

Formulation and evaluation of cereal based health mix for pre-school children

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■ **ABSTRACT** : Investigation on multigrain mixes were formulated using cereals, pulses and oilseeds. The developed food mix was evaluated for sensory parameters, nutrient composition, digestibility and keeping quality. Based on protein quality, the mix with either garden cress seeds or carrot shreds was selected for further study. *Laddu* incorporated with 5 g of roasted groundnut pieces received significantly higher scores (between 8 and 9) with good flavour, colour and appearance, whereas *Laddu* with roasted edible gum was very good (between 7 and 8) and plain *Laddu* was good (between 5 and 6). *Thepla* with dried carrot shreds was acceptable with a overall acceptability score of 8.0. All the beneficiaries, *Anganwadi* staff, primary health care staff and mothers accepted *Laddu* and *Thepla*. *Laddu* mix had significantly higher amounts of crude protein (18.54%) while *Thepla* mix contained significantly higher amounts of ash (6.57%). However, there was no significant difference in moisture, crude fat, fibre, carbohydrate content and energy values of *Laddu* (3.60%, 8.55%, 3.88%, 61.85% and 399 Kcal, respectively) and *Thepla* mix (3.70%, 8.37%, 4.06%, 60.53% and 385Kcal, respectively). Calcium (250 mg) and phosphorus (483.5 mg) contents were significantly higher in *Thepla* mix while iron (11.80 mg) and zinc (2.16 mg) contents were higher in *Laddu* mix. The dietary fibre, IVPD and IVSD of both the mixes did not differ significantly. On storage, though decrease in sensory scores and increase in moisture and free fatty acids was observed, the mixes were acceptable even after 180 days of storage.

■ **KEY WORDS**: Food formulation, Nutrient composition, Sensory evaluation, Keeping quality, Acceptability, Target group

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