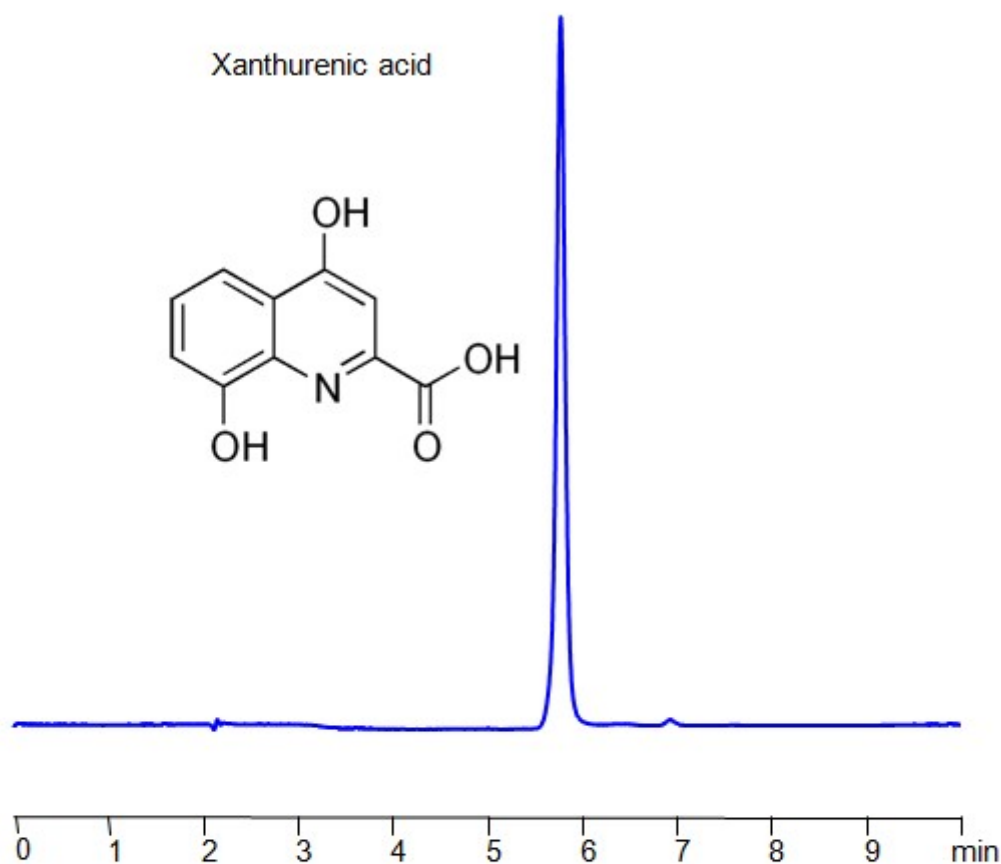


HPLC Method for Analysis of Xanthurenic acid on Newcrom BH Column

<https://sielc.com/hplc-determination-of-xanthurenic-acid>

Chromatogram



Column:	Newcrom BH
Column size:	4.6 × 150 mm, 5 µm, 100A
Column part number:	NBH-46.150.0510
Mobile phase:	Gradient MeCN – 10-60%, 10 min
Buffer:	H ₂ SO ₄ – 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 250 nm

Description

Xanthurenic acid is a compound with the chemical formula C₁₀H₇NO₄. It is associated with tryptophan metabolism and is known to be excreted in the urine. It is a non-essential, non-proteinogenic amino acid derivative and is considered to be a metabolite of tryptophan. It is part of the kynurenine pathway, which is the major catabolic route for tryptophan. Synthesis of xanthurenic acid is dependent on vitamin B₆ (pyridoxal phosphate), as it is a cofactor for enzymes in the tryptophan degradation pathway.

Xanthurenic acid is characterized by the presence of two hydroxy groups and a carboxylic acid group. Structurally, it is composed of a bicyclic ring system that incorporates a benzene ring and a pyridine ring (with a nitrogen atom). The benzene ring

is substituted with two hydroxy groups at positions 4 and 8, and the pyridine ring carries a carboxylic acid functionality. It is formed from 3-hydroxykynurenine by the action of the enzyme kynurenine 3-monooxygenase and can further be converted to 2-amino-3-carboxybenzoate semialdehyde by xanthurenate 8-monooxygenase

Xanthurenic acid can be retained and analyzed on a mixed-mode Xanthurenic acid column with a mobile phase consisting of water, Acetonitrile (MeCN), and sulfuric acid. This analytical method can detect compounds with high resolution and peak symmetry using UV detection at 200 nm

Method Parameters

Mobile Phase	Gradient MeCN – 10-60%, 10 min
Buffer	H ₂ SO ₄ – 0.2%
Flow Rate	1.0 ml/min
Peak Retention Time	5.58 min
Detection	250 nm
Class of Compounds	Acid
Analyzing Compounds	Xanthurenic acid

HPLC Column Used

Newcrom BH, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

[Order this column at hplc-shop.de](https://www.hplc-shop.de) →