

# Catch new markets with fish extracts

In fish and seafood processing, only a fraction of the available meat is used. The remaining protein-rich material is typically processed into low-value fish meal. Today, the market is demanding higher-value fish ingredients, while the requirements to meet new application needs are becoming more diversified. And as fish and seafood consumption rises globally, your opportunities to convert co-products into valuable fish and low-fat feed products have never been greater.

Together with Novozymes, you can efficiently meet the demand for the high-value extracts, natural flavors and protein enhancers that can be developed from fish co-products. Embracing sustainable enzyme technology over traditional processing with acid (silage) enables you to create new value from your fish co-products, maximize process economy and win in the marketplace.

## Benefits

### Maximize the value of co-products

Enzymes convert co-products from fish and seafood into protein-rich products that can bring significant value to your business. You can create natural fish and other seafood flavors for soups, sauces, bouillons or pet food. Enzymes can help extract a higher yield of oils rich in omega-3 – a claim that resonates with health-conscious consumers. And high-quality fish meal can be used to make quality animal feed and pet food for demanding pet owners.

### Increase yield and save costs

The enzymatic process increases yield and develops higher-quality fish-derived products. This gentle but highly effective process optimizes energy utilization through reduced viscosity and reduces cleaning costs, since treated fish is less likely to stick to surfaces. Transforming your co-products into an in-demand ingredient not only benefits your process economy, it also makes your process more sustainable, since enzymes are fully biodegradable.

### Improve your process environment

The enzymatic process is safer and more robust than acid treatment. It is easy to control and there is no risk of equipment corrosion. Altogether, conditions that are better for your employees and the environment. Novozymes' expert technical services staff is also committed to helping you optimize every step of your process. Together, we'll find the optimal combination and dosage of the industry's most advanced enzymes for your fish co-products and process flow.

# Partner to improve your fish processing

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

## Differentiate

### Understanding market demands

Fish-derived co-products are rich in nutritional and bioactive compounds that are in high demand in several industries globally. Fish protein extract and natural flavors are sustainable ways to derive value from fish co-products. 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 develop your new ingredient. The enzymes that can boost the value of your fish co-products are Alcalase®, Flavourzyme® and Neutrase®.

## Expand

### Winning customers and sales

Fish processing can boost sustainability by extracting the maximum value from every fish. 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 fish extracts are 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.

### Novozymes Switzerland AG

Neumattweg 16  
4243 Dittingen  
Switzerland

Tel. +41 61 765 6111  
Fax +41 61 765 6333

### Novozymes A/S

Krogshoejvej 36  
DK-2880 Bagsvaerd  
Denmark

Tel. +45 4446 0000