

Proteases - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 152 pages | Mordor Intelligence

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Report description:

The Proteases Market size is estimated at USD 3.54 billion in 2024, and is expected to reach USD 4.72 billion by 2029, growing at a CAGR of 6% during the forecast period (2024-2029).

Proteases are a diverse group of enzymes that act as proteinases, peptidases, and amidases and have a broad range of industrial applications, particularly in the food, detergents, and pharmaceutical sectors. Research has shown that proteases constitute a significant class of industrial enzymes, accounting for approximately 60% of the enzyme market and 40% of all enzyme sales worldwide. Proteases are essential industrial enzymes that break down peptide bonds in proteins and find numerous uses in chemical and biological processes. One of the main advantages of using proteases is their ability to produce natural products, exhibit activity under mild reaction conditions, and exhibit stereospecificity, specificity, and biodegradability. Companies have introduced innovative products that reduce reaction time to enhance overall yield. Proteases are crucial in developing many fast-moving consumer goods (FMCG) products. The market's primary driver is the multiple applications of proteases in various industries. Additionally, their non-toxic and non-pathogenic attributes make them eco-friendly, further boosting the market.

Protease enzymes find use in three primary applications in the food industry: meat products, baked goods, and beverages. In meat products, proteases are used to tenderize the meat, making it softer and palatable and reducing overall processing time. The global processed food industry is experiencing significant growth, driven by changing lifestyles that demand ready-to-cook/eat products. This is expected to drive the demand for proteases during the forecast period. Additionally, microbial proteases have gained interest due to their vital role in metabolic activities and their immense utilization in industries. The proteases available in the market are of microbial origin because of their high yield, less time consumption, and cost-effectiveness, which have made them suitable for biotechnological application in the market.

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Rising Application of Proteases in Various Industries

Proteases are enzymes that play a significant role in various industries, making up 60% of the enzyme market. They are used in the production of detergent, leather, food, pharmaceuticals, paper, and pulp, as well as in the recovery of silver from photographic films and bioremediation procedures. Manufacturing daily essentials, such as textiles, paper, feed, food, medications, and chemicals, generates a substantial amount of waste, which is harmful to the environment and human health. Thus, the use of proteases has become crucial in increasing processing efficiency while reducing waste production and preserving natural resources. As a result, companies worldwide are searching for alternative technologies or mergers and acquisitions to meet the annual demand while consuming fewer natural resources.

For instance, in November 2022, Novozymes and LinusBio collaborated to test new, non-invasive technology in a clinical trial to assess exposure to harmful compounds. The project will leverage LinusBio's environmental biodynamics platform to map out harmful compound exposure during a clinical trial of probiotics sponsored by Novozymes' human health unit. The clinical trial will assess exposure to heavy metals, such as lead, and a broad range of environmental pollutants and is part of a larger clinical program from Novozymes OneHealth. Apart from environmental benefits, protease enzymes are widely used in the food and beverage industry to enhance food proteins' flavor, nutritional value, solubility, and digestibility. They are utilized in various applications such as brewing, coagulation of milk, and the meat industry, where proteases are used to tenderize meat products by breaking down the microfibre in the meat structure. Alkaline proteases prepare protein hydrolysates of high nutritional value with a well-defined peptide profile.

Protease enzymes have diverse applications in numerous industries. The market is expected to grow significantly in the upcoming years due to its vital role in reducing waste production, improving processing efficiency, and preserving natural resources.

Asia-Pacific is the Fastest-growing Market

India, China, and South Korea are some of the fastest-growing markets for processed foods globally, making the Asia-Pacific region the most productive market for protease enzymes by application. In India, the food processing industry is one of the largest in the world, and the country presents enormous growth potential for proteases. In China, rapid urbanization and income growth create a demand for high-value products, diversifying the Chinese diet and increasing the demand for protease enzymes.

South Korea has a developing processed food industry, where consumers are more inclined toward frozen processed foods and frozen meat products, especially pork meat with high-fat content. It holds the fifteenth largest market share in processed food globally. The South Korean food industry also holds greater potential for wide applications of food additives like proteases.

The expanding organized retail chains in developing regions further augment the demand for processed meat products, benefiting meat tenderizing agents, including protease. In the bakery industry, protease is used to reduce the gluten of flour, improve the plasticity of gluten, increase dough volume, improve dough toughness, and shorten dough forming time. The heightened demand for high-quality, long-shelf-life, healthy bakery products, including bread, cakes, biscuits, and others, is expected to fuel the growth of the protease enzyme segment.

In addition to food and bakery products, protease enzymes are widely used in detergents and pharmaceuticals. The Asia-Pacific region also presents untapped growth potential for protease enzymes in these industries. Overall, the Asia-Pacific region is an important market for protease enzymes and is expected to witness significant growth in the coming years.

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Protease Industry Overview

The protease market is consolidated in nature with the top players occupying major market shares. Some of the major players in this sector include International Flavors & Fragrances, Inc., Koninklijke DSM NV, Novozymes AS, BASF SA, and Associated British Foods plc. These players adopt various strategies to maintain their leading position in the market and build a strong brand image. The key strategies these players adopt are mergers and acquisitions, which help them consolidate their market position and expand their product portfolios.

Product innovation and new product developments are essential strategies, top players adopt to cater to consumer demand and preferences. Companies invest heavily in research and development activities to introduce new and improved products, which helps them to differentiate their products from their competitors and expand their customer base. Moreover, companies also focus on expanding their product portfolios by adding new product lines and acquiring new businesses. This strategy enables companies to cater to consumers' evolving needs and preferences and increase their market share.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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