

## Soya Fortified Healthy Noodles

### Utility

Soy-fortified noodles are a protein-rich, nutritious fast food developed to address the low protein content of commonly consumed noodles, especially among school-going children. Noodles, which are widely popular in both rural and urban India due to their ease of preparation and long shelf life, were formulated using wheat flour, refined wheat flour, soy flour, oil, and salt in different proportions without the need for sophisticated equipment. Fortification with soy ingredients such as defatted soy flour (DFSF), full-fat soy flour (FFSF), and soy protein isolate (SPI) significantly enhanced the nutritional quality. The developed soy-fortified noodles contained up to 17% protein, representing an increase of about 115% over conventional noodles, while maintaining good sensory quality. Based on ICMR recommendations for children aged 9–18 years, the product was found safe, shelf-stable, palatable, and suitable as a healthy alternative to conventional fast food.



### Salient Features

- Protein-rich soy-fortified noodles developed for school children (9–18 years) as per ICMR guidelines.
- Prepared using locally available flours and simple processing without hi-tech equipment.
- Incorporation of DFSF, FFSF, and SPI increased protein content up to ~17%.
- Protein enhancement of about 115% compared to conventional noodles.
- Acceptable taste, color, and texture with up to 20% soy flour incorporation.
- Safe, shelf-stable product with low risk of food spoilage when properly packaged.
- Better shelf life and moisture resistance in PET-MET/LDPE and MET-MET/LDPE packaging compared to LDPE and PP.

**Commercialization Status:** Ready for Commercialization

**Proposed stakeholders:** Food Processing Industries.

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