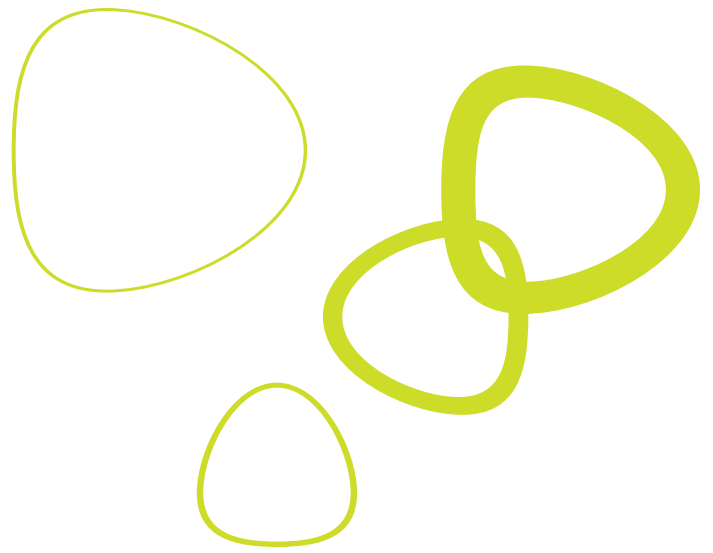


Distilling product range

Novozymes delivers efficiency, high quality and innovation to distilleries



As the global leader in research and development within grain processing, Novozymes continues to introduce innovative products to the market. Together with Novozymes' experts in alcohol production and grain processing, you get the specific help you need to efficiently produce high-quality distilling products.

We ensure efficiency throughout the distilling process with our products and renowned technical service capabilities:

- Improving production capacity and output
- Increasing alcohol yields
- Reducing costs
- Securing process consistency
- Ensuring high-quality spirits

Optimize each step of your production process with Novozymes' broad range of products

Liquefaction: Delivering value and flexibility beyond standard liquefaction

Key benefits with Novozymes' liquefaction range:

- Increase alcohol yields
- Save on chemicals, energy, and water with low pH and high DS processing
- Maximize use of backset/thin stillage
- Optimize pre-liquefaction and liquefaction

Process step	Product	Benefits
Liquefaction	Liquoflow® Yield	<ul style="list-style-type: none">• Special premium blend of enzymes• Boost ethanol yield to the highest possible level
	LpHera®	<ul style="list-style-type: none">• Lower pH liquefaction• High temperature stability
	Liquoflow® pHlex DS	<ul style="list-style-type: none">• Lower pH stability, allowing increased use of stillage recycle and reduced chemical additions (Na), which can inhibit yeast• Works at high dry solids (>30%)• Better viscosity break
	Liquoflow® Go 2X Liquoflow® Go 3X	<ul style="list-style-type: none">• Efficient liquefaction at very high mash DS (30–35%)• Low mash viscosity and smoother downstream processing• Savings in energy and chemicals due to low pH• No Ca++ addition is required, reducing the formation of beer stone

Saccharification: Delivering high-quality, cost-effective fermentation solutions

Novozymes' Saczyme® range converts starch into glucose effectively, while being kind to costs, delivering dependable quality and ensuring a robust process.

Key benefits with Novozymes' saccharification range:

- High alcohol levels
- Reliable saccharification with varying raw materials and conditions
- Increased alcohol yield
- Cost efficiency and logistical savings
- Side activities that help compensate for less-than-ideal liquefaction

Process step	Product	Benefits
Saccharification	Saczyme® Yield	<ul style="list-style-type: none"> • Special premium blend of enzymes • Strive for lowest possible residual starch • Boost ethanol yield to the highest possible level
	SAN™ Super 360 L	<ul style="list-style-type: none"> • Enhanced fermentation and saccharification • More valuable alcohol with lower levels of off-flavors • Greater process and raw material flexibility • Reduction in fermentation time
	Saczyme® Pro 1.5X	<ul style="list-style-type: none"> • Higher starch conversion resulting in very low residual starch • Faster glucose generation • Improved performance at low enzyme cost
	Saczyme® Plus 1X Saczyme® Plus 2X	<ul style="list-style-type: none"> • Enhanced yield
	Saczyme® Go 2X	<ul style="list-style-type: none"> • Cost efficient and robust saccharification • Low dosage due to very high concentration • Savings in logistics

Fermentation & High Gravity Fermentation: Ensuring exceptional yield, high output and reduced costs

Process step	Product	Benefits
HGF/Viscosity reduction on small grains (wheat, rye, barley)	Viscoferm®	<ul style="list-style-type: none"> • Increased output and capacity with high solids (>30% DS) • Savings in energy, water and operational costs • Reduced viscosity and smooth processing
Fermentation enhancement	Sanferm® Yield	<ul style="list-style-type: none"> • Increased alcohol yield • Shorter and ensured fermentation
	Novozym® 25008	<ul style="list-style-type: none"> • Increased alcohol yields on grains • Increased alcohol yields on cane molasses • Improved and reduced fermentation time

Novozymes' food and beverage expertise

For years, Novozymes has helped the world's largest distilleries achieve processing excellence, high yield and quality, in varying conditions and with a variety of grains. Our customers rely on our deep knowledge of enzymes, our pragmatic application expertise, and our global and local market insights to help them create the products that consumers, even in niche markets, will embrace for their world-class quality.

Technical services

Our experienced technical service representatives have a proven track record of optimizing processes for lower cost in use and better quality. Our technical service teams are located in every region of the world. We can help you to optimize your process, and we can assist you in managing your process or developing the products you need.

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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