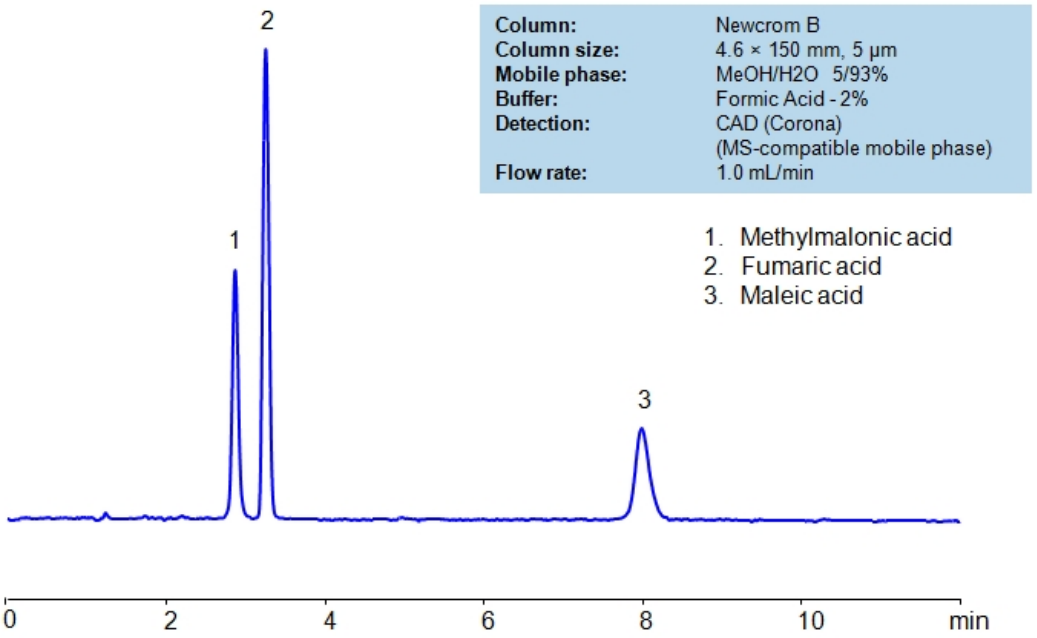
HPLC Separation of Methylmalonic, Fumaric, Maleic acids on Newcrom B Column



High Performance Liquid Chromatography (HPLC) Method for Analysis of Fumaric Acid , Methylmalonic Acid , Maleic Acid

Methylmalonic Acid is an organic acid with the chemical formula C4H6O4 . It works as an intermediate in the breakdown of certain amino acids and fatty acids. Elevated levels of Methylmalonic acid can be a sign of a Vitamin B12 deficiency or Methylmalonic acidemia, which is a rare genetic disorder where the previously mentioned acid is not properly metabolized, leading to .

Malonic Acid is an organic acid with the C3H4O4chemical formula. It has a variety of uses from synthesis to preservatives. When it comes to synthesis, it is often used in industrial means. and especially dyes for natural fibers. Besides industrial use, in laboratory environments, it is used in preparation of tris-maleate, sodium maleate buffers, and maleate salts.

Fumaric Acid , also known as trans-butenedioic acid, is an organic compound with C4H4O4chemical formula. It is used across food, industrial, and medical industries. In food, is it often used as a preservative, pH regulator, and flavoring akin to citric acid. Industrially, it is used in making polyester resins, polyhydric alcohols, and more. Medically, it is used in denture cleaners and it’s derivatives are used in treating psoriasis.

Fumaric Acid , Methylmalonic Acid , Maleic Acid can be retained and analyzed using the Newcrom B stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) with a formic acid buffer. Detection is performed using CAD.

Method Parameters

Column	Newcrom B, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeOH/H2O – 5/93%
Buffer	Formic Acid – 2%
Flow Rate	1.0 mL/min
Detection	CAD (Corona) (MS-compatible mobile phase)

Quelle: https://sielc.com/hplc-separation-of-methylmalonic-fumaric-maleic-acids