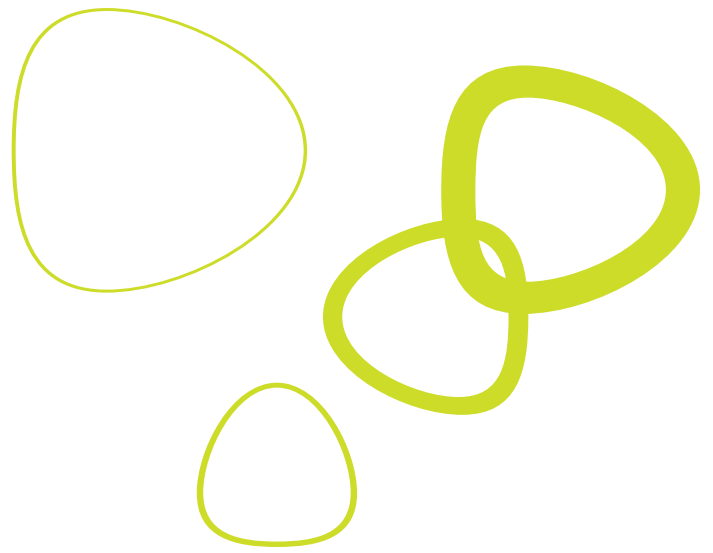


Brewing product range



Application	Recommended products	Benefits	Main enzyme activities
Cost-effective cereal cooking	Termamyl® SC DS Termamyl® SC 4X Termamyl® BrewQ Termamyl® Classic	<ul style="list-style-type: none"> Faster and more consistent liquefaction Lower mash viscosity, resulting in easier wort production No risk of resistant or retrograded starch formations, or insufficient saccharification Reduced processing costs through more efficient liquefaction Improved flexibility in the use of various cereal grain adjuncts Reduced energy consumption due to lower temperatures when handling decoction mashes 	α-amylase
Efficient wort separation and beer filtration	Ultraflo® Max Ultraflo® XL Ultraflo® Core	<ul style="list-style-type: none"> Minimal fluctuation in the brewing process Consistently fast wort separation Higher brewhouse yield and efficiency Longer filtration cycles and lower filtration costs Allows brewing at higher gravity 	β-glucanase Cellulase Xylanase
Attenuation control and light beer production	Attenuzyme® Pro Attenuzyme® Core Novozym® 26062 Fungamyl® BrewQ AMG® 300 L BrewQ	<ul style="list-style-type: none"> Consistent attenuation control regardless of raw material variability or process fluctuation Produces wort that enables highly attenuated beers Potential for shorter mashing times and lower enzyme dosage 	Glucoamylase Pullulanase α-amylase
Raw material optimization	Ceremix® Flex Ondea® Pro Ceremix® Plus MG Ceremix® 2XL Ceremix® 6X MG	<ul style="list-style-type: none"> Enables the use of adjuncts in different ratios and allows the sourcing of locally grown raw materials with varying qualities 	Selected combination of different enzymes
Fermentation control with FAN optimization	FAN® Boost Neutrase® 0.8L BrewQ	<ul style="list-style-type: none"> FAN control for consistent yeast growth and optimal fermentation FAN optimization in high barley/adjunct brewing Improvement of mash lautering/filtration Yield improvement 	Protease
Diacetyl control	Maturex® Pro	<ul style="list-style-type: none"> Consistently low levels of diacetyl in the final beer Shorter maturation time leading to higher capacity utilization Compensates for seasonal fluctuations in sales Lower energy consumption Leaner process conditions for low alcohol beers 	α-acetolactate - decarboxylase
Membrane cleaning	Ultimase® MFC	<ul style="list-style-type: none"> Reduced operational costs Increased lifespan of membrane cartridges Regeneration step easily integrated into CIP automation programs 	β-glucanase Cellulase



BrewQ quality matters

Brewing is a sensory business where consumers judge beer one serving at a time. To ensure the consistent quality of your brands, our brewing enzymes are produced in compliance with BrewQ specifications: They are analyzed according to Analytica-Microbiologica-EBC 2005 section 4.6.1 “Detection of contaminants in additives” using wort agar for aerobic incubation (beer spoilage yeasts) and UBA for anaerobic incubation (beer spoilage bacteria).



Labeling

All our bioinnovation products comply with specifications for food enzyme preparations as published by JECFA and FCC V, and with FDA cGMP standards (21 CFR 110). Our production sites are ISO 9001:2000 and ISO 14001 certified.

Enzymes are classified as processing aids and do not require labeling.

Novozymes' food and beverage expertise

For years, Novozymes has helped the world's largest breweries 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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