

Role of genetically modified organisms in food safety

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Safe food is the food that will not harm the consumer so long as intended use guidelines are followed when it is prepared or eaten. GMO's may be defined as organisms whose genetic material has been altered in a specific manner in order to confer upon them novel useful characteristics. A lot of new foods are ready to hit the market and in the process of evolution with various new characteristics introduced in them. This technology appeared for the first time in 1973, as a result of pioneering work of Cohen and co-workers in the United States. Most GM foods currently in the market are of microbial and plant origin. Instead of so many new advantages there is still so much concern regarding the use of these products. GMO's and GM foods are currently a matter of intense scientific development and public debate. There is enormous potential that GMO's have for the generation of foods and food ingredients, with increased safety. In the coming future this will reach the consumers and have substantial impact on the human health and the environment but due care is required for maintaining the safety standards for the products.

Biography

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Development of chicken sticks by replacement of rice flour with different levels of minced chicken meat

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Snacking can be defined as problem free consumption of easy to handle, miniature portioned, hot or cold products in solid or liquid form which need little or no preparation and are intended to satisfy the occasional pangs of hunger. Snack products include various types of the products such as cookies, biscuits, pies, sticks, breads etc. Sticks are ready to eat quick snacks with several attractive features including wider consumption base, relatively longer shelf-life, more convenience and good eating quality. Sticks are mainly prepared from cereal grains and these cereal based snack products lack some essential amino acids like tryptophan, threonine and lysine so don't form the balanced diet. Incorporation of chicken meat in such products can improve their nutritional functional properties. So the present research was carried out to develop and to study quality characteristics of shelf stable chicken sticks to enhance the nutritional values of cereal based ready to eat sticks. Cereal based snacks are highly consumed in the group of high class and medium class family. For preparation of cereal based snacks taking 100% rice flour in control gp then three different combination are prepared by replacing the rice flour with meat (50%, 60% & 70%) i.e rice flour are replaced by chicken meat as in combination of 50%, 60%, and 70% ,other ingredients are same as in control gp and the products were then evaluated for proximate analysis, sensory evaluation and physico-chemical properties. The cooking yield, emulsion stability, pH of sticks, pH of emulsion are decreased significantly but ash contents, moisture content, protein contents and fat contents are increased significantly. Sensory parameters are also increased significantly as meat are increased. High moisture contents present in 70% combination as meat increases the moisture contents increases, Other parameter like water activity also increases. The overall mean TPC and yeast and mould count increased significantly ($P < 0.05$) throughout the storage period. *Staphylococcus*, *Coliforms* and *Salmonella* were not detected during whole storage period in any treatments due to high processing temperature and hygienic handling and packaging of product.

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