

# Fluorescence Detector

**Integration of semi-microcolumn technologies - Optimum for high-sensitivity analysis!**



## Stable Baseline

The optical system was miniaturized to improve thermal stability and minimize noise and drift.

## Flow Cell with Special Structure Supporting Semi-microcolumn

A specially designed cell minimizes the band broadening caused by stagnant flow profiles at the entry and exit of the cell, which used to be pronouncing at low-flow rates in conventional fluorescence detectors.

Standard	For 7 $\mu$ L	For semi-microcolumn LC
Optional	For 12 $\mu$ L	Conventional LC

The detector has a 7  $\mu$ L flow cell, which is compatible with columns of 1.0 mm i.d., to enable high-sensitivity analysis with trace sample quantity.

## Optimum Wavelength Selectable

The optimum wavelength can be determined easily by the scan function for excitation wavelength and emission wavelength.

## Time Program Function for High-sensitivity Analysis

The optimum wavelength can be set for each peak, which greatly improves the detection sensitivity.

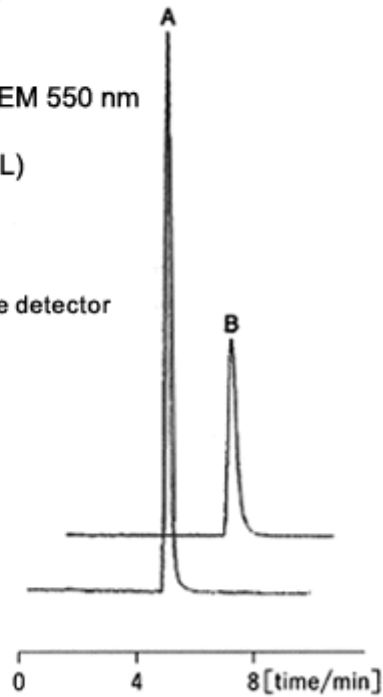
## Lamp Timer Function

The lamp lighting time can be monitored and used to judge when to replace the lamp.

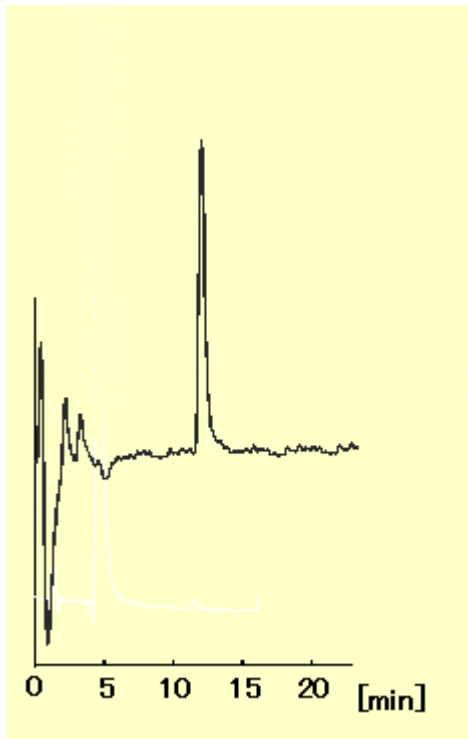
Comparison of theoretical plate number with competing manufacturers

**Instrument** : NANOSPACE SI-2  
**Column** : CAPCELL PAK C<sub>18</sub> UG120 S5 1.5mmØ x 150mm  
**Mobile phase** : 20 mmol/L potassium dihydrogenphosphate, pH 3.0/acetonitrile = 60/40  
**Flow rate** : 100 µL/min  
**Temperature** : 40°C  
**Detection** : Fluorescence EX 325 nm, EM 550 nm  
**Injection volume** : 2.0 µL  
**Sample** : Dansyl-L-Alanine (1 µL/mL)

**A** : NANOSPACE fluorescence detector  
 N = 4000  
**B** : Competing manufacturer's  
 fluorescence detector  
 N = 1600



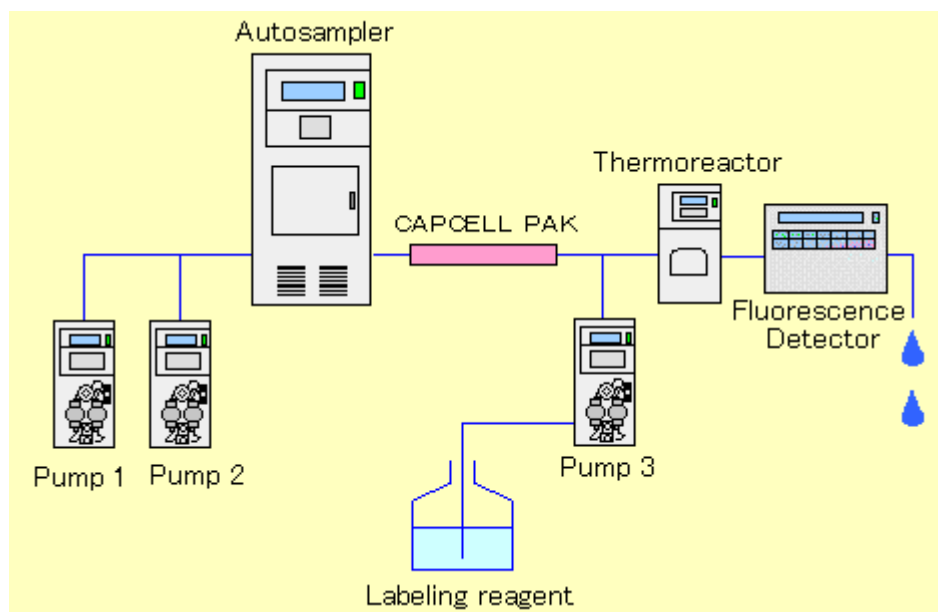
Analysis by post-labeling of histamine



HPLC Conditions

Column: CAPCELLPACK18  
 UG120 S5  
 2.0 mm i.d. x 150 mm  
 Detection: EX 340 nm, EM 455 nm  
 Sample: Histamine 800 pg

Post-labeling system



For post-column reaction, use the detector with a thermoreactor.

### System Control Function

Remote operation from a Windows™ PC is possible by using Syscon-21 software.

### Specifications

Product No.	3013
Product Name	Fluorescence detector
System	Specific photometry of transmitted light monitor
Light Source	Xe lamp
Fluorescence Wavelength	Excitation side: 200 to 850 nm Fluorescence side: 250 to 900 nm
Bandwidth	Selectable from 15 and 30 nm (fluorescence side)
Sensitivity	300 or more (Raman scattered light of water S/N, 12 μL flow cell) 180 or more (Raman scattered light of water S/N, 7 μL flow cell)
Flow Cell	Standard: 7 μL Optional: 12 μL
Power	AC 100 V ±10%, 50/60 Hz, 420 W
Dimensions	260(W) × 243(H) × 500(D) mm
Weight	About 19 kg