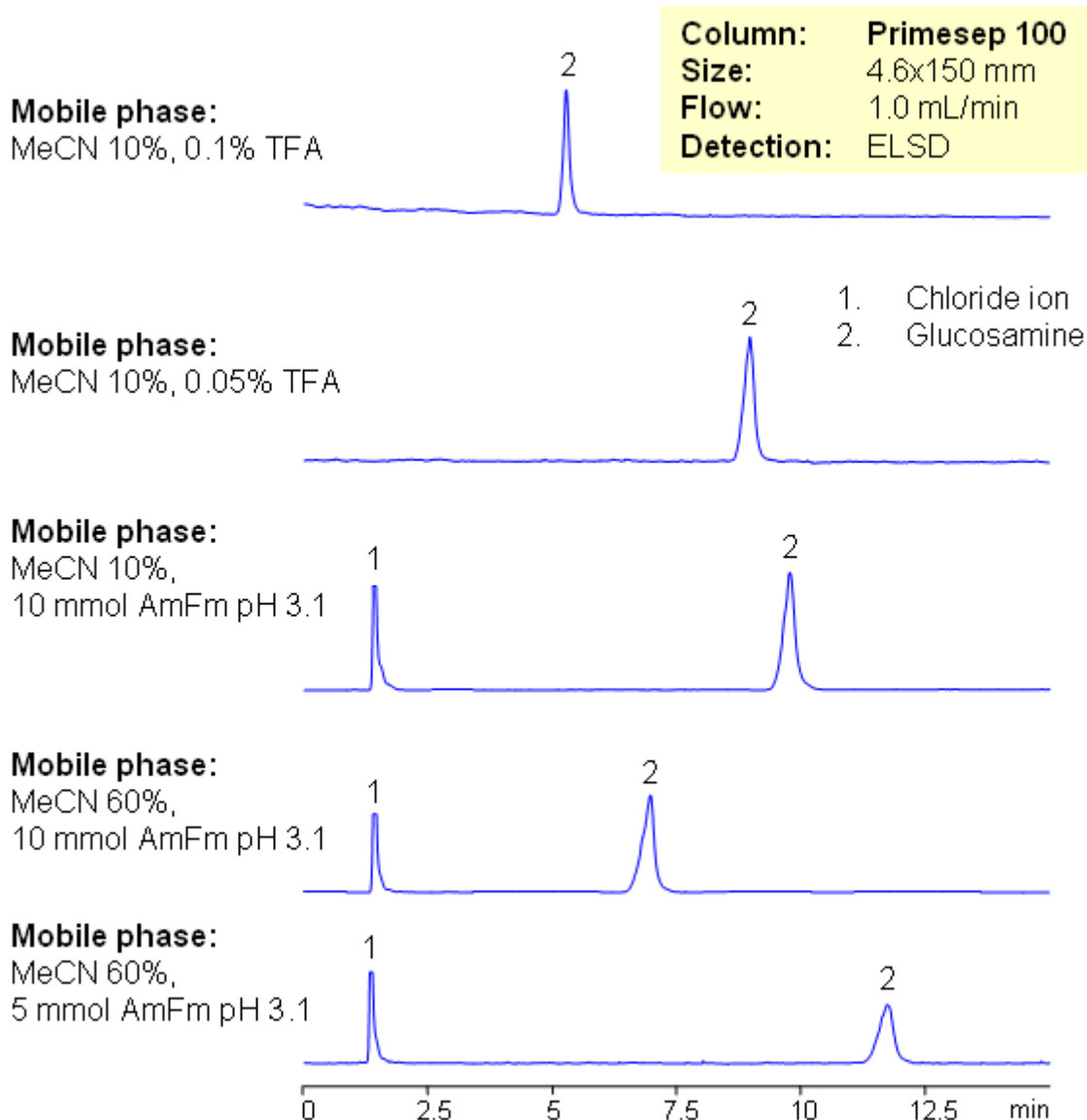


HPLC Retention of Glucosamine

<https://sielc.com/Application-HPLC-Retention-of-Glucosamine>

Chromatogram



Description

Glucosamine is an amino sugar that is used as precursor in synthesis of glycosylated proteins and peptides. Glucosamine is also a component of several medications, example being oral glucosamine being is used to treat arthritis. It is a very polar compound with no UV activity and pKa of 11. Compound is not retained on modern HPLC columns without ion-pairing reagents. It is often required to quantitate glucosamine in complex matrices with LC/MS detection, making the use of ion-pairing reagents impossible. In this HPLC application glucosamine is retained by cation-exchange mechanism on Primesep 100 mixed-mode column. Retention of glucosamine is controlled by buffer nature, buffer concentration and buffer pH. Method can be used for fast determination of glucosamine in mixtures with proteins, sugars and sugar phosphates. ELSD and LC/MS are detection of choice for polar non-UV active compounds.