

## **Dextrasol: Indigenously produced dextranase using solid state fermentation**

Dextranases are the most efficient method of hydrolyzing the dextrans at sugar mills. extrasol from Varuna Biocel Pvt Ltd supported by DBT's Biotechnology Industry Research Assistance Council (BIRAC), a PSU under Department of Biotechnology (DBT) is an indigenously produced dextranase which hydrolyses the dextran. It is need of sugar industry, which is a major industrial sector supporting agricultural economy. The production technique of dextrasol involves locally available raw materials and resources with no environmental load; hence the technology is highly economically viable. With this patented technology, Varuna Biocel has sold over 97 tons of dextrasol which is priced at rupees 1000 a kg plus taxes. The product also occupies a huge market share in states of Uttar Pradesh and Maharashtra.



Dextrans are undesirable compounds of sugar cane. They are high molecular weight polysaccharides formed by the action of the dextranase enzyme from contaminant microorganisms that are home to the plant sap. Some bacterial strains like, *Leuconostoc* sp. bacteria have shown ability to synthesize alpha-glucan polysaccharides (dextran) from the sucrose released from sugarcane. An increase in the level of dextran (greater than 1000 mg/kg on Brix basis) increases the viscosity of the sucrose solutions in the milling and refining processes and also interferes with overall process control. There is an economical

and technical need to control dextran. Many countries have fixed the standard of dextran in sugar.

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