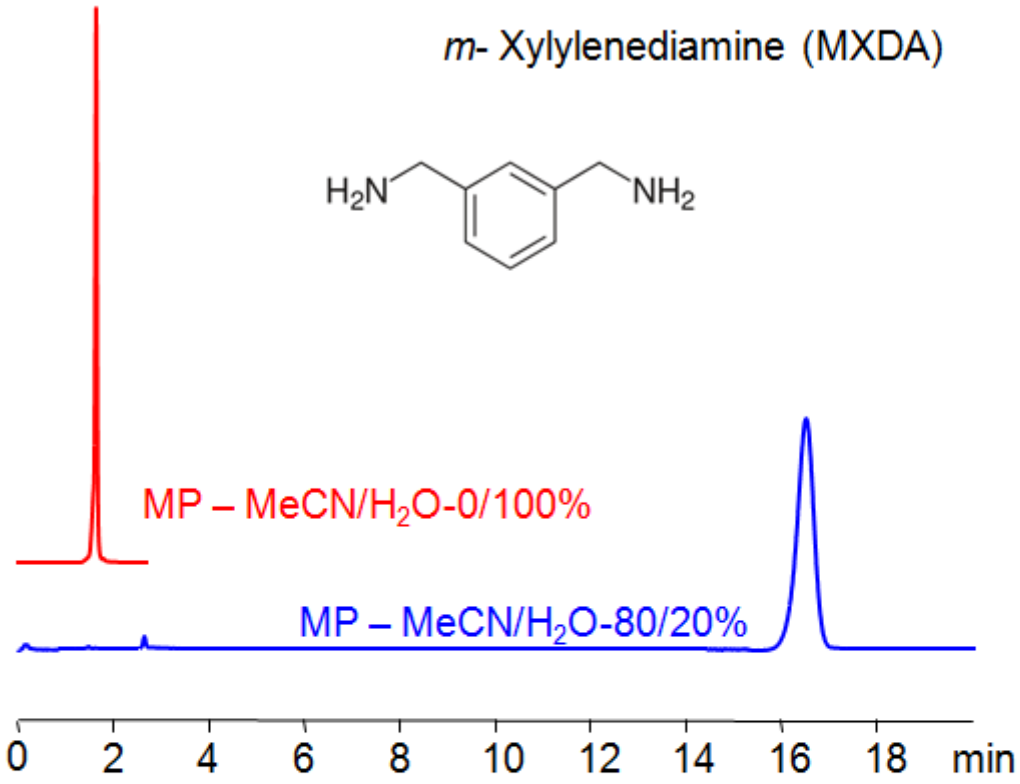
HPLC Method for Analysis of m-Xylylenediamine (MXDA) on BIST™ B+ Column

https://sielc.com/hplc-method-for-analysis-of-m-xylylenediamine-mxda

Chromatogram



Column:	BIST™ B+
Column Size:	4.6 × 150 mm, 5 µm
Column part number:	TBP-46.150.0510
Buffer:	H_2SO_4 – 0.2%
Flow Rate:	1.0 ml/min
Detection:	UV 210 nm

Description

· Separation type: Bridge Ion Separation Technology, or BIST™ · BIST Ionic Modifier Preparation · High Performance Liquid Chromatography (HPLC) Method for Analysis of m- Xylylenediamine (MXDA)

HPLC Method for Analysis of m-Xylylenediamine on a BIST™ B Column. m-Xylylenediamine (MXDA) is a popular curing agent used on epoxy resins. Using SIELC's newly introduced BIST™ method, MXDA, which protonates in water, can be retained on a positively-charged anion-exchange BIST™ B column. There are two keys to this retention method: 1) a multi-charged, negative buffer, such as Sulfuric acid (H2SO4), which acts as a bridge, linking the positively-charged MXDA analytes to the positively-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. Using this new and unique analysis method, MXDA can be retained and UV detected at 210 nm.

Method Parameters

Mobile Phase	MeCN – 80%
Buffer	H2SO4 – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 210nm
Class of Compounds	Amine, Aliphatic amine
Analyzing Compounds	m-Xylylenediamine (MXDA)

HPLC Column Used

BIST™ B+, 4.6×150 mm, 100A