

# ICE CREAM



## **INTRODUCTION:**

Ice cream is considered to be a delicious dairy based food and consumed not being delicious only for its delectable taste also for its food value Ice cream has become the most popular product which was once considered to be a luxury item. It is reported that our country is the third largest producer of ice cream in the world trailing behind USA and Japan.

Ice cream is very tasty, cool, delicious, flavoured dairy product. It is the frozen dairy product made by suitable blending and processing of milk, cream, other milk products with without the addition of sugar and stabilizers with or without eggs, emulsifier, eggs, fruits, fruits juice, nuts, chocolate, flavours and permitted edible food colour with usually made smooth by whipping or stirring during the process of freezing.

## **OBJECTIVE:**

The primary objective of the model report is to facilitate the entrepreneurs in understanding the importance of setting up unit of Ice Cream. This model report will serve as guidance to the entrepreneurs on starting up such a new project and basic technical knowledge for setting up such a facility.

## **RAW MATERIAL AVAILABILITY:**

The main raw materials are milk, sugar, flavour, stabilizer, emulsifying agents etc. and are easily available across India.

## **SUITABLE LOCATION:**

Ice Cream can be manufactured at any location which is near to the market.

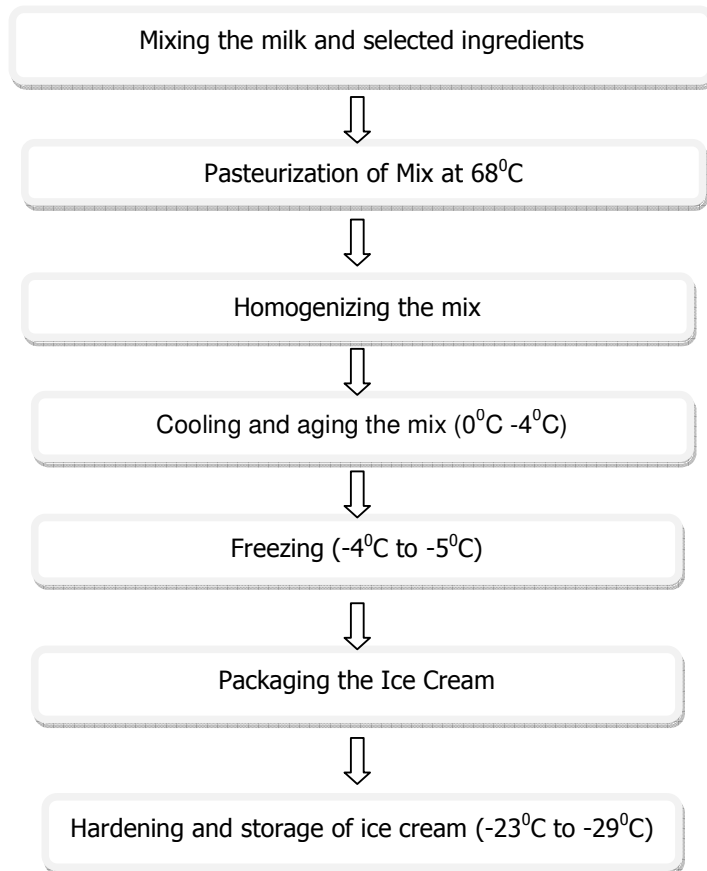
## **MARKET OPPORTUNITIES:**

Ice cream is a popular food item not only because of its taste, but it is a source of milk protein to vegetarians. In the recent years the manufacture of ice cream has been recognised as an important food processing industry and a number of new units have come up in different parts of the country to produce different varieties of ice cream to meet the local needs. Therefore, keeping in view the fact that children are the main consumers of this product in the country, there is a scope for the development of this industry on scientific lines under hygienic controls.

## **MANUFACTURING PROCESS:**

A good average ice cream will have the following usually all the ingredients, excepting, colours and flavours are mixed before processing. All liquid ingredients are placed in a suitable vessel (vat, tank etc.). The ingredients including skim milk powder, stabilizers etc. are added, while the liquid material is agitated before the temperature reaches, 50 (122 ° F). To avoid lumpiness, the materials should be mixed thoroughly, with sugar and slowly added to liquid ingredients if gelatin is the stabilizer to be used. It is best added after it is thoroughly mixed with equal volume of sugar and before the liquid ingredients is heated to 50°C or above. However, sodium alginate should not be added to the mix until the temperature of the mix has reached at least 65°-68°C. Then cooling and aging the mix (0°C -4°C) to 4 to 6 hours after this it freeze to the -4°C to -5°C then packaging. Ice cream is hardening and storage to -23°C to -29°C.

### Flow Chart of Ice Cream



**CAPACITY OF THE PROJECT:**

- The total capacity of the unit is 96 MT per year.

**PRODUCTION TARGETS (PER ANNUM):**

- The scheme is worked out per shift (8 Hour) basis and 300 working days per annum.
- Assume there'll be 70% production in first year.
- Quantity: 67.20 MT per year or 5.60 MT per month.

**PROJECT COMPONENT AND COST:**

**FINANCIAL ASPECTS:-**

**APPLICATION OF FUNDS**

Particular	Amount
Land	200 sq. meter covered
Building	area on Rent
Plant & Machinery	5,329,500.00
Office Equipment & Furniture	70,000.00
Working Capital	1,431,137.48
Pre-Operative Expenses	25,000.00
<b>Total</b>	<b>6,855,637.48</b>

**SOURCE OF FUND**

Particular	Amount
Own Capital	2,038,059.37
Loan from Banks	4,049,625.00
Loan for Working Capital	767,953.11
<b>Total</b>	<b>6,855,637.48</b>

## FIXED ASSETS

<b>(1) Land And Building:</b>				<b>Value (Rs.)</b>
Land & Building : 200 sq. meter covered area on rent				360,000 per annum
<b>(2) Machinery And Equipment:</b>				
<b>S. N.</b>	<b>Description (Name of machine with specification)</b>	<b>Qty.</b>	<b>Rate</b>	<b>Value (Rs.)</b>
<b>Production Unit</b>				
<b>i</b>	Mixing Tank	1	100,000.00	100,000.00
<b>ii</b>	Pasteurizer	1	1,000,000.00	1,000,000.00
<b>iii</b>	Homogenizer	1	700,000.00	700,000.00
<b>iv</b>	Boiler	1	325,000.00	325,000.00
<b>v</b>	Ice Cream freezer	1	600,000.00	600,000.00
<b>vi</b>	Mix Aging Tank	1	100,000.00	100,000.00
<b>vii</b>	Hardening Room	1	500,000.00	500,000.00
<b>viii</b>	Pump	2	35,000.00	70,000.00
<b>ix</b>	Packaging Machine	1	600,000.00	600,000.00
<b>x</b>	Laboratory Equipments	-	-	300,000.00
<b>xi</b>	Miscellaneous Equipments	-	-	400,000.00
<b>Total Cost of Machinery &amp; Equipments</b>				<b>4,845,000.00</b>
Electrification & Installation Charges @ 10%			-	484,500.00
<b>Total Cost of Production Unit</b>				<b>5,329,500.00</b>
Furniture & Fixtures			-	<b>70,000.00</b>
<b>3</b>	<b>Pre-Operative Expenses:</b>		-	25,000.00
<b>Total Fixed Capital ( 2+3)</b>				<b>5,354,500.00</b>

## SALES TURNOVER PER MONTH

Description	Packet	Rate (Rs./Gm.)	Value (Rs.)
Ice Cream: Small Cups (50 gm)	44800	10	448,000.00
Ice Cream: Big Cups (100 gm)	16800	20	336,000.00
Ice Cream: Family Pack (1000 gm)	1680	150	252,000.00
<b>Total</b>			<b>1,036,000.00</b>

## RAW MATERIAL REQUIREMENT & STOCK

### Raw Material (per month):

Description with specification	Qty. (Kg.)	Rate (Rs./Kg.)	Value (Rs.)
Milk	3,544.80	32.00	113,433.60
Cream	560.00	200.00	112,000.00
Milk Powder	560.00	220.00	123,200.00

Sugar	840.00	35.00	29,400.00
Emulsifier	16.80	400.00	6,720.00
Stabilizer	16.80	500.00	8,400.00
Flavour	56.00	800.00	44,800.00
Colour essences	5.60	300.00	1,680.00
			<b>439,633.60</b>

### **ANNUAL CONSUMPTION**

Milk	Rs	1,361,203.20
Cream	Rs	1,344,000.00
Milk Powder	Rs	1,478,400.00
Sugar	Rs	352,800.00
Emulsifier	Rs	80,640.00
Stabilizer	Rs	100,800.00
Flavour	Rs	537,600.00
Colour essences	Rs	20,160.00
<b>Total</b>		<b>5,275,603.20</b>
Stock of Raw Material	30 Days	433,611.22
Stock of WIP	02 Days	7,458.65
Purchase Cost of Raw Material	Rs	5,716,673.07

### **WORKING CAPITAL REQUIREMENT**

<b>Particulars</b>	<b>Days</b>	<b>Year' 1</b>
Raw Material	30	433,611.22
Work in Process	2	7,458.65
Finished Goods	10	230,457.03
Receivables	30	1,036,000.00
Advance/Security		200,000.00
Total		1,907,526.90
Less: Creditors	30	476,389.42
<b>Net Current Assets</b>		<b>1,431,137.48</b>
Paid Stock		195,137.48
75% of Paid Stock		146,353.11
60% of Book Debts		621,600.00
Bank Limits		767,953.11
Margin for Working Capital		663,184.37

**SELLING & ADMINISTRATION  
EXPENSES**

Particular	Year I
i Postage	15,000.00
ii Commission on sales	60,000.00
iii Office Expenses	48,000.00
iv Tour & Travel	60,000.00
v Printing & Stationary	20,000.00
vi Advertisement	200,000.00
vii Telephone	50,000.00
viii Repair & Maintenance	60,000.00
ix Conveyance	60,000.00
x Sales expenses	70,000.00
xi Insurance	40,000.00
xii Misc. Expenses	14,000.00
<b>Total</b>	<b>697,000.00</b>

**STAFF AND LABOUR EXPENSES**

S. No.	Description	No.	Salary	Total Salaries- Year I
<b>(a) Administrative &amp; Supervisory</b>				
i	Production Manager	1	15,000.00	180000.00
ii	Accountant	1	10,000.00	120,000.00
iii	Salesman	2	8,000.00	192,000.00
iv	Peon/watchman	1	5,000.00	60,000.00
v	Sweeper	1	5,000.00	60000.00
<b>Total Salaries</b>				<b>612,000.00</b>
<b>(b) Technical Skilled &amp; Unskilled</b>				
i	Skilled Worker	1	10,000.00	120,000.00
ii	Semi Skilled Worker	1	8,000.00	96,000.00
iii	Helper	2	5,000.00	120,000.00
<b>Total Wages</b>				<b>336,000.00</b>
<b>Grand Total</b>				<b>948,000.00</b>

**MANUFACTURING AND PROFIT & LOSS  
ACCOUNT**

Particulars	Year' 1
Sales Value of Ice Cream	<b>12,432,000.00</b>
<b>Cost of Production:</b>	
Raw Material Consumed:	
Opening Stock	-
Add: Purchases	5,716,673.07
	5,716,673.07
Less: Closing Stock	433,611.22
Raw Material Consumption	5,283,061.85
Add: Op Stock of WIP	-
	5,283,061.85
Less: Cl Stock of WIP	7,458.65
	5,275,603.20
Power & Fuel	800,000.00
Manufacturing Wages	336,000.00
Bonus & Incentives	20,160.00
Packaging Materials	913,640.00
Rent	360,000.00
Raw material storage & ins. Cost	16,800.00
Carriage inward	34,300.04
Depreciation	539,950.00
<b>Total Cost of Production</b>	<b>8,296,453.24</b>

**BALANCE SHEET**

Particulars	Year' 1
<b>Liabilities:</b>	
Capital	2,038,059.37
Reserve & Surplus	1,040,682.90
Secured Loan:	
Term Loan	3,239,700.00
Unsecured loan:	
Current Liabilities:	
Bank Borrowings	767,953.11
Sundry Creditors	476,389.42
	<u>7,562,784.81</u>
<b>Assets:</b>	
Fixed Assets:	
Gross Block:	5,399,500.00
Less: Depreciation	539,950.00
	<u>4,859,550.00</u>
Current Assets:	
Inventories	671,526.90

Add: Op. Stock of Finish. Goods	-	Receivables	1,036,000.00
	8,296,453.24	Advance/Security	200,000.00
Less: Cls. Stock of F. Goods	230,457.03	Cash & Bank Balance	775,707.90
<b>Cost of Sales</b>	<b>8,065,996.20</b>		
		Preliminary Expenses	20,000.00
<b>Gross Profit</b>	<b>4,366,003.80</b>		<u>7,562,784.81</u>
	0.35		
Selling & Admin Cost:		Difference	0.00
Expenses	697,000.00		
Salary	612,000.00		
Financial Expenses:			
Interest on Term Loan	478,193.22		
Interest on W. Capital	95,994.14		
Pre. Expenses	5,000.00		
<b>Profit Before Taxation</b>	<b>2,477,816.44</b>		
Taxation	743,344.93		
<b>Net Profit After Taxation</b>	<b>1,734,471.51</b>		
Cash withdrawal	693,788.60		
Transfer to Reserves	1,040,682.90		
Cumulative Reserves	1,040,682.90		
% of PBT on Sales	19.93		

### RATIO ANALYSIS

Particulars	Year' 1
<b>Net Profit ratio</b>	
NP*100/Total sales	<b>13.95</b>
<b>Rate of Return</b>	
NP*100/Total Investment	<b>25.30</b>

### BREAK EVEN ANALYSIS

<b>Fixed Cost</b>	
Rent	360,000.00
Interest on Borrowing	478,193.22
40% of Salaries	244,800.00
40% of Utilities	320,000.00
25% of Admin Exp	174,250.00
Depreciation	539,950.00
<b>Total</b>	<b>2,117,193.22</b>
<b>Break Even Point</b>	$\frac{\text{Fixed Cost} * 100}{\text{Fixed Cost} + \text{Profit}}$
	<b>54.97</b>

**ADDRESS OF MACHINERY & EQUIPMENT SUPPLIERS:**

- M/s Bajaj Processpack Maschinen Pvt. Ltd., 7/27, Jai Lakshmi Industrial Estate, Sahibabad Industrial Area, Sahibabad, Dist. Ghaziabad (U.P.) - 201301.
- A. P. V. Engineering Co. Ltd., Kolkata - 700 026, West Bengal, India.
- M/s Food & Biotech Engineers (I) Pvt. Ltd., Chaprola Road, Prithla, Tehsil- Palwal Distt. - Palwal, Pin: 121102 Haryana (India).
- Filtron Engineers Ltd., 6, Sitabaug Colony, Sinhagad Road, Pune – 411030 (Mahaeashtra).
- Eskimo Refrigeration Industries, S. No. 85/1, Shree Shankar Nagar, B-Building, Ground Floor, Poud Road, Kothrud, Pune - 411038, Maharashtra, India.
- M/s Om Metals & Engineers, S. No. 5, Ekata Hsg. Society, Bapujibuwa Nagar, Thergaon, Pune - 411 033, Maharashtra, India.