

LOW COST NUTRIENT SUPPLEMENT FOR MALNOURISHED CHILDREN - *ENPRO*

1. Introduction:

Enpro, a low cost ready-to-eat nutrient supplement is prepared using cereals, millets, pulses and oilseeds. The product is sweetened with jaggery and enriched with vitamins and minerals. Malting of millets through indigenous enzymes and hydrolysis of oilseed proteins by the addition of enzymes from both plant and microbial sources are the biotechnological unit operations. The dough can be mould into round or rectangular shape before baking to get a golden brown, crispy and spicy product with a spread ration of 34.6 cm. The product is ready-to-eat, convenient to pack and easy to distribute. At room temperature (27oC) keeping quality of the product was good up to 6-8 months. One hundred grams of the product provides 17% protein, 16% fat and 450 kcal of energy.

2. Raw material:

Ragi, wheat flour, defatted soy flour, groundnut kernel, chilli powder, vanaspati, baking powder, tomato puree, salt, fat, vitamin premix, GMS, BHA and Protein hydrolysate.

3. Plant and machinery:

Weighing Scales, Bucket Elevator, Pre-Cleaner/ De-Stoner, Roaster, Hammer Mill, Inclined Sieve, Planetary Mixer, Nutche Filter, Heating Kettle, Dough Mixer, Biscuit Moulding Machine, Biscuit Oven and Generator.

a. Land and land development	10000 Sq. Ft
b. Building and civil construction	3200 Sq. Ft
c. Plant and machinery	16,00,000

4. Production capacity:

Installed capacity:	3MT/ shift/day
Working:	300 days
Optimum capacity utilization:	90%
Annual production envisaged:	900 MT

5. Technology /Manufacturing process – Availability

The technology for processing of the *Enpro* has been developed at CFTRI, Mysore using appropriate equipment optimal product recovery of right quality. The institute has the necessary expertise to provide technical assistance and guidance for setting up the project and implementation, under technical consultancy arrangements.