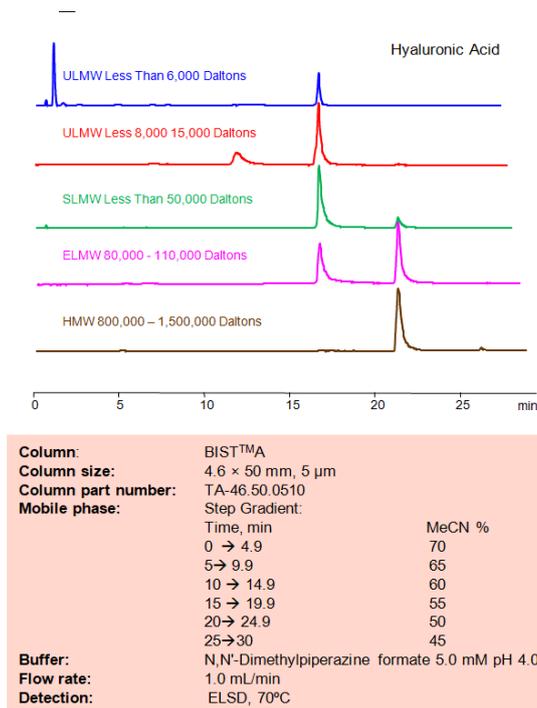


HPLC Method for Analysis of Hyaluronic Acid on BIST A Column



Separation type: Bridge Ion Separation Technology, or BISTTM by SIELC Technologies

Hyaluronic acid (HA) is a glycosaminoglycan, a type of molecule made up of long chains of sugar molecules. It's found naturally in many parts of the body, including the skin, eyes, and joints. Due to its unique properties, hyaluronic acid is used in a variety of medical and cosmetic applications. Here are some key points to know about hyaluronic acid:

If you're considering using products with hyaluronic acid or having procedures that involve HA, it's essential to consult with a dermatologist or medical professional to ensure it's the right choice for you.

Using SIELC's newly introduced BISTTM method, however, hyaluronic acid can be retained, analyzed on a negatively-charged, cation-exchange BISTTM A column. There are two keys to this retention method: 1) a multi-charged, positive buffer, such as N,N'-Dimethylpiperazine (DMP), 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 BISTTM include TMDAP, Calcium acetate, and Magnesium acetate. Using this new and unique analysis method, hyaluronic acid retained with high selectivity and great peak shape. This method can be detected and is compatible with ELSD, CAD, and Mass Spectrometry (LC-MS).

Method Parameters

Column	BIST A, 4.6 x 50 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Step gradient MeCN
Buffer	N,N'-Dimethylpiperazine formate 5.0 mM pH 4.0
Flow Rate	1.0 mL/min
Detection	ELSD, the nebulizer and evaporator temperatures 70 °C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM) (MS- compatible mobile phase)

Quelle: <https://sielc.com/hplc-determination-of-hyaluronic-acid>