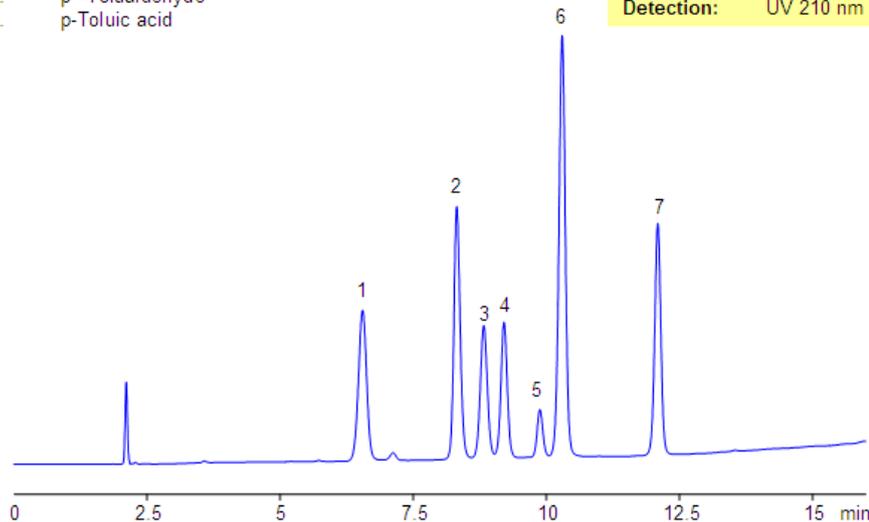


Separation of Phthalic Acids and Related Impurities

1. Terephthalaldehyde
2. Phthalic acid
3. 4-Carboxybenzaldehyde
4. Benzoic acid
5. Terephthalic acid
6. p-Tolualdehyde
7. p-Toluic acid

Column: Primesep D
Size: 4.6 x 150 mm
Mobile phase: MeCN gradient 10-50%
in 15 min with 0.1% H₂SO₄
Flow: 1.0 mL/min
Detection: UV 210 nm



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 ion-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

Column	Primesep D, 4.6x150 mm, 5 µm, 100 Å
Mobile Phase	Gradient MeCN – 10-50%, 15 min
Buffer	H ₂ SO ₄ – 0.1%
Flow Rate	1.0 mL/min
Detection	UV, 210 nm

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