

FLAVORED PASTEURIZED MILK

1. INTRODUCTION:

Flavored pasteurized milk Made with milk, sugar, colorings and artificial or natural flavorings. Flavored milk is often pasteurized using ultra-high-temperature (UHT) treatment, which gives it a longer shelf-life than plain milk. Pre-mixed flavored milk is sold in the refrigerated dairy case alongside other milk products. Flavored sweetened powders or syrups which are added to plain milk are also available. Since centuries, milk is used for making various products as well as for direct consumption. With the advent of new processing techniques, many products are added in this category. This phenomenal growth is on account of nutritional values present in milk and its acceptance as a "complete food". India has made commendable progress in milk production and is one of the largest producers along with the USA. Milk and Milk products are consumed round the year by people from all age and income groups. The overall market for flavored milk in India grew 27 per cent in value terms in 2014-15. With increased lifestyle and health concerns flavored milk market is expected grow at considerably high rate in near future. Flavored milk has gained substantial popularity but somehow coffee flavored milk is still not easily available even though consumption of coffee has steadily increased, thus has potential in the market.

2. PRODUCT & ITS APPLICATION:

Flavored milk contains sugar, colorings, and (mostly inexpensive artificial) flavoring added to make it more appetizing, especially to children (a prominent example can be found in the artificial strawberry flavor, ethyl methylphenylglycidate) can be sold as a powder to be added to plain milk, or bought pre-mixed alongside other milk products. Flavoring can be included in a straw, and some flavored milk products are designed as dietary supplements by including additional vitamins or minerals. Only people who have certain diseases

benefit from this odd drink. Bottled spiced (masala) milk is a popular beverage in the Indian subcontinent.

3. DESIRED QUALIFICATIONS FOR PROMOTER:

Promoter with high business skill is basic need for this type of project. Successful running this project does not require any specific qualification.

4. INDUSTRY LOOKOUT AND TRENDS

Although per capita consumption of fluid milk has been declining for more than 40 years, the use of dairy ingredients in all types of beverages continues to grow. This is in part due to dairy's healthful halo, as many of the ingredients contribute protein and essential vitamins and minerals, most notably calcium.

Depending on the beverage and the production process, either fresh fluid dairy, such as milk and cream, or concentrated dry dairy ingredients may be used. The benefit to using the latter is the beverage may typically be produced in a non-Grade-A fluid dairy manufacturing plant. Such facilities are a requirement for the processing of raw fluid milk.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

The size of India's dairy industry is 3 crore rupees and milk accounts for most of this. The 2014-15 figures indicate that we produced 147 million tons of milk which makes us the world's largest milk producer. Though a large part of this market is raw buffalo milk, we decided to taste pasteurized cow's milk because it's more popular in Tier 1 and Tier 2 cities where you won't find too many takers for raw milk. Raw milk comes straight from the farm to your doorstep, along with a long list of unanswered questions about 'health and safety. The World Health Organisation (WHO) suggests that an adult needs 400 to 500 milligrams of calcium a day to prevent bone fracture and maintain good bone health. One glass of toned milk has about 125 milligrams of calcium, which means you need to

drink anywhere between three to four glasses of milk a day. Some other advocates of health and food recommend as high as 1200 milligrams of calcium a day for people up to the age of 50. The United States Department of Agriculture recommends three cups of milk a day for anyone over the age of 8. In the dairy sector, most of the processing is done by the unorganized sector. Though the share of organized sector is less than 15 per cent, it is expected to rise rapidly, especially in the urban regions. Among the milk products manufactured by the organized sector, some of the prominent ones are ghee, butter, cheese, ice creams, milk powders, malted milk food, condensed milk and infant foods. Addition of milk in tea or coffee is the most common and equally popular practice. Flavored milk is yet another variant. Consumption of coffee is increasing steadily but availability of coffee flavored milk is still not very comfortable. With increasing health awareness, many people are switching over to milk and coffee flavored milk would be an attractive proposition. Railway stations, air-ports, bus-stands, tourist spots, picnic centres, cold drink stalls, hostels, restaurants, coffee bars or fast food restaurants, clubs, school canteens etc. could be the major outlets.

6. RAW MATERIAL REQUIREMENTS:

Basic Raw Material required as follows

- Raw Milk – as a base to process
- Sugar – for good test
- Flavors – for variety and test

7. MANUFACTURING PROCESS:

Fresh milk is standardized according to fat contents and then heated at around 40 degree C and filtered. Filtered milk is again heated at about 60-65 degree C and stabilisers like DSHP or TSC are added in very small quantity. Milk is then processed in homogeniser. Simultaneously 5% concentrated coffee powder or flavor is mixed with water and filtered. Then homogenized milk, sugar syrup and coffee/ flavor water are at around 80-85 degree C and sterilized for about half an hour and immediately bottled.

8. MANPOWER REQUIREMENT:

Sr. No.	Designation	SALARY	Salary ₹	Number of Employees				
				Year-1	Year-2	Year-3	Year-4	Year-5
	Working Staff		PER ANNUM					
1	Production Manager	18000	36000	2	2	2	3	3
2	Operators	12000	60000	5	5	5	7	7
3	Helpers	10000	100000	10	10	10	12	12
			196000	17	17	17	22	22
1	Fixed Staff:							
2	Admin Manager	15000	30000	2	2	2	2	2
3	Accounts/Stores Assistant	12500	50000	4	4	4	4	4
	Office Boy	9000	27000	3	3	3	3	3
	<i>Sub-Total</i>		107000	8	8	8	8	8
	Total		303000	25	25	25	30	30

9. IMPLEMENTATION SCHEDULE:

The project can be implemented in 4months' time as detailed below:

Sr. No.	Activity	Time Required (in months)
1	Acquisition of premises	2.00
2	Construction (if applicable)	2.50
3	Procurement & installation of Plant & Machinery	2.50
4	Arrangement of Finance	1.00
5	Recruitment of required manpower	1.00
	Total time required <i>(some activities shall run concurrently)</i>	4.00

10. COST OF PROJECT:

Sr. No.	Particulars	₹ in Lacs
1	Land	50.00
2	Building	100.00
3	Plant & Machinery	125.00
4	Furniture, other Misc Equipments	5.00
5	Other Assets including Preliminary / Pre-operative expenses	12.50
6	Margin for Working Capital	60.00
	Total	352.50

11. MEANS OF FINANCE:

Bank term loans are assumed @ 75 % of fixed assets.

Sr. No.	Particulars	₹ in Lacs
1	Promoter's contribution	88.13
2	Bank Finance	264.38
	Total	352.50

12. WORKING CAPITAL CALCULATION:

Sr. No.	Particulars	Gross Amt	Margin %	Margin Amt	Bank Finance
1	Inventories	30.00	0.25	7.50	22.50
2	Receivables	15.00	0.25	3.75	11.25
3	Overheads	15.00	100%	15.00	0.00
4	Creditors	-		0.00	0.00
	Total	60.00		26.25	33.75

13. LIST OF MACHINERY REQUIRED:

Plant and Machinery Major plant and machinery required for the proposed project are as follows: Flavor Mixing /Sugar blending tank , Milk Transfer Pump, Mix Homogenizer, Balance tank, Bottling Machine , Batch Sterilizer, SS Pipes, valves and Fittings

Sr. No.	Particulars	UOM	Qty	Rate (₹ in Lacs)	Value (₹ in Lacs)
	Plant & Machinery / Equipments				
<i>a)</i>	Main Machinery				
1	Flavor Mixing Tanks	Nos	1	15.00	15.00
2	Sugar Blending Mixing	Nos	1	12.00	12.00
3	Milk Conditioner	Nos	1	18.00	18.00
4	Milk Homogenizer	Nos	1	26.00	26.00
5	Bottling Plant	Nos	1	15.00	15.00
6	Boiler	Nos.	1	11.00	11.00
7	Tax, Transport, Installation	LS	1	28.00	28.00
	<i>Sub-Total Plant & Machinery</i>				125.00
	Office Furniture And Electrification	LS	1	0.50	5.00
1	<i>Sub Total</i>				5.00
	Other Assets				
	Preliminary And Preoperative	LS			12.50
1	<i>Sub-Total Other Assets</i>				12.50
	Total				142.50

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

1. Fry-Tech Food Equipments Private Limited
S. No. 4, Raviraj Industrial Estate,
Bhikhubhai Mukhi Ka Kuwa Bharwadvash,
Ramol, Ahmedabad - 380024,
Gujarat, India

2. Hindustan Vibrotech Pvt. Ltd.
Office No. 2, Ground Floor,
Vrindavan Building, Vile Parle East,
Mumbai – 400057,
Maharashtra, India

3. Electronics cooling systems Pvt. Ltd.
S-27, SIDCO Industrial Estate
Kakkalur Industrial Estate
Tiruvallur – 602003,
Tamil Nadu, India

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	UOM	Year-1	Year-2	Year-3	Year-4	Year-5
1	Capacity Utilization	%	60%	70%	80%	90%	100%
2	Sales	₹. In Lacs	180.00	210.00	240.00	270.00	300.00
3	Raw Materials & Other direct inputs	₹. In Lacs	143.11	166.96	190.82	214.67	238.52
4	Gross Margin	₹. In Lacs	36.89	43.04	49.18	55.33	61.48
5	Overheads except interest	₹. In Lacs	16.67	17.71	19.80	20.42	20.84
6	Interest @ 10 %	₹. In Lacs	26.44	26.44	17.63	13.22	10.58
7	Depreciation @ 30 %	₹. In Lacs	87.50	62.50	43.75	31.25	28.13
8	Net Profit before tax	₹. In Lacs	-93.72	-63.62	-31.99	-9.56	1.94

The basis of profitability calculation:

This unit will have 3, 00,000 Liter/Annum capacity. The growth of selling capacity will be increased 10% per year. (This is assumed by various analysis and study, it can be increased according to the selling strategy.)

Energy Costs are considered at Rs 7 per Kwh and fuel cost is considered at Rs. 65 per litre. The depreciation of plant is taken at 10-12 % and Interest costs are taken at 14 -15 % depending on type of industry.

15. BREAKEVEN ANALYSIS:

The project shall reach cash break-even at 51.10 % of projected capacity.

Sr. No.	Particulars	UOM	Value
1	Sales at full capacity	₹. In Lacs	300.00
2	Variable costs	₹. In Lacs	238.52
3	Fixed costs incl. interest	₹. In Lacs	31.42
4	$BEP = FC/(SR-VC) \times 100 =$	% of capacity	51.10%

16. STATUTORY / GOVERNMENT APPROVALS

The Ministry of Food Processing Industries has been operating several plan schemes for the development of processed food sector in the country during the 10th Plan. One of the schemes relates to the Technology Up-gradation/ Establishment/ Modernization of food processing industries.

The Indian food processing industry is regulated by several laws which govern the aspects of sanitation, licensing and other necessary permits that are required to start up and run a food business. The legislation that dealt with food safety in India was the Prevention of Food Adulteration Act, 1954 (hereinafter referred to as "**PFA**"). The PFA had been in place for over five decades and there was a need for change due to varied reasons which include the changing requirements of our food industry. The act brought into force in

place of the PFA is the Food Safety and Standards Act, 2006 (hereinafter referred to as "**FSSA**") that overrides all other food related laws.

FSSA initiates harmonization of India's food regulations as per international standards. It establishes a new national regulatory body, the Food Safety and Standards Authority of India (hereinafter referred to as "**FSSAI**"), to develop science based standards for food and to regulate and monitor the manufacture, processing, storage, distribution, sale and import of food so as to ensure the availability of safe and wholesome food for human consumption. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

All food imports will therefore be subject to the provisions of the FSSA and rules and regulations which as notified by the Government on 5th of August 2011 will be applicable.

Key Regulations of FSSA

- A. Packaging and Labelling
- B. Signage and Customer Notices
- C. Licensing Registration and Health and Sanitary Permits

17. BACKWARD AND FORWARD INTEGRATIONS

The objective of the scheme is to provide effective and seamless backward and forward integration for processed food industry by plugging the gaps in supply chain in terms of availability of raw material and linkages with the market. Under the scheme, financial assistance is provided for setting up of primary processing centres/ collection centres at farm gate and modern retail outlets at the front end along with connectivity through insulated/ refrigerated transport.

The Scheme is applicable to perishable horticulture and non-horticulture produce such as, fruits, vegetables, dairy products, meat, poultry, fish, Ready to Cook Food Products, Honey, Coconut, Spices, Mushroom, Retails Shops for Perishable Food Products etc. The Scheme would enable linking of farmers to processors and the market for ensuring remunerative prices for agri produce.

The scheme is implemented by agencies/ organizations such as Govt./ PSUs/ Joint Ventures/ NGOs/ Cooperatives/ SHGs / FPOs / Private Sector / individuals etc.

Backward Linkage:

- Integrated Pack-house(s) (with mechanized sorting & grading line/ packing line/ waxing line/ staging cold rooms/cold storage, etc.)
- Pre Cooling Unit(s)/ Chillers
- Reefer boats
- Machinery & equipment for minimal processing and/or value addition such as cutting, dicing, slicing, pickling, drying, pulping, canning, waxing, etc.
- Machinery & equipment for packing/ packaging.

Forward Linkage:

- Retail chain of outlets including facilities such as frozen storage/ deep freezers/ refrigerated display cabinets/cold room/ chillers/ packing/ packaging, etc.
- Distribution centre associated with the retail chain of outlets with facilities like cold room/ cold storage/ ripening chamber.

18. TRAINING CENTERS AND COURSES

There are few specialized Institutes provide degree certification in Food Technology, few most famous and authenticate Institutions are as follows:

1. Anand Agricultural University,
Anand – 388110, Gujarat – INDIA

2. Junagadh Agricultural University
Junagadh University, Junagadh, Gujarat – 362015
Gujarat – INDIA

3. Dairy Science College

KVAFSU Regional Campus, Bellary Rd,
Hebbal, Bengaluru,
Karnataka – 560024

Udyamimitra portal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.