

Application Data Sheet

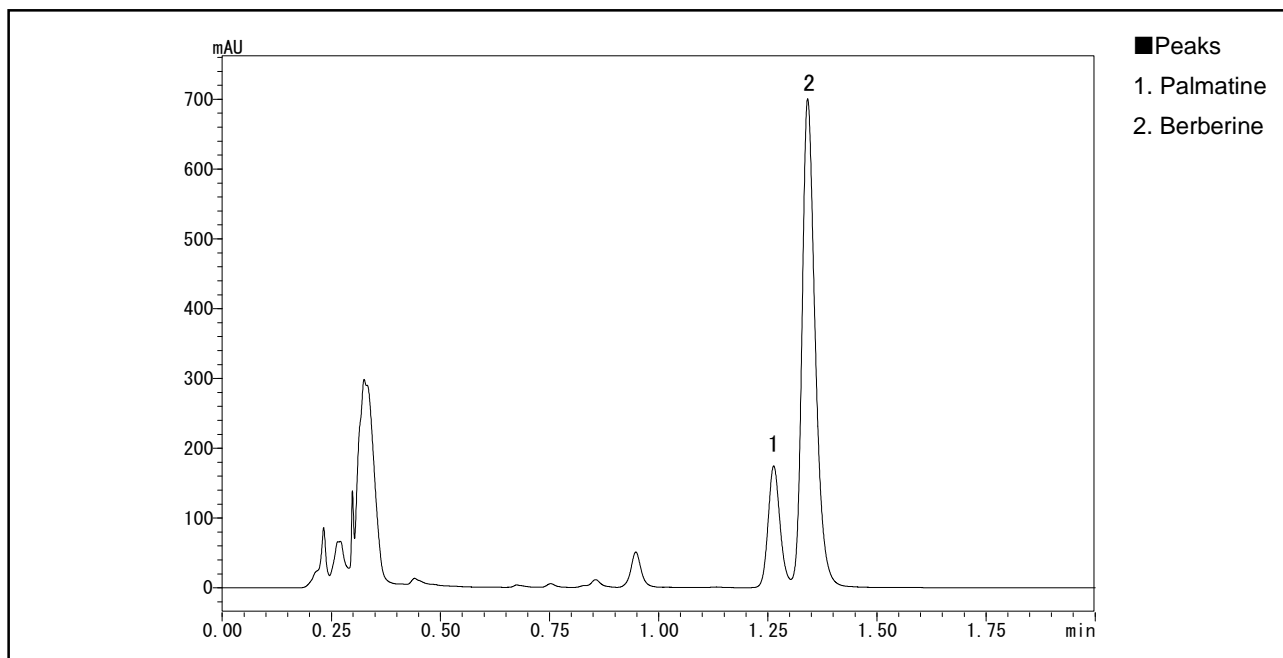
High Performance Liquid Chromatography

No. 44

High-Speed Analysis of Berberine and Palmatine

This is an example of high-speed analysis of berberine, one of the alkaloids contained in cork tree bark. The ultra fast separation for berberine and palmatine was performed using a UFLCXR system.

The two components were detected using a UV detector with a semi-micro flow cell. For the LCMS application, please refer to Data Sheet No.27.



Analysis of Berberine and Palmatine in Cork Tree Bark Powder

[Sample Preparation]

20 mL of extraction solution* was added to 0.1 g of cork tree bark powder to extract the palmatine and berberine. The supernatant was filtered using a 0.45 μ m membrane filter.

*Extraction solution : methanol / 10mM HCl (1/1, v/v)

Analytical Conditions

Instrument	: Prominence UFLCXR system
Column	: Shim-pack XR-ODS (75 mm \times 3.0 mm <i>i. d.</i>)
Mobile Phase	: Water / Acetonitrile = 1 / 1 (v/v) containing SDS (1.7 g/L) and potassium dihydrogenphosphate (3.4 g/L)
Flow Rate	: 1.2 mL/min
Column Temperature	: 40 $^{\circ}$ C
Detection	: Absorbance at 345 nm with semi-micro flow cell
Sample Volume	: 4 μ L