

Industrial enzymes: High on radar

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The industrial enzyme sector in India estimated at Rs 320 crore in 2004-05 registered 34.45 percent growth during the year. There are about 17-20 players. Most of these companies are either into marketing or into formulations. But there are companies that are into real manufacturing of enzymes used in different industries like pharmaceutical, food processing, leather, detergents, paper and pulp and textile. They produce various enzymes and several other eco-friendly biological products. The product range and services are growing rapidly as the use of enzymes is gaining widespread acceptance. The Indian manufacturers are not only supplying to local market but are also exporting to number of countries.

Maps India, an Ahmedabad-based biotechnology company producing enzymes and microorganisms since 1975, has spread its network to 20 countries with a product portfolio of 60 plus meeting the requirements for more than 10 different industries. Similarly Advanced Enzymes Technologies (formerly called Advanced Biochemicals) based at Thane near Mumbai has extensive biotech experience that has led to the development of hundreds of unique enzyme solutions addressing the needs of customers in 25 industries and over 30 countries.

The companies are also expanding their manufacturing bases to meet the local and global demand. Maps India is investing Rs 10 crore for production of new enzymes and microorganisms. Advanced Biochemicals is setting up a 100 percent Export Oriented Unit and is investing over Rs 110 crore at Indore SEZ.

The opportunity in enzymes sector is attracting companies from agri and pharmaceutical sectors like Excel Industries and Concord Biotech (manufacturers of statins) to invest in this sector that is free from complex regulatory issues. |

On the other hand, we have the presence (directly or indirectly) of the some of the global players in enzymes space like Novozyme, Genencor International, Enzyme Development Corp., Dyadic International and Quest International. These are keen on to tap the local market here. For example, Genencor, a global leader in the enzyme market and having indirect presence in India since 1996, has entered the market on its own. It has taken a few people on board. While Novozyme had already set up its own office in Bangalore, Danish company CHR-Hansen opened shop in Mumbai to market its enzymes products used in the food processing industry.

Focus on R&D

Advancements in biotechnology and genomics would aid the discovery of fresh enzyme sources and production strains for commercialization. Companies like Rossari Biotech and Advanced Enzyme Technologies have been investing on their R&D activities. Also academic and research institutes like the Institute of Microbial Technology, Chandigarh, National Chemical Laboratory, Pune and Indian Institute of Technology (IIT), Delhi are already working on some R&D projects in the industrial enzymes segment. Instead of working independently, if both the public and private sectors work together they might take on the MNCs in launching new and indigenous products.

As noted earlier, the industrial biotech sector is relatively free from regulatory complexities of biopharma and bioagri sectors. Nonetheless, it is being felt that the current situation tends to favor traders as against manufacturers. DBT has taken this into account and has included a road map in its draft on the National Biotechnology Development Strategy to promote and develop the sector. The few strategic actions mentioned include emphasis on industrial biotechnology to reduce chemical and toxic load in effluent streams, developing non-fossil fuels that are eco-friendly and developing green technologies in industrial processing and encouraging public-private partnerships to promote investment in this sector. Further, it has been suggested to promote industrial biotechnology as a strategic area of manufacturing and developing green technologies.

Potential

In 2004, the global demand for industrial enzymes was \$ 2.5 billion with an annual growth rate of 5-10 percent. The USA, Europe and Japan together account for over 90 percent sales of the enzyme in the world. The global demand for enzymes will grow 6.5 percent annually through 2009. Specialty types will generally outpace industrial enzymes, though the market for animal feed enzymes will grow the fastest. Developing countries such as China, India, South Korea and Taiwan will offer some of the best growth opportunities. Although the growth in enzyme sector globally is expected to be about 7 percent, in India it is on the higher side.

Growing consumption of enzyme in the existing application areas, use of enzymes in the new industrial processes, strict enforcement of environment laws and cost savings would support the growth of this sector in India.

With least entry barriers and no social and regulatory risks involved in industrial biotechnology, the Indian companies that develop enzymes have a good future and would cross Rs 1000 crore mark in the next couple of years.