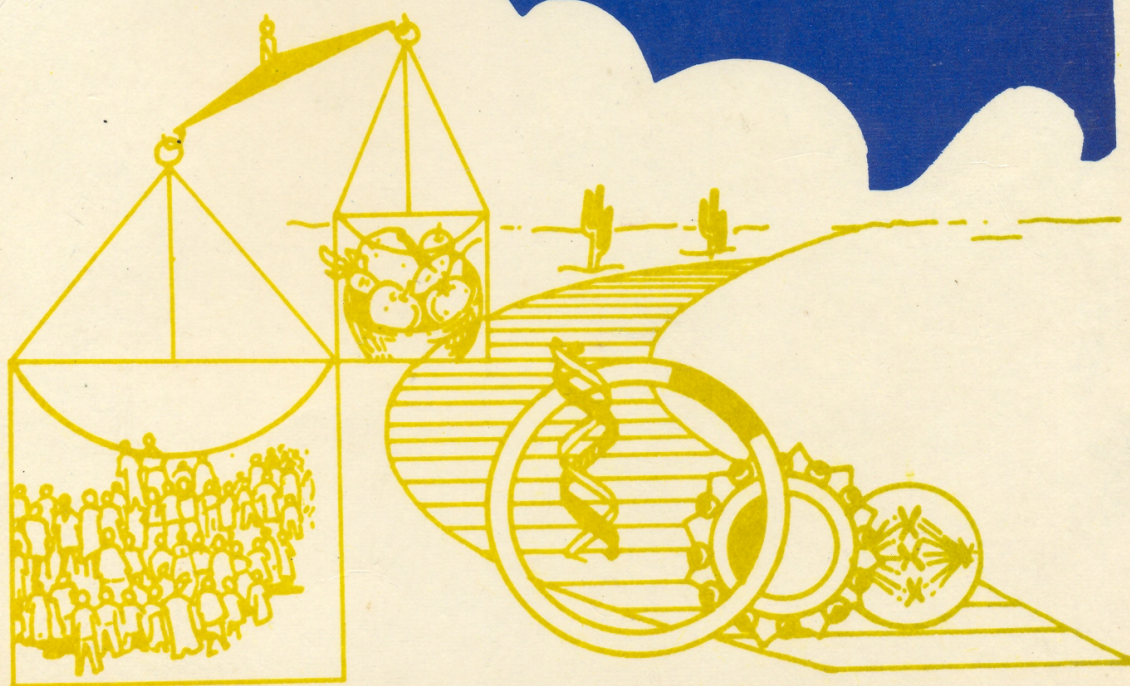


APPLICATION OF BIOTECHNOLOGY IN THE DEVELOPMENT OF FOOD PROCESSING INDUSTRIES

9th Indian
Convention of
Food Scientists
& Technologists
AFST(I), Mysore



**IX INDIAN CONVENTION OF FOOD SCIENTISTS & TECHNOLOGISTS
ON
APPLICATION OF BIOTECHNOLOGY IN THE
DEVELOPMENT OF FOOD PROCESSING INDUSTRIES**

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**ASSOCIATION OF FOOD SCIENTISTS AND TECHNOLOGISTS (INDIA)
AND
CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE, MYSORE**

MFT 25 ISOLATION AND CHARACTERIZATION OF CHLOROBENZOIC ACID
DEGRADING STRAIN OF PSEUDOMONAS

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Synthetic organic compounds especially the chlorinated ones used as pesticides, organic solvents and waste products from chemical industries constitute a formidable bulk of environmental pollutants. Chlorobenzenes and benzoic acids form a significant part of xenobiotics. In nature, chlorinated benzoic acids are accumulated mainly due to the incomplete microbial attack on highly chlorinated compounds and PCBs. The best way to eliminate these chemical residues is their complete degradation in soil using potent microorganisms. Among a number of bacterial strains isolated by environment using HCH, DDT and endosulfan, a strain (3 mT) identified as Pseudomonas sp. was able to utilise 3-chloro and 4-chloro benzoic acids as the sole source of carbon. The catabolic versatility of this strain was studied by supplying 23 different aromatic compounds as the carbon source. The strain was able to grow on benzoate, catechol protocatechuic acid apart from 3-chloro and 4-chloro benzoates (3-CBA and 4-CBA). Mono, di and tri chlorobenzene derivatives did not support any growth. The growth of this strain on 3-CBA reached a maximum at 18 h and maximum release of chlorine was obtained at 24 h. However, only half the stoichiometric level of chlorine was released.

MFT 26 STUDIES ON THE UTILIZATION OF MICROBIAL POLYSACCHARIDE

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In the recent years, the utility of microbial polysaccharide as a gelling agent in food system is being explored. Xanthan gum, one such polysaccharide produced by Xanthomonas compestris has been found to have widespread utility in food industry. The results showed that a good curd could be obtained with 0.5% xanthan gum and 3:1 milk to water ratio. Acidity of the curd with xanthan gum was slightly lower than that of the curd prepared under standard conditions. The product was found to be acceptable and could stand high dilution for the preparation of butter milk.