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Response surface methodology assisted media optimization for enhancement in production of A-galactosidase enzyme using *Aspergillus awamori*

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α-Galactosidase (α-D-galactoside galactohydrolase E.C.3.2.1.22) is an exoglycosidase that catalyzes hydrolysis of terminal α-1-6-linked galactosyl residues from a wide range of substrates including oligo-saccharides of raffinose family sugars; raffinose, stachyose, melibiose, verbascose and polysaccharides of galactomannans; locust bean gum and guar gum. More over it also hydrolyzes glycoconjugates; glycoproteins and glycosphingolipids. It plays a crucial role in the enzymatic hydrolysis of raffinose from sugar beet syrup from sugar industry in order to facilitate the crystallization and consequently improve the yield of the sugar. The potential use of *α-galactosidase* for the processing of legume based food products has been demonstrated. Here, response surface methodology {RSM} analysis is used for medium optimization to enhance the production of enzyme α-galactosidase using *Aspergillus awamori* (NCIM - 1225). The production of α-galactosidase is growth associated. The Guar gum is the main source for the production of the α-galactosidase but organic nitrogen sources such as soyabean meal, wheat bran and kurma and inorganic nitrogen sources such as ammonium nitrate and ammonium sulphate also affects the production of the α-galactosidases. Considering potential biotechnological and medicinal applications of α-galactosidases, study like this is need of an hour.

Biography

Juvekar A. R has done Ph.D. (Tech.) Pharmacology from UICT, Mumbai University in Dec. 1995 and currently is Professor in Pharmacology and Physiology, Department of Pharmaceutical Sciences & Technology, Institute of Chemical Technology, Mumbai. She has guided 47 Masters and 11 Ph.D. students. She has more than 60 publications in national and international journals and serves as referee for reputed journals. She has attended 8 international and 14 national level conferences with numerous poster and oral presentations.

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