

## Development and evaluation of low fat fried value added traditional snacks

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Deep Fried snacks are popular and relished very much by the people of all age group but these contain high levels of fat. These snacks can be different in shape, size and composition and can be eaten between the two principle meals. Hence, an attempt was made to reduce fat content of selected deep fried snacks using Gum Acacia. Process was standardized to decrease fat content of popular Indian fried snacks viz. *samosa*, *matar*, *pakora*, *sev*, *gujia*, *suhali*. These snacks were assessed for proximate composition, water activity, physical and sensory characteristics. No change in 'L' values of *Suhali* and *Pakora* was found with use of gum acacia, 'L' values for *Samosa*, *Matar*, *Gujia* and *sev* increased with increase in concentration. Application of lower concentration of Gum Arabic (Gum Acacia) had no effect on the hardness of products, where as hardness of all products increased at higher concentration. No change in 'L' values of *Suhali* and *Pakora* was found with use of gum acacia, 'L' values for *Samosa*, *Matar*, *Gujia* and *sev* increased with increase in concentration. Application of Gum Acacia decreased the fat content of these snacks; higher the concentration of Gum Acacia more was the reduction and less was the fat absorption. These snacks were adjudged 'liked very much' by the judges in terms of colour and appearance, aroma, taste and texture. These snacks contained 2.3-30.3g moisture, 6.2-16.7g protein 13.1-17.1g fat, 0.86-2.60g ash, 0.60-2.8g fiber, 64-75g carbohydrate and 450-479 Kcal per 100g. The water activity of these snacks ranged from 0.16 to 0.77. The results of the study indicate that Gum Acacia can be used to reduce the fat content of fried snacks without adversely affecting the physical and sensory characteristics of these value added snacks.

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## Optimization of inducer concentration in the medium for production of glutaminase from *Erwinia*

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This purpose of study was to determine effect of inducer concentrations in the medium for production of Glutaminase enzyme from *Erwinia*. For production of glutaminase enzyme from free cells of *Erwinia*, various physical and chemical parameters were optimized. The microorganism *Erwinia* which is a source of glutaminase was procured from Institute of Microbial Technology, Chandigarh and was grown on specified medium. The media was sterilized by autoclaving for 15 minutes at 15 psi/cm<sup>2</sup>. The microorganism was maintained on agar slants and kept in refrigerator at 4.0 ± 0.5°C for further use and was sub-cultured after every 20 days. The viability check of microorganism was done by gram staining and tryphan blue. The work utilized Beef extract, Peptone, Yeast extract, Sodium chloride and Water as composition of growth medium for the production of glutaminase enzyme. The parameters such as Temp., pH, & Time were optimized. By using these parameters Glutaminase enzyme were produced by adding different concentration of inducers such as. Ammoniumsulphate, Inorganic phosphate & L- Glutamine. It was concluded that as we increase the concentration of inducers, enzyme activity was increases up to a certain concentrations. The enzyme activity was determined by Nessler's reagent method. So it is cleared from this study that Inducers are very helpful to increase the production of glutaminase enzyme from *Erwinia* & it was concluded that after adding inducer concentrations Ammoniumsulphate (100mM), Inorganic phosphate (200μL) & L- Glutamine (12.5%) the enzyme production was maximum.

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