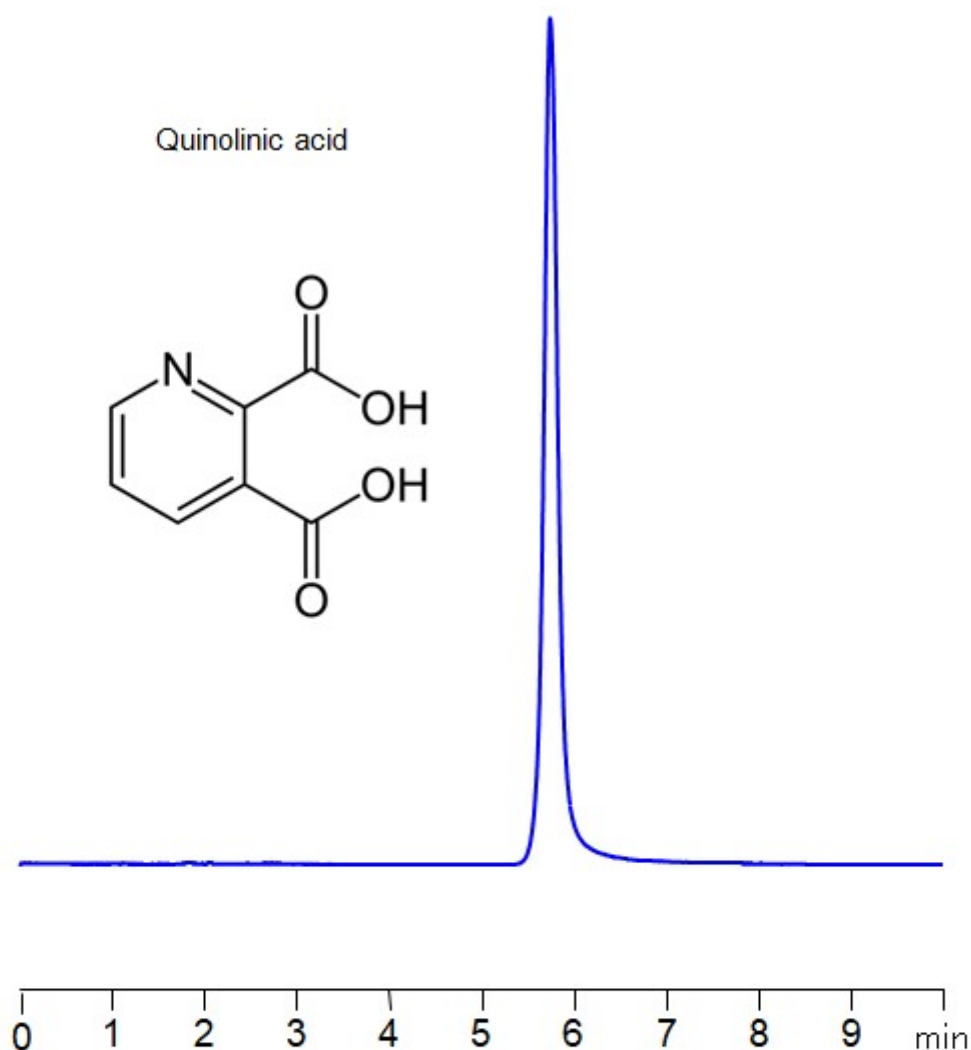


## HPLC Method for Analysis of Quinolinic acid on Newcrom BH Column

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

### Chromatogram



|                            |                                       |
|----------------------------|---------------------------------------|
| <b>Column:</b>             | Newcrom BH                            |
| <b>Column size:</b>        | 4.6 × 150 mm, 5 µm, 100A              |
| <b>Column part number:</b> | NBH-46.150.0510                       |
| <b>Mobile phase:</b>       | MeCN – 20%                            |
| <b>Buffer:</b>             | H <sub>3</sub> PO <sub>4</sub> – 0.2% |
| <b>Flow rate:</b>          | 1.0 mL/min                            |
| <b>Detection:</b>          | UV 200 nm                             |

### Description

HPLC analysis of Quinolinic acid with Newcrom BH . Includes separation method, chromatogram, and mobile phase.

Quinolinic acid , also known as quinolinate or 2,3-pyridinedicarboxylic acid , is a dicarboxylic acid with a pyridine backbone. It has the chemical formula C<sub>7</sub>H<sub>5</sub>NO<sub>4</sub> . It plays a role in various biological processes and is associated with some pathological

conditions. Quinolinic acid is a metabolite in the kynurenine pathway, which is responsible for the catabolism of tryptophan, an essential amino acid. It serves as a precursor to nicotinamide adenine dinucleotide (NAD<sup>+</sup>), an essential coenzyme in cellular redox reactions. Quinolinic acid can act as an excitotoxin in the brain, meaning it can overactivate nerve cells potentially leading to damage or death of the cells. High levels of quinolinic acid have been associated with various neurodegenerative disorders, such as Alzheimer's disease, Huntington's disease, and others, due to its ability to overstimulate neurons through the N-methyl-D-aspartate (NMDA) receptor. It has a somewhat polar character due to the carboxylic acid groups and the nitrogen in the pyridine ring. It is a weak acid and can lose protons from the carboxylic acid groups, forming salts in neutral and basic conditions. Quinolinic acid, like other biologically active molecules, may be found in various environmental contexts, like in soil and water, through natural processes or as a result of anthropogenic activities, such as the use of pesticides that may contain pyridine derivatives. You can find detailed UV spectra of Quinolinic acid and information about its various lambda maxima by visiting the following link.

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

#### Method Parameters

|                     |                 |
|---------------------|-----------------|
| Mobile Phase        | MeCN – 20%      |
| Buffer              | H3PO4 – 0.2%    |
| Flow Rate           | 1.0 ml/min      |
| Peak Retention Time | 5.38 min        |
| Detection           | 200 nm          |
| Class of Compounds  | Acid            |
| Analyzing Compounds | Quinolinic acid |

#### HPLC Column Used

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

[Order this column at hplc-shop.de →](#)