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CANNED ROSOGOLLA

PRODUCT CODE	:	N.A.
QUALITY AND STANDARDS	:	Mandatory: PFA Regulations Optional IS 4079:1967
PRODUCTION CAPACITY	:	Quantity : 6,00,000 cans (per annum) Canned Rosogolla A-2, ½ size Value : Rs. 3.18 Crores
MONTH AND YEAR OF PREPARATION	:	March, 2003
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INTRODUCTION

Rosogolla is a very delicious Indian sweet preparation. It is a product made out from fresh cow's milk and crystalised sugar. Besides being delicious, rosogolla is nutritious also.

MARKET POTENTIAL

Rosogolla is very popular especially in West Bengal, Bihar and North India. Its popularity is also growing up in South India. Canned rosogolla has more demand because it is more hygienically prepared and have longer shelf life. Besides, transportation is also easier in canned form. Now the product is being exported also.

BASIS AND PRESUMPTIONS

(i) The scheme is based on a single shift per day and 300 working days per annum.

(ii) It is presumed that from the 3rd year of operations onwards, the unit will achieve its maximum capacity utilisation.

(iii) The rate of interest has been taken at 15% p.a. on an average both for fixed investment and working capital.

(iv) It is assumed that recovery of chhanna from milk will be 17%.

(v) The rates quoted in respect of salary and wages for skilled workers and others are the minimum rates in the State/ neighbouring States.

IMPLEMENTATION SCHEDULE

The approximate time required for various activities is given below. However, it may vary from place to place depending upon the local circumstances and upon the enthusiasm of the entrepreneur:

(a) Hiring of building	7 days
(b) Registration as SSI	7 days
(c) Preparation of project report	1 month
(d) Availability of finance	3 months
(e) Machinery procurement, erection, commissioning, trial run, etc.	6 months

TECHNICAL ASPECTS

Process of Manufacture

The preparation and preservation of rosogolla involve the following steps:—

(a) Preparation of chhanna.
(b) Mixing and kneading of chhanna.
(c) Preparation of sugar syrup.
(d) Cooking of raw rosogolla.
(e) Preparation of final product.
(f) Canning of rosogolla.

Preparation of Chhanna

Heat the milk in a frying pan on a medium fire and bring it to boil. Stir continuously so that scum does not form. Remove the pan from the fire and slowly add citric acid solution or the lime juice stirring the milk all the time. Stop addition of citric acid solution/lime juice as soon as the milk starts curdling. Drain as quickly as possible the watery portion or whey on a piece of muslin cloth by suitably manipulating the filtering cloth. The four ends of the filtering cloth are tied in the form of a bag and immersed in cold water for about 10-15 minutes so as to cool the contents. Remove the cloth bag and drain all the whey by gently squeezing and pressing the bag. The residual material inside the bag is called "CHHANNA". The chhanna should not be very wet and should have the consistency of soft wheat dough.

Mixing and Kneading

Mix the chhanna well and knead it thoroughly so that it becomes soft and smooth, small round balls of about 1/2-3/4" diameter are prepared from this chhanna.

Sugar Syrup

Sugar syrups of 60° Brix and 50° Brix are prepared. The syrup of 60° Brix is used for first step of cooking and of 50° Brix for the final suspension of the prepared rosogolla.

Cooking of Raw Rosogolla

The syrup of 60° Brix is boiled and raw rosogolla are immersed for 15-20 minutes turning slowly with perforated laddle till the syrup is sufficiently thick.

Preparation of Final Product

Remove the cooked rosogolla, drain and immerse in the 50° Brix syrup, flavour the final product with rose or any other essence.

Canning

Fill the prepared rosogolla in sterilised can (22 to 25 rosogolla in A-2½ can size). The inner space is filled with 50° Brix syrup. The cans are immediately sealed with a can sealer. The sealed cans are processed in pressure cooker at 15 lbs pressure for 15 minutes. Cool the cans in cold water.

Quality	Mandatory	PFA Regulations
Control and Standards	Optional	IS 4079:1967

Motive Power

15 H.P.

Production Capacity

6 lakhs cans of A-2½ size per annum of the value of Rs 3.18 crores.

Pollution Control

There are no major pollution control requirement for the unit. However, no objection certificate may be obtained from the concerned State Pollution Control Board.

Energy Conservation

Proper insulation may be done to avoid heat loss in heating equipments.

Financial Aspects

A. Fixed Capital

(i) Land and Building	Amount (In Rs.)
Rented building including processing Hall, Godown for finished products, fitted with fly proof doors and windows-500 sq mtr. @ Rs 20 per sq mtr.	Rs 10,000

(ii) Machinery and Equipments

Sl. No.	Description	Qty.	Amount (In Rs.)
1.	Stainless Steel tank 1000 litre	6 Nos.	1,50,000
2.	Stainless Steel steam Jacketted tank tilting type-cap. 50 gallons	4 Nos.	2,00,000
3.	Plate Heat Exchanger	1 set	60,000
4.	Boiler	1 No.	1,25,000
5.	Milk weighing balance	1 No.	10,000
6.	Kneader	2 No.	1,00,000
7.	Water Treatment Plant	1 No.	50,000
8.	Working tables with Al top	6 No.	36,000
9.	Canning retorts with dial thermometer, pressure gauge safety valve	2 No.	50,000
10.	Crates for canning retorts	6 No.	48,000
11.	Can reformer for reforming flattened can body	1 No.	50,000
12.	Flanger with one change plate	1 No.	52,000
13.	Flanger rectifier	1 No.	20,000
14.	Semi automatic can sealer	1 No.	85,000
15.	Can embossing machine	1 No.	15,000
16.	Concrete tank lined with tiles 8' × 8' × 4'	1 No.	20,000
17.	Testing Equipment	L.S.	50,000
		Total	11,21,000
	Electrification and Installation Charges @ 10% cost of Machinery and Equipment		1,12,100
	Office Furniture and Equipments		*50,000*
		Total	12,83,100
(iii)	Pre-operative Expenses		Rs. 50,000
		Total Fixed Capital (i+ii+iii)	13,33,100

B. Working Capital (per month)

(i) Personnel

Sl. No.	Particulars		Salary/ Month	Total (In Rs.)
(a)	Food Technologist	1 No.	6000	6000
(b)	Skilled Worker	2 No.	3000	6000
(c)	Semi-skilled Worker	3 No.	2500	7500
(d)	Sales Supervisor	1 No.	3000	3000
(e)	Helper	3 No.	2000	6000
(f)	Watchman	1 No.	2000	2000
				30500
		Perquisites @ 15%		4575
		Total		35075
		Say		35,000

(ii) Raw Materials including Packaging Material

Particulars	Quantity	Rate (In Rs.)	Total (In Rs.)
1. Fresh milk	1,10,000 kg	11/ kg	12,10,000
2. Sugar	17,000 kg	15/ kg	2,55,000
3. Citric Acid	L.S.		1,000
4. Cans A 2½ size	50,000	14/each	7,00,000
5. Labels	50,000	1/each	50,000
6. Carton etc.	2,200	18/each	39600
		Total	22,55,600

(iii) Utilities	Amount (In Rs.)
1. Power 15 HP 70% of 12×25×8 = 1680 KWH @ Rs. 2.50/per unit	4200
2. Water	800
3. Fuel	7000
Total	12,000

(iv) Other Contingent Expenses	Amount (In Rs.)
1. Rent	10,000
2. Repair and maintenance	1,000
3. Transport charges	5,000
4. Postage and stationery	1,000
5. Advertisement and publicity	5,000
6. Miscellaneous expenses	2,000
Total	24,000

(v) Total Recurring Expenses	Amount (In Rs.)
1. Expenditure (per month) (i+ii+iii+iv)	23,26,600
2. Working Capital for 2 months	46,53,200

C. Total Capital Investment

Particulars	Amount (In Rs.)
(a) Fixed Capital	13,33,100
(b) Working capital for two months	46,53,200
Total	59,86,300

FINANCIAL ANALYSIS

1. Cost of Production (Per annum)	Amount (In Rs.)
1. Total recurring cost	2,79,19,200
2. Depreciation on machinery @ 10 percent	1,23,310
3. Depreciation on furniture @ 20 percent	10,000
4. Interest on total investment @ 15 percent	8,97,945
Total	2,89,50,455

2. Turn-over (per annum)	Total (In Rs.)
Canned rosogolla 6,00,000 cans @ Rs. 53/cans	3,18,00,000
3. Net Profit (per annum)	Rs. 28,49,545
4. Net Profit Ratio	9.8%
5. Rate of Return	47.6%
6. Break-even Point	

Fixed Cost (per annum)	Amount (In Rs)
1. Depreciation on machinery and equipments	1,23,310
2. Depreciation on furniture	10,000
3. Rent	1,20,000
4. 40% of other expenses	67,200
5. 40% of Salary and Wages	1,68,000
6. Interest on total investment	8,97,945
Total	13,86,455

B.E.P. $= \frac{1386455 \times 100}{1386455 + 2849545}$

$= \frac{1386455 \times 100}{4236000}$

$= 33\ (\%)$

Addresses of Machinery and Equipment Suppliers

1. M/s. B. Sen Berry and Co.
   65/11, Rohtak Road,
   New Delhi-110 005
2. M/s. SSP Pvt. Ltd.
   19 DLF Industrial Area - II,
   13/4 - Mathura Road,
   Faridabad - 121 003

Addresses of Raw Material Suppliers

– Locally available.