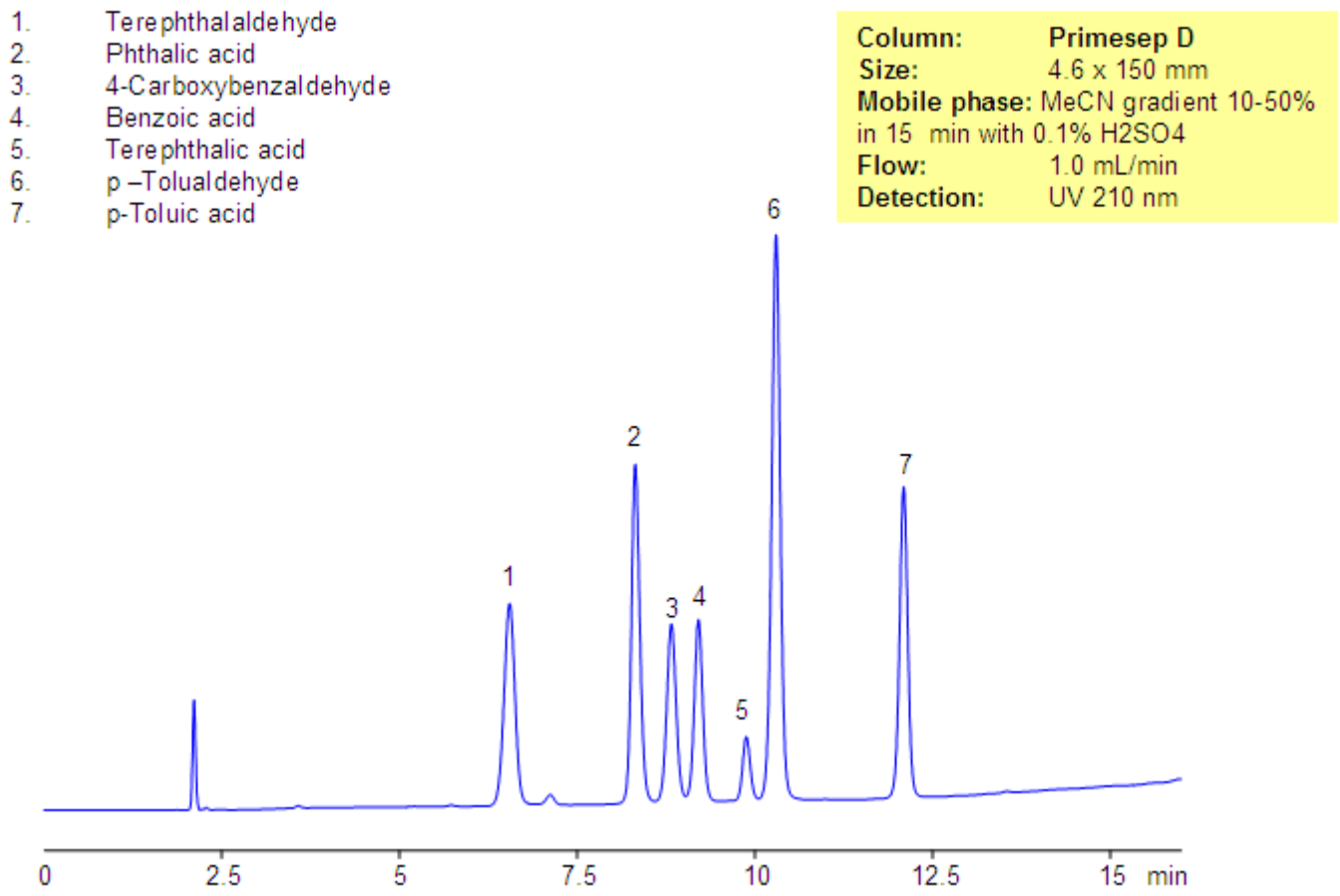
Separation of Phthalic Acids and Related Impurities

https://sielc.com/Application-Separation-of-Phthalic-Acids-and-Related-Impurities

Chromatogram



Description

Phthalic acid, phthalic acid isomers, and related products present in the production of phthalic acid were separated on the Primesep D column, based on reversed-phase and in-exchange mechanisms. Neutral, hydrophobic compounds of the phthalic acid production are retained by a reversed-phase mechanism, and phthalic acid and other acidic compounds are retained by a combination of reversed-phase and anion-exchange mechanisms. Resolution and selectivity of this separation can be modified by varying the amount of acetonitrile, buffer concentrations, and buffer pH. This method can be used for monitoring the production cycle of phthalic acid and related impurities.

Method Parameters

Mobile Phase	Gradient MeCN – 10-50%, 15 min
Buffer	H2SO4 – 0.1%
Flow Rate	1.0 ml/min
Detection	UV, 210 nm
Class of Compounds	Acid, Hydrophilic, Ionizable

Analyzing Compounds	Terephthalaldehyde, Phthalic acid, 4-Carboxybenzaldehyde, Benzoic acid, Terephthalic acid, p –Tolualdehyde, p-Toluic acid

HPLC Column Used

Primesep D, 4.6×150 mm, 5 µm, 100A

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