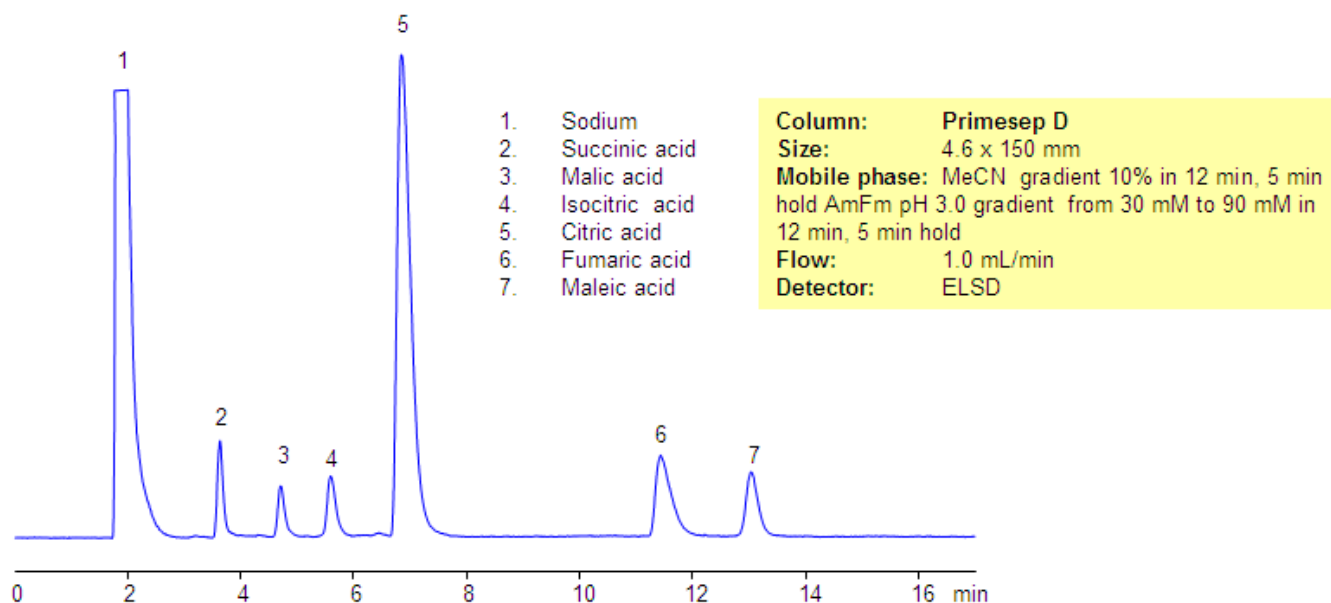


Separation of Compounds in TCA Cycle on Primesep D Column

<https://sielc.com/Application-Separation-of-Compounds-in-TCA-Cycle-on-Primesep-D-Column>

Chromatogram



Description

The citric acid cycle (tricarboxylic acid cycle, Krebs cycle) is a key process in the metabolic pathway by which all aerobic organisms generate energy. Compounds generated during TCA are hydrophilic, acidic compounds. Some of the hydrophilic acids are very strong while others are relatively weaker. All compounds have very low hydrophobicity and do not retain by the reversed-phase mechanism on the C18 or C8 HPLC columns. Citric acid and related products were separated in reversed-phase, anion-exchange mode on the Primesep D mixed-mode column. All hydrophilic, acidic compounds are well separated and demonstrate good shape. This robust method can be used for analysis of components of the TCA cycle and other highly hydrophilic compounds. This method is fully compatible with LC/MS and prep chromatography.

Method Parameters

Mobile Phase	MeCN/H ₂ O
Buffer	AmFm, pH 3.0
Flow Rate	1.0 ml/min
Detection	ELSD
Class of Compounds	Acid, Hydrophilic, Ionizable
Analyzing Compounds	Sodium, Succinic acid, Malic acid, Isocitric acid, Citric acid, Fumaric acid, Maleic acid

HPLC Column Used

Primesep D, 4.6x150 mm, 5 µm, 100A

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