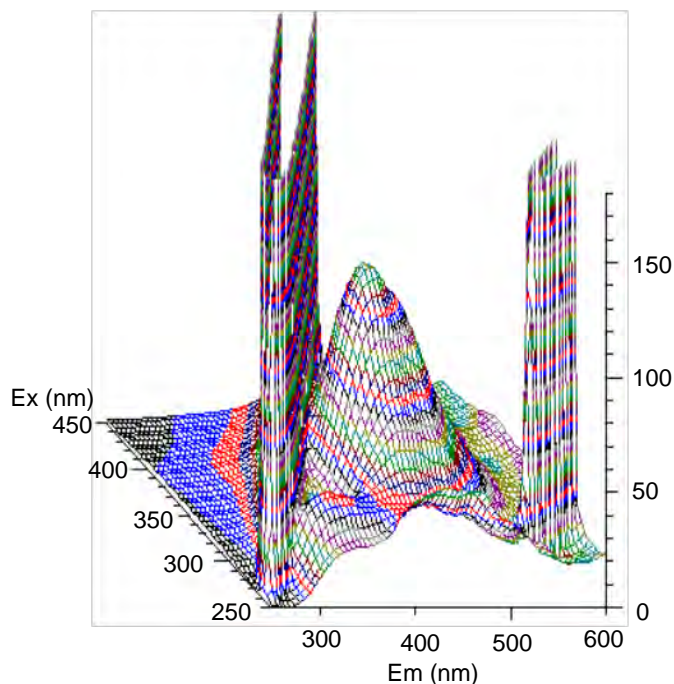
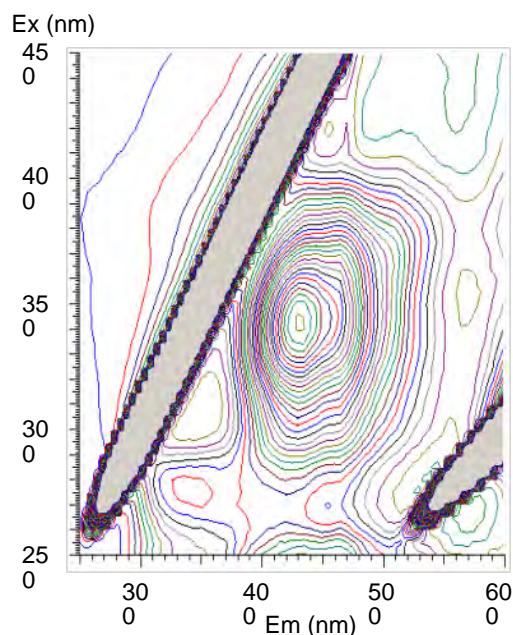
SAMPLE NAME : Banana peel

ACCESSORY

Solid sample holder
(P/N : 650-0161)

INSTRUMENT CONDITIONS

INSTRUMENT	: F-7000	RESPONSE	: Auto	FULLSCALE	: 180
EX BANDPASS	: 5 nm	EM FILTER	: 310	DIVISION NUMBER	: 1
EM BANDPASS	: 5 nm	PHOTOMULTIPLIER	: R3788		
SCAN SPEED	: 60000 nm/min	PHOTOMULTIPLIER VOL.	: 400 V		



KEY WORDS

Bio/Medical Science/Food/Pharmaceutical, Food, Food Chemistry, Banana, 3D Fluorescence Spectrum, 3D, FL, F-7000

Fluorophotometer (FL)

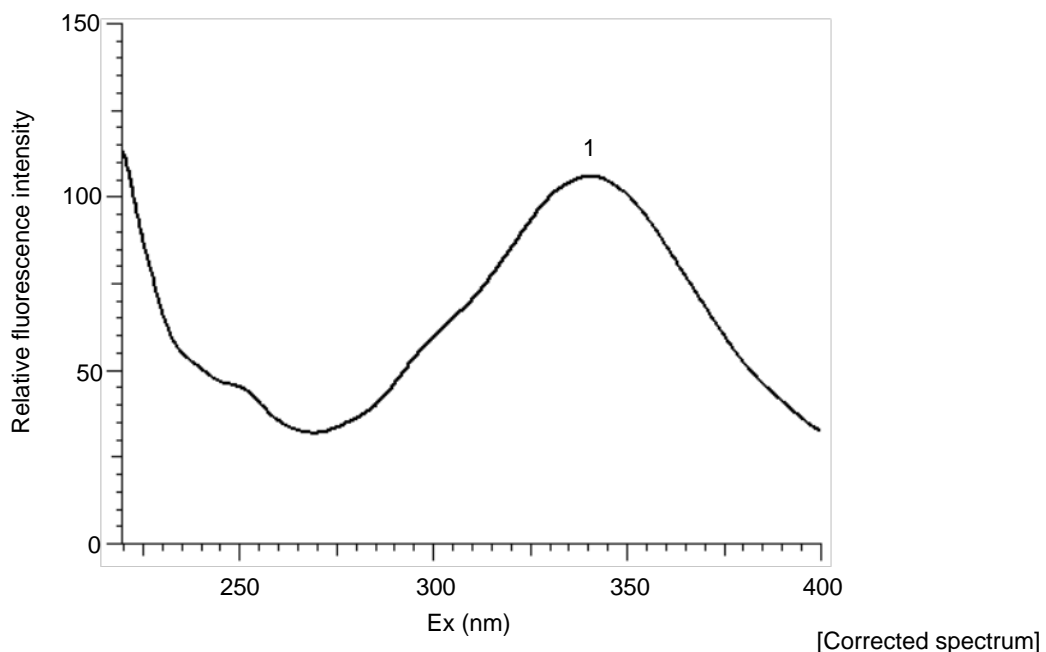
Sheet No. FL090014-01A

Measurement of Banana (Excitation Spectrum)

INTRODUCTION

The fluorescence of banana peel was analyzed. When the surface of the peel was irradiated by ultraviolet ray at 300 - 400 nm, a blue fluorescence having a peak at 430 nm was observed. There has been a report that when a banana ripens, even more intense fluorescence is observed around the sugar spots and thus, the fluorescence can be used as an index of the ripeness. The excitation spectrum at the fluorescence wavelength of 430 nm was measured based on the information obtained from the 3D fluorescence spectrum.

SAMPLE	ACCESSORY
SAMPLE NAME : Banana peel	Solid sample holder (P/N : 650-0161)
INSTRUMENT CONDITIONS	PEAKS (nm)
INSTRUMENT : F-7000 RESPONSE : Auto EM WAVELENGTH : 430 nm EM FILTER : 310 EX BANDPASS : 5 nm PHOTOMULTIPLIER : R3788 EM BANDPASS : 5 nm PHOTOMULTIPLIER VOL. : 400 V SCAN SPEED : 400 nm/min	1 : 340



KEY WORDS

Bio/Medical Science/Food/Pharmaceutical, Food, Food Chemistry, Banana, Excitation Spectrum, FL, F-7000

Fluorophotometer (FL)

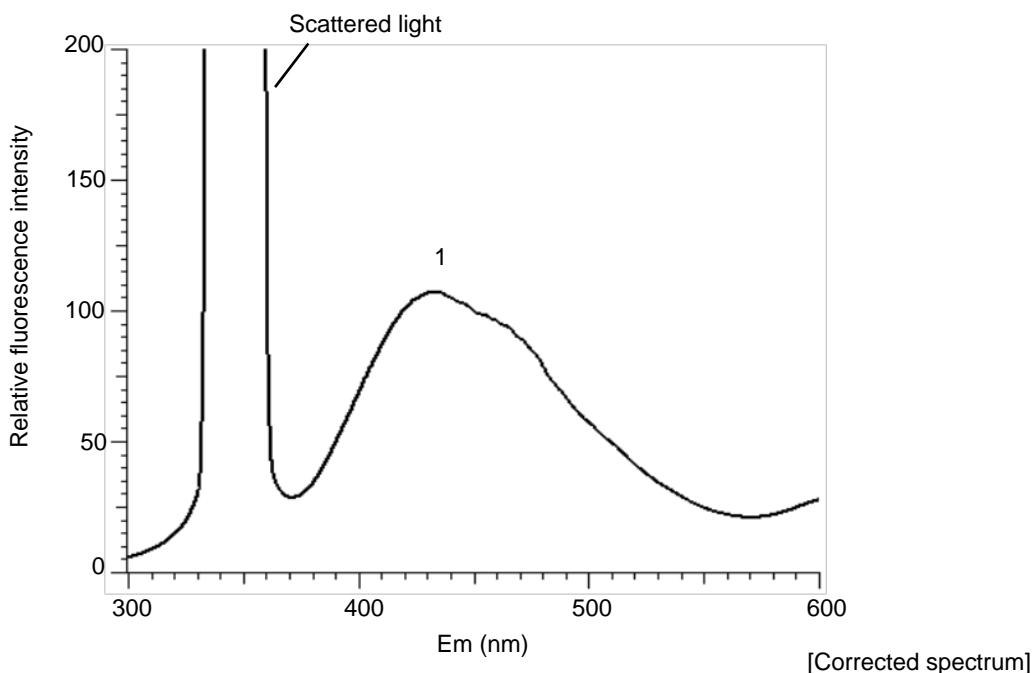
Sheet No. FL090014-02A

Measurement of Banana (Fluorescence Spectrum)

INTRODUCTION

The fluorescence of banana peel was analyzed. When the surface of the peel was irradiated by ultraviolet ray at 300 - 400 nm, a blue fluorescence having a peak at 430 nm was observed. There has been a report that when a banana ripens, even more intense fluorescence is observed around the sugar spots and thus, the fluorescence can be used as an index of the ripeness. The fluorescence spectrum at the excitation wavelength of 345 nm was measured based on the information obtained from the 3D fluorescence spectrum.

SAMPLE	ACCESSORY
SAMPLE NAME : : Banana peel	Solid sample holder (P/N : 650-0161)
INSTRUMENT CONDITIONS	PEAKS (nm)
INSTRUMENT : F-7000 RESPONSE : Auto EX WAVELENGTH : 345 nm EM FILTER : 310 EX BANDPASS : 5 nm PHOTOMULTIPLIER : R3788 EM BANDPASS : 5 nm PHOTOMULTIPLIER VOL. : 400 V SCAN SPEED : 240 nm/min	1 : 434



KEY WORDS

Bio/Medical Science/Food/Pharmaceutical, Food, Food Chemistry, Banana, Fluorescence Spectrum, FL, F-7000

Fluorophotometer (FL)

Sheet No. FL090014-03A