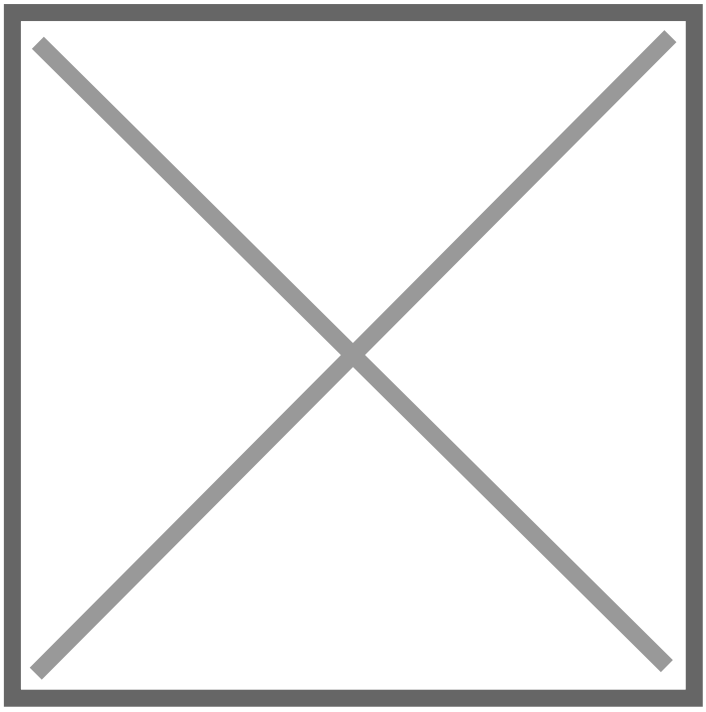
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BioIndustrial Analysis

10 August 2004 | News



Enzymes are used in many industries like healthcare, starch processing, breweries and distilleries, industrial alcohol, textile processing, garment and denim washing, detergent and cleaning aids, leather processing, baking and flour milling, food processing, animal and fish feeds, natural extracts and waste treatment. Enzymes have potential use in many ways in these sectors.

In the leather industry, enzymes help in rapid scud loosening, wetting and degreasing, removal of adhering fatty tissues from the skin. Apart from these, many more applications have attracted entrepreneurs to look at this sector as a lucrative one. In paper pulping, xylanases are sometimes used to avoid the need for chlorine. This technology has been around for about 10 years, but its impact on chlorine use has been modest because of the associated cost and impact on yield. Detergents is an old and well established market for industrial enzymes that include proteases, amylases, cellulases and lipases. In textiles, a fairly well-established application for enzymes is the fading of denim. However, consumption is no longer as steady as it used to be, now that most of the world's denim is produced in India and South America.

The leading Indian companies in the sector include Biocon (66.5 crore), Novozyme (65 crore), , Advanced Biochemicals (30 crore), Rossari Biotech (24 crore) and Maps India (17 crore). The total size of the sector in India is about Rs 250 crore.

The other players in the sector include Fermenta Biotech, a part of the Vasant Kumar Group, Maple Biotech, Textan Chemicals, a Chennai-based player in enzymes for the leather industry, Pappayin Produckts (India), a leading company of Keartiman Group of Coimbatore, Lumis Biotech, a Kgenix Group company, Celgen Biologicals, a subsidiary of ABL Biotechnologies, AVON Organics, Organic Solutions, Resil Biotech, a division of Bangalore-based Resil Chemicals and Sangitha Biochemicals. Many companies not only produce but also export their products to many Asian and European countries.

Company	2003-04(Rs crore)
Biocon	66.52
Novozymes	65

Advanced Biochemicals	30
Rossari Biotech	24
Maps India	17
TOP 5	**202.52**
Others	**47.48**
Total BioIndustrial Revenue	**250**

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Companies like Rossari Biotech, Biocon and Zytex (India) have received the ISO certification for their facilities and processes. This shows that Indian companies are quality conscious and are meeting the international standards.

Considering the opportunity in the industrial enzyme sector, agri and pharmaceutical companies like Excel Industries and Concord Biotech are making inroads into this segment.

These companies produce various enzymes like amylases, proteases, cellulases, xylanases, glucoamylases, pectinases, papains, bromelain, catalases and many other eco-friendly biological products.

There are few agencies and companies in India, which import enzymes for the local market. The agencies include Delhi-based Atul Brewchem, Karan Agencies of Mumbai, Southern Marketing Agency of Chengannur, Sukhjit Starch & Chemicals of Phagwara and Zytex (India). Even the Danish company CHR-Hansen has set up a shop in India to market its products used in food processing industry.

There is a lot of opportunity in this sector as industry leaders put the value of the global industrial enzyme market, including applications in food and animal feed, detergents, textiles, pulp and paper, leather and manufacture of chemicals at $1.6 billion to $2 billion. The fastest growing markets are fuel ethanol, animal feed and food enzymes. Novozymes and Genencor, which holds 22 percent of the market are the global leaders in industrial enzymes.

The market for industrial enzymes is growing at a healthy pace, boosted in part by demand from emerging markets, but this volume has been accompanied by downward pricing pressure as a host of smaller players compete for a piece of the pie. New applications have also helped drive demand and the industry is responding with a continuous stream of innovative products. The companies are also looking at producing different types of industrial enzymes, using all the natural methods of production, from plants and vegetable origin, fermentation-both with solid state and submerge culture techniques. Companies are also spending on R&D efforts directed not only towards development of new innovative products but also towards making them available at an economical price to customers.

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