

## Production and comparative analysis of nutrient enriched cheese with microorganism using natural extract treatment

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The present study was carried out to determine the enrichment in nutritional value of cheese production using *Lactobacillus spp.* and *Saccharomyces spp.* with Natural extracts. Proteolytic enzyme like rennet is used in large scale production of the cheese isolated from calf stomach which is expensive and also raises ethical issues. To overcome the problem, research is been carried out for enzyme alternatives like natural extracts from *Carica papaya* and pineapple that have been proven to have proteolytic activity. *Lactobacillus spp.* and *Saccharomyces spp.* were isolated from curd and idli batter which were used as starter cultures. Peel and pulp extract of *Carica papaya* and pineapple was used as source of proteolytic enzymes. Fermentation were initiated by starter culture and natural extract followed by separation of whey, salting, ripening, cheddaring, and maturation of cheese. These samples of cheese were analyzed for its nutritional values and physiological characters viz., texture, aroma, flavor, colour, hardness, moisture content. It could be concluded that the study provided a better alternative in cheese products by using cheaper sources to valuable and quality product. This study concludes the potential of inexpensive natural source as an alternative to this Rennet for the production of Cheese.

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## GMO golden rice: A enhanced source of vitamin A

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Genetically modified rice that contains beta-carotene, widely known as Golden Rice Golden Rice is genetically modified to provide beta-carotene in the rice grain and it could potentially address widespread Vitamin A deficiency in poor countries where rice is a staple. Political opponents have viewed Golden Rice as representing the interests of multi-nationals and as inherently unsafe for consumption. Golden Rice contains 35 micrograms of beta-carotene per gram. Progress has been made towards adapting this crop to tropical-rice growing environments, but it has not yet been introduced into farmer's fields. Efficacy and safety have not yet been fully tested. Substantial work remains to target and deliver this intervention to Vitamin A-deficient populations, and to overcome remaining resistance to this technology. The political response to the on-going development of Golden Rice is reviewed to draw lessons for biofortification efforts that employ modern biotechnology.

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