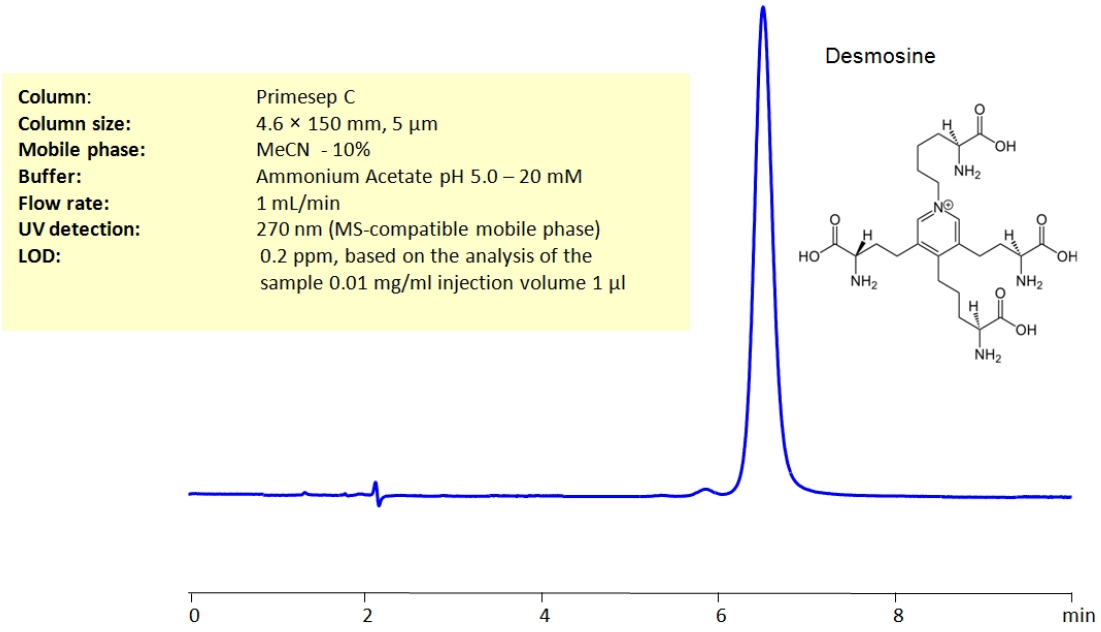
HPLC Determination of Desmosine on Primesep C Column



High Performance Liquid Chromatography (HPLC) Method for Analysis of Desmosine .

Desmosine and isodesmosine are unique amino acids found in elastin, a protein in connective tissue such as elastic arteries, lungs, and skin. Both can be used as specific biological markers for the degradation of mature cross-linked elastin.

Desmosine is pyridinium-based amino acid derivative with C24H40N5O8 + molecular formula. It is found exclusively in elastin. Elevated levels of desmosine in urine can be a symptom of Chronic Obstructive Pukmonary Disease (COPF), so it can be used as a biomarker when monitoring progression and aiding in a potential diagnosis.

Desmosine can be detected at 270 nm using Primesep C mixed-mode reversed-phase cation-exchange column and a mobile phase consisting of acetonitrile (ACN), and water with Ammonium acetate buffer.

Method Parameters

Column	Primesep C, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN – 10%
Buffer	Ammonium Acetate pH 5.0 – 20 mM
Flow Rate	1.0 mL/min
Detection	UV 270 nm

Quelle: https://sielc.com/hplc-determination-of-desmosine-on-primesep-c-column