Bio-gen Extracts

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Glucosamine Salts

CAS 3416-24-8

RESEARCH REVIEW

Glucosamine is an amino monosaccharide found in chitin, glycoproteins and glycosaminoglycans *(formerly known as mucopolysaccharides)* such as hyaluronic acid and heparan sulfate. Glucosamine is also known as 2-amino-2-deoxyglucose, 2-amino-2-deoxy-beta-D-glucopyranose and chitosamine.

Glucosamine is available commercially as a nutritional supplement in three forms: Glucosamine hydrochloride, Glucosamine sulfate and N-acetyl-Glucosamine.

- The Glucosamine used in supplements is typically derived from marine exoskeletons.
- Glucosamine plays a role in the promotion and maintenance of the structure and function of cartilage in the joints of the body.
- Glucosamine may also have anti-inflammatory properties.
- Glucosamine may be indicated for the treatment and prevention of osteoarthritis, either by itself or in combination with Chondroitin Sulfate or MSM.

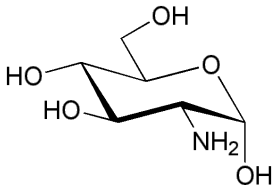

Figure 1 Glucosamine Salt Structure

At neutral as well as physiologic pH, the amino group in Glucosamine is protonated, resulting in its having a positive charge. Salt forms of Glucosamine contain negative anions to neutralize the charge. In the case of Glucosamine hydrochloride, the anion is chloride, and in Glucosamine sulfate the anion is sulfate. N-acetylglucosamine is a delivery form of Glucosamine in which the amino group is acetylated, thus neutralizing its charge. To date, most of the clinical studies examining the effect of Glucosamine on osteoarthritis have been performed with either the sulfate or the chloride salts of Glucosamine. All three forms are water soluble.

For more information please visit www.bio-gen.in