



National Research Development Corporation

In association with Suruchi Consultants

LONG SHELF LIFE PANEER

Technology offer

Paneer manufacture involves heat/ acid coagulation of standardized milk followed by pressing of the coagulum. The existing manufacturing technique is labour and energy intensive and is susceptible to environmental contamination. Manual handling at various stages of processing leads to microbial spoilage, which is a serious limitation factor for the organized nationwide marketing network. Further, lack of effective packaging system limits its life to only one or two days at room temperature. More over the traditional technology is suitable for batch operations and handling of milk up to 5000-10000 litres in batches.

The traditional technology has the following limitations:-

- 1 Loss of nearly half of milk solids in whey
2. Loss of heat in whey
3. Recontamination of product after heat treatment
4. Limited shelf life
5. Labour intensive
6. Lack of packaging systems
7. Lack of quality assurance system

NEW PROCESS

An innovative approach in- package, sterilization directed at heat/acid coagulation of concentrated milk coupled with texturization has been conceptualized for the preparation of long life paneer. The process permits integration of newly developed energy efficient unit process into the system for commercial scale manufacture of paneer having extended shelf life at room temperature.

he process permits conservation of milk solids without loss of whey and higher yield of paneer with product safety through modern technology.

PLANT PARAMETERS	
Capacity,	800T/A of finished product
No. of shifts / day	2
Working days/Year	300
Covered Area, m ²	To be worked out for processing but should be around 500-700 sq mtr if all the operations to be included in the process area for panir
MANPOWER	
Managerial	1
Skilled	3
Unskilled	8
RAW MATERIAL	
Buffalo milk	
Gluc delta lactone	
Nisin	
PLANT & MACHINERY	
Weighing balance	Baby boiler
Aluminium cans	Ghee clarifier
Storage tank	sterilizer
Cream separator	Evaporator
Standardised tank	Pouch filling machine
Plate chiller	UF plant
Heat exchanger	Clearing system
Air compressor	
ECONOMICS	
Total project cost Including land and building	To be worked out as per the capacity envisaged alongwith technology transfer arrangements

ADVANTAGES

The method offers the following advantages.

- 1 Higher product yield of 35-40% compared to conventional process
- 2 Whey solids retained in the product, thus no problem of whey disposal
- 3 Shelf life 3 months at 30 degrees
- 4 Various unit operations integrated fully with mechanized energy efficient equipments.
- 5 Appropriate packaging system.
6. Cost of manufacture of paneer is Rs.45/Kg.
- 7 .Hygienic quality product

About NRDC

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