

Application Data Sheet

No.21

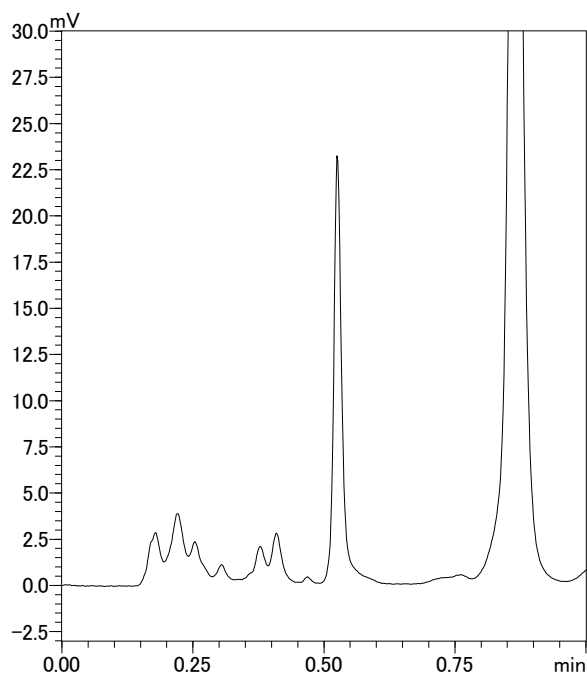
LC
Liquid Chromatograph

High-speed, Sensitive Analysis of Serotonin

Serotonin (5-hydroxytryptamine) is a biologically active substance that plays an important role in the body, functioning in the blood to constrict the vascular smooth muscle, and to promote platelet aggregation. This article introduces an example of ultrafast analysis of serotonin in the blood utilizing the Nexera UHPLC system and the RF-20Axs high-sensitivity fluorescence detector.

Analysis of Serotonin in the Blood

The blood sample was subjected to deproteinization via an aqueous trichloroacetic acid solution. A Shim-pack XR-ODS III (2 mm internal diameter, 50 mm length) with a 1.6 μ m particle size was used, and detection was performed via the RF-20Axs fluorescence detector. The maximum system load pressure in this analysis was approximately 79 MPa.



Column	: Shim-pack XR-ODS III (50 mmL. x 2.0 mmI.D., 1.6 μ m)
Pressure	: 79 MPa
Mobile Phase	: 0.15 mmol/L Acetate buffer (pH 4.7) / Methanol = 9 / 1 (v / v)
Flow Rate	: 0.7 mL/min
Column Temp.	: 37 °C
Injection Volume	: 1 μ L
Detection	: Fluorescence (RF-20Axs) Ex. 300 nm, Em. 350 nm
Cell Temp.	: 25 °C
Flow Cell	: Semi-micro cell

Peak :
1. Serotonin

* This data was provided by BML, Inc.

* The data in this document was not acquired by instruments approved by the Japanese Pharmaceutical Affairs Law.

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