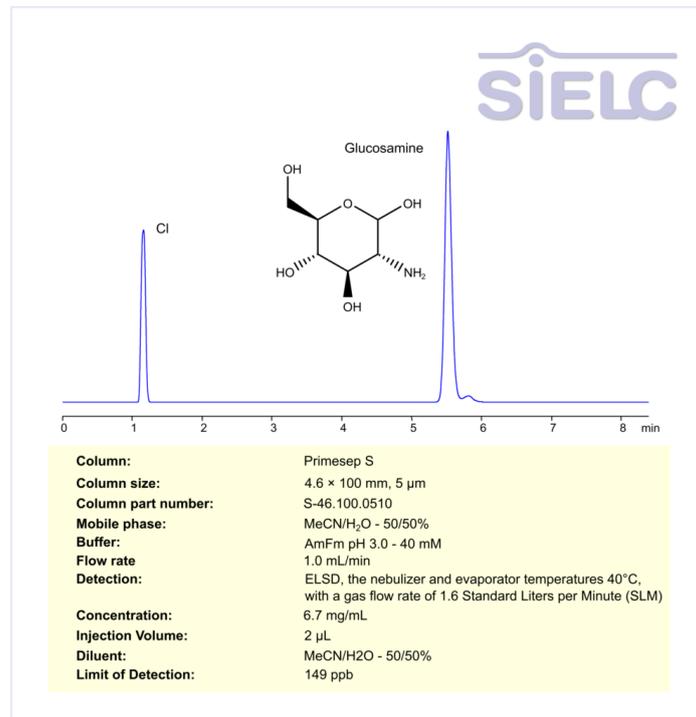


ELSD-HPLC Method for Analysis of Glucosamine (Hydrochloride) on Primesep S Column



Glucosamine is a naturally occurring compound primarily found in cartilage, which cushions and supports joints. It is widely used as a dietary supplement to promote joint health and alleviate symptoms of osteoarthritis, such as stiffness and pain. Commonly sourced from shellfish or produced synthetically, glucosamine is available in forms like glucosamine sulfate, glucosamine hydrochloride, and N-acetyl glucosamine. It supports the repair and maintenance of cartilage and connective tissues, playing a vital role in joint flexibility and mobility.

Glucosamine can be retained and analyzed using an Primesep S mixed-mode stationary phase column. The analysis employs an isocratic method with a simple mobile phase consisting of water, acetonitrile (MeCN), and ammonium formate as a buffer. Detection is achieved using ELSD.

Method Parameters

| | |
|-------------------------|--|
| Column | Primesep S, 4.6 x 100 mm, 5 µm, 100 Å, dual ended |
| Mobile Phase | MeCN/H ₂ O – 50/50% |
| Buffer | Ammonium formate pH 3.0 – 40 mM |
| Flow Rate | 1.0 mL/min |
| Detection | ELSD, the nebulizer and evaporator temperatures 40°C, with a gas flow rate of 1.6 Standard Liters per Minute (SLM) |
| Sample | 6.7 mg/ml |
| Injection Volume | 2 µl |

Quelle: <https://sielc.com/hplc-method-for-analysis-of-glucosamine>