

Lift the value of your GAG extraction process



These days, people are living and staying active for longer – and our bodies need to remain in working order to support longevity and quality of life. Key components of joint-targeted supplements are glycosaminoglycans, better known as GAGs. In particular, chondroitin sulfate and heparin are of commercial importance, with heparin being used both for arthritis and as an anticoagulant.

GAGs can be extracted from animal sources, such as lungs, skin and other tissues, and can be released by either alkaline or enzymatic hydrolysis. The use of enzymes reduces costs, increases yields and results in cleaner GAGs than a chemical approach, for a much more sustainable extraction process.

Benefits

Maximize the value, yield and quality of your GAGs

By extracting GAGs from animal co-products, you create valuable new commercial products for growing markets such as chondroitin sulfate and heparin. Chondroitin sulfate is used to treat osteoarthritis, while heparin's uses include blood clots, heart attacks and arthritis. With enzymes, your yield is larger and your product is cleaner than with chemicals. This makes your GAGs more attractive to quality-conscious customers for a favorable return on your investment.

Reduce your environmental footprint – and your costs

Using enzymes for GAG extraction generates less residue than the chemical approach, which significantly reduces the amount of water needed to remove undesirable byproducts. Not only does this save you money, it also reduces the environmental impact of the process in two ways: by conserving precious water resources and by avoiding alkaline waste, which can harm aquatic life and affect human health.

Optimize your process

Extracting GAGs requires a number of steps and strict protocols, and an enzymatic process fits well into a value- and quality-driven production environment. Novozymes helps you every step of the way. We'll recommend the optimal combination and dosage of enzymes for your particular process, help you operate at maximum efficiency, produce minimum waste and unlock every bit of value.

Partner to improve GAG extraction

Novozymes works with you to ensure enzymes make your business better:

Differentiate

Understanding market demands

Animal-derived co-products are rich in nutritional and bioactive compounds that are in high demand in several industries globally. By working with Novozymes' experts, you can unlock the value within these process streams and win in the marketplace.

Optimize

Optimizing your product with enzymes

Protease technology has unique and versatile functional benefits. Through experimentation, we can select the optimal balance and dosage of enzymes to extract glycosaminoglycans in the most sustainable and profitable manner. The enzymes that can extract value from your animal-derived protein are Alcalase®, Savinase® and Novo-Pro® D.

Expand

Winning customers and sales

Novozymes helps you meet your production and launch goals with a partnership mentality. You have access to a wealth of expertise, from labeling and regulatory to technical services, supply chain and commercial account management. Together we ensure that your GAG product is a commercial success.

Get ahead

Staying ahead of the dynamic food and beverage market requires the best technology and expertise to become even more flexible, efficient and profitable. With our solutions and know-how, Novozymes can support you on that journey. Let's transform the quality and sustainability of your business together.

It's the quality that counts

Novozymes provides safe production strains, assessed and approved raw materials – under strict, controlled processes that have full traceability. We are your expert when it comes to monitoring, understanding and complying with local and global food legislation, and we continue to pursue key international food safety and quality certifications – so you and your customers can feel confident.



About Novozymes

Novozymes is the world leader in biological solutions. Together with customers, partners and the global community, we improve industrial performance while preserving the planet's resources and helping build better lives. As the world's largest provider of enzyme and microbial technologies, our bioinnovation enables higher agricultural yields, low-temperature washing, energy-efficient production, renewable fuel and many other benefits that we rely on today and in the future. We call it Rethink Tomorrow.

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