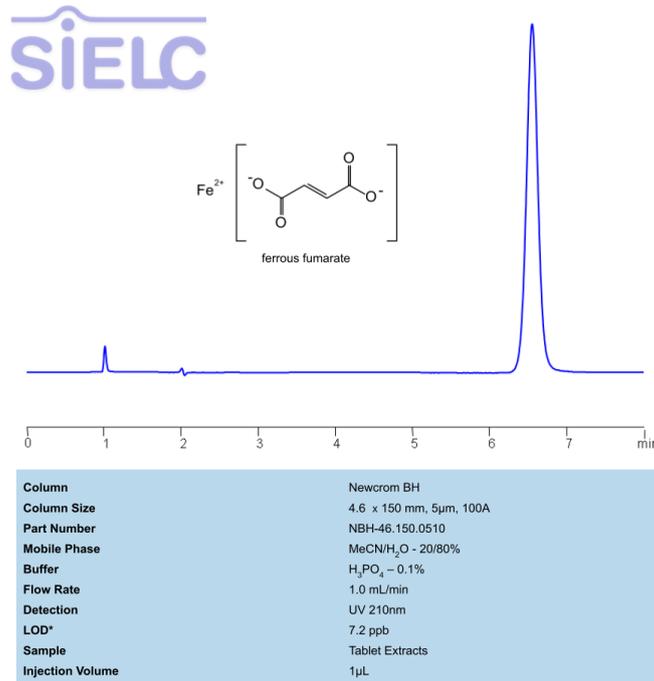


HPLC Method for Analysis of Ferrous Fumarate via Fumaric Acid Content in Pharmaceutical Formulation Using Newcrom BH Column



High Performance Liquid Chromatography (HPLC) Method for Analysis of Ferrous fumarate .

Ferrous Fumarate , also known as Iron(II) fumarate, is iron(II) salt of fumaric acid with the molecular formula C₄H₂FeO₄ . It is used as an iron supplement to prevent iron deficiency anemia. When mixed with potassium iodate, it is also used to address iodine deficiency.

Ferrous fumarate can be retained and analyzed using the Newcrom BH stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN). Detection is performed using UV.

Preparation of Fumaric Acid Standard Solutions Stock Solution (1 mg/mL fumaric acid):

Dilution Series: Prepare the following standard concentrations from the stock solution using deionized water as the diluent.

Preparation of Tablet Extracts (Ferrous Fumarate Tablets) Each tablet contains ferrous fumarate, providing 25 mg of elemental iron, which is equivalent to approximately 51 mg of fumaric acid per approx. 314 mg tablet.

Extract (Target ~0.20 mg/mL fumaric acid):

Theoretical concentration: ~0.20 mg/mL

Method Parameters

Column	Newcrom BH, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN – 20%
Buffer	H3PO4
Flow Rate	1.0 mL/min
Detection	UV 210 nm

Quelle: <https://sielc.com/hplc-method-for-analysis-of-ferrous-fumarate>