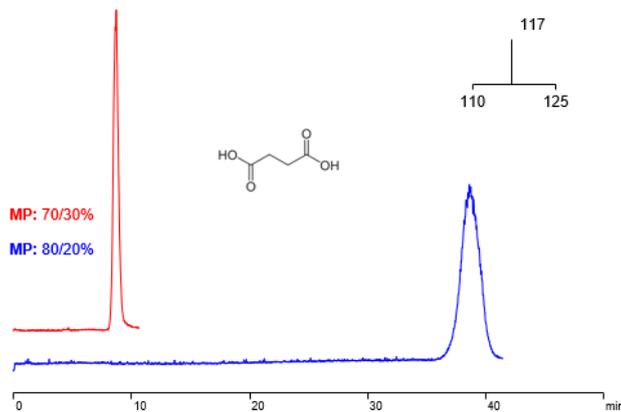


HPLC Method for Analysis of Succinic Acid on BIST A+ Column



Column:	BIST A+
Column size:	4.6x150 mm, 5 µm, 100Å
Column part number:	TAP-46.150.0510
Mobile phase:	MeCN/H ₂ O
Buffer:	TMDAP Formate – 5 mM, pH 4
Flow rate:	1.0 mL/min
Detection:	ESI-

Succinic Acid is a dicarboxylic acid with the chemical formula C₄H₆O₄. It is a precursor of some polyesters as well as a component of some alkyd resins. In food, it is typically used as an acidity regulator and flavoring agent. Sulfonic acids like 1-Pentanesulfonic acid, 1-Heptanesulfonic acid, 1-Decanesulfonic acid, and 1-Dodecane sulfonic acid are typically used in ion chromatography and for organic syntheses.

Using SIELC's newly introduced BIST™ method, Succinic Acid can be separated on a negatively-charged, cation-exchange BIST A+ column, contrary to conventional chromatographic wisdom. There are two keys to this retention method: 1) a multi-charged, positive buffer, such as N,N,N',N'-Tetramethyl-1,3-propanediamine (TMDAP), which acts as a bridge, linking the negatively-charged anion analytes to the negatively-charged column surface and 2) a mobile phase consisting mostly of organic solvent (such as MeCN) to minimize the formation of a solvation layer around the charged analytes. Other positively-charged buffers that can generate BIST™ include Calcium acetate and Magnesium acetate. Using this new and unique analysis method, these Sulfonic acids can be separated, retained, and detected through ELSD. This method is also compatible with Mass Spectrometry (LC-MS) and CAD.

Method Parameters

Column	BIST A+, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN
Buffer	TMDAP phosphate – 5 mM pH 4.0
Flow Rate	1.0 mL/min
Detection	Vis 600 nm

Quelle: <https://sielc.com/hplc-method-for-succinic-%d0%b0cid>