

PROJECT REPORT

Of

VANILLIN

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Vanillin**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxxx
Pin: xxxxxxxx State: xxxxxxxxxx
Mobile xxxxxxxx
- 5 Product and By Product : **Vanillin**
- 6 Name of the project / business activity proposed : **Vanillin Manufacturing Unit**
- 7 Cost of Project : Rs.27.44 Lakhs
- 8 Means of Finance
Term Loan Rs.18 Lakhs
Own Capital Rs.2.74 Lakhs
Working Capital Rs.6.7 Lakhs
- 9 Debt Service Coverage Ratio : 2.31
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 39%
- 13 Employment : 13 Persons
- 14 Power Requirement : 25 HP
- 15 Major Raw materials : Eugenol(oil of cloves), Caustic Potash,Acetic AnhydrideGlacial Acetic Acid etc
- 16 Estimated Annual Sales Turnover (Max Utilized Capacity) : 152.79 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Building /Shed 1500 Sq ft	Own/Rented
Plant & Machinery	18.90
Furniture & Fixtures	1.10
Working Capital	7.44
Total	27.44

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.74
Term Loan	18.00
Working Capital	6.70
Total	27.44

PROJECT REPORT ON VANILLIN



Introduction:

Vanillin, a partially methylated aldehyde of the catechol series, is the fragrant constituent of vanilla bean and occurs also in the sugar beet in balsams and resins. It is an important component of artificial flavour. Vanillin is the main ingredient in artificial vanilla flavours, used most extensively for the flavouring of confectionary, baked goods, candies, chocolates, etc. Vanillin serves widely also in perfumes and cosmetics for imparting sweet and casting notes. It blends well with heliotrope in and coumarone. used in floral and fancy scents alike.

Market & Demand Aspect:

There is no organised unit in West Bengal for production of vanillin. Most of the vanillin available in the market is a blended product of imported vanillin. There is considerable demand of vanillin in the country for the bakers and confectionery industry, perfumery and cosmetic industry. There is ample scope for its production in the country

Raw materials:

The raw materials required for manufacturing of Vanillin are Engenol, Caustic Potash, Acetic Anhydride, Glacial Acetic Acid, Potassium Dichromate. All the above raw materials are available locally from manufacturers or traders.

Manufacturing Process & Source of Technology:

The synthetic process for manufacture of Vanillin utilizes Eugenol Available from some essential oils. Under the influence of alcoholic KCH at 140°C of conC.KCH aqueous at 220°C, Eugenol isomerises to give is eugenol.

This is acetylated to protect the phenolic group and Oxidised under mild conditions with potassium dichromate solutions. Isoeugenol is converted to vanillin. Pure Vanillin is obtained by reaction with sodium bisulphate and then distilled to give pure vanillin.

The important aromatic aldehydic is widely distributed in nature although it occurs in essential oils, gums, and 691 only in small quantities. Most likely plants do not contain vanillin as much but in the form of glycosides which by enzyme action release vanillin.

Presumption :

- a) The working hours : 8 hours per day on single shift basis and 25 working days in a month.
- b) The cost of machinery and equipment, raw materials etc. are those generally obtaining at the time of the preparation of the project report.
- c) The rate of interest on Bank loan has been considered as 11.00% p.a. which may vary from time to time.
- d) The time period for achieving full envisaged capacity utilization is three years.
- e) The project is based on Single shift working per day and 300 working days per annum
- f) The rate of interest on Bank loan has been considered as 11.00% p.a. which may vary from time to time.

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Capital Account					
Opening Balance	-	2.70	5.58	9.18	13.03
Add: Additions	2.74	-	-	-	-
Add: Net Profit	0.96	4.38	7.60	10.85	14.21
Less: Drawings	1.00	1.50	4.00	7.00	10.00
Closing Balance	2.70	5.58	9.18	13.03	17.24
CC Limit	6.70	6.70	6.70	6.70	6.70
Term Loan	16.00	12.00	8.00	4.00	-
Sundry Creditors	1.00	1.16	1.33	1.51	1.71
TOTAL :	26.40	25.43	25.20	25.23	25.64
<u>APPLICATION OF FUND</u>					
Fixed Assets (Gross)	20.00	20.00	20.00	20.00	20.00
Gross Dep.	2.95	5.45	7.59	9.41	10.96
Net Fixed Assets	17.06	14.55	12.41	10.59	9.04
Current Assets					
Sundry Debtors	2.90	3.45	3.96	4.50	5.09
Stock in Hand	5.56	6.28	7.15	8.09	9.11
Cash and Bank	0.89	1.15	1.69	2.05	2.40
TOTAL :	26.40	25.43	25.20	25.23	25.64
	-	-	-	-	-

PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
<u>A) SALES</u>					
Gross Sale	87.00	103.64	118.74	135.09	152.79
Total (A)	87.00	103.64	118.74	135.09	152.79
<u>B) COST OF SALES</u>					
Raw Mateiral Consumed	60.19	69.51	79.61	90.53	102.38
Electricity Expenses	2.13	2.34	2.55	2.77	2.98
Repair & Maintenance	0.44	0.52	0.59	0.68	0.76
Labour & Wages	10.76	11.83	13.02	14.32	15.75
Depreciation	2.95	2.51	2.14	1.82	1.55
Cost of Production	76.45	86.71	97.91	110.11	123.42
Add: Opening Stock /WIP	-	2.55	2.81	3.17	3.56
Less: Closing Stock /WIP	2.55	2.81	3.17	3.56	3.99
Cost of Sales (B)	73.90	86.45	97.54	109.72	122.99
C) GROSS PROFIT (A-B)	13.10	17.19	21.20	25.38	29.80
	15.05%	16.58%	17.85%	18.79%	19.50%
D) Bank Interest (Term Loan)	1.95	1.60	1.16	0.72	0.28
ii) Interest On Working Capital	0.74	0.74	0.74	0.74	0.74
E) Salary to Staff	8.58	9.44	10.38	11.42	12.56
F) Selling & Adm Expenses Exp.	0.87	1.04	1.19	1.35	1.53
TOTAL (D+E)	12.14	12.81	13.46	14.22	15.10
H) NET PROFIT	0.96	4.38	7.73	11.16	14.70
	1.1%	4.2%	6.5%	8.3%	9.6%
I) Taxation	-	-	0.14	0.31	0.48
J) PROFIT (After Tax)	0.96	4.38	7.60	10.85	14.21

PROJECTED CASH FLOW STATEMENT

PARTICULARS	I	II	III	IV	V
<u>SOURCES OF FUND</u>					
Own Contribution	2.74	-			
Net Profit	0.96	4.38	7.73	11.16	14.70
Depreciation & Exp. W/off	2.95	2.51	2.14	1.82	1.55
Increase In Cash Credit	6.70				
Increase In Term Loan	18.00	-	-	-	-
Increase in Creditors	1.00	0.16	0.17	0.18	0.20
TOTAL :	32.34	7.04	10.04	13.16	16.45
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	20.00	-	-	-	-
Increase in Stock	5.56	0.72	0.87	0.94	1.02
Increase in Debtors	2.90	0.55	0.50	0.55	0.59
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Taxation	-	-	0.14	0.31	0.48
Drawings	1.00	1.50	4.00	7.00	10.00
TOTAL :	31.46	6.78	9.51	12.79	16.10
Opening Cash & Bank Balance	-	0.89	1.15	1.69	2.05
Add : Surplus/(Deficit)	0.89	0.27	0.53	0.37	0.35
Closing Cash & Bank Balance	0.89	1.15	1.69	2.05	2.40

COMPUTATION OF VANILLIN MANUFACTURING UNIT**Items to be Manufactured Vanillin**

Manufacturing Capacity per Day		250.00	kgs
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		75,000	kgs
Year		Capacity	Vanillin
		Utilisation	
I		50%	37,500
II		55%	41,250
III		60%	45,000
IV		65%	48,750
V		70%	52,500

COMPUTATION OF RAW MATERIAL

Item Name	Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
Eugenol(oil of cloves)	7,500.00	kgs	1,500.00	11,250,000.00
Caustic Potash	2,470	kgs	70.00	172,900.00
Acetic Anhydride	2,470	kgs	65.00	160,550.00
Glacial Acetic Acid	3,290	kgs	45.00	148,050.00
Potassium Dichromate	2,057	kgs	150.00	308,550.00
Total	9,970.00			12,040,050.00

Total Raw material in Rs lacs at 100% Capacity 120.40
 Cost per kg (In Rs) 160.50

Raw Material Consumed	Capacity Utilisation	Rate	Amount (Rs.)
I	50%	160.50	60.19
II	55%	168.50	69.51
III	60%	176.90	79.61
IV	65%	185.70	90.53
V	70%	195.00	102.38

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL

PARTICULARS	I	II	III	IV	V
Finished Goods					
(10 Days requirement)	2.55	2.81	3.17	3.56	3.99
Raw Material					
(15 Days requirement)	3.01	3.48	3.98	4.53	5.12
Closing Stock	5.56	6.28	7.15	8.09	9.11

COMPUTATION OF WORKING CAPITAL REQUIREMENT

Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	5.56		
Less:			
Sundry Creditors	1.00		
Paid Stock	4.55	0.46	4.10
Sundry Debtors	2.90	0.29	2.61
Working Capital Requirement			6.71
Margin			0.75
MPBF			6.71
Working Capital Demand			6.70

COMPUTATION OF SALE

Particulars	I	II	III	IV	V
Op Stock	-	1,250.00	1,375.00	1,500.00	1,625.00
Production	37,500.00	41,250.00	45,000.00	48,750.00	52,500.00
	37,500.00	42,500.00	46,375.00	50,250.00	54,125.00
Less : Closing Stock(10 Days)	1,250.00	1,375.00	1,500.00	1,625.00	1,750.00
Net Sale	36,250.00	41,125.00	44,875.00	48,625.00	52,375.00
Sale Price per pouch of 25 gm	240.00	252.00	264.60	277.83	291.72
Sale (in Lacs)	87.00	103.64	118.74	135.09	152.79

BREAK UP OF LABOUR

Particulars	Wages	No of	Total
	Per Month	Employees	Salary
Supervisor	20,000.00	1	20,000.00
Plant Operator	15,000.00	1	15,000.00
Unskilled Worker	8,500.00	4	34,000.00
Helper	5,000.00	1	5,000.00
Security Guard	7,500.00	1	7,500.00
			81,500.00
Add: 10% Fringe Benefit			8,150.00
Total Labour Cost Per Month			89,650.00
Total Labour Cost for the year (In Rs. Lakhs)		8	10.76

BREAK UP OF SALARY

Particulars	Salary	No of	Total
	Per Month	Employees	Salary
Accountant cum store keeper	15,000.00	1	15,000.00
Administrative Staffs	12,500.00	4	50,000.00
Total Salary Per Month			65,000.00
Add: 10% Fringe Benefit			6,500.00
Total Salary for the month			71,500.00
Total Salary for the year (In Rs. Lakhs)		5	8.58

COMPUTATION OF DEPRECIATION

Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation			15.00%	10.00%	
Opening Balance		Own/Rented	-	-	-
Addition	-		18.90	1.10	20.00
	-		18.90	1.10	20.00
TOTAL		-	18.90	1.10	20.00
Less : Depreciation	-	-	2.84	0.11	2.95
WDV at end of 1st year	-	-	16.07	0.99	17.06
Additions During The Year	-	-	-	-	-
	-	-	16.07	0.99	17.06
Less : Depreciation	-	-	2.41	0.10	2.51
WDV at end of IIInd Year	-	-	13.66	0.89	14.55
Additions During The Year	-	-	-	-	-
	-	-	13.66	0.89	14.55
Less : Depreciation	-	-	2.05	0.09	2.14
WDV at end of IIIrd year	-	-	11.61	0.80	12.41
Additions During The Year	-	-	-	-	-
	-	-	11.61	0.80	12.41
Less : Depreciation	-	-	1.74	0.08	1.82
WDV at end of IV year	-	-	9.87	0.72	10.59
Additions During The Year	-	-	-	-	-
	-	-	9.87	0.72	10.59
Less : Depreciation	-	-	1.48	0.07	1.55
WDV at end of Vth year	-	-	8.39	0.65	9.04

REPAYMENT SCHEDULE OF TERM LOAN

11.0%

Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	18.00	18.00	0.50	-	18.00
	IInd Quarter	18.00	-	18.00	0.50	-	18.00
	IIIrd Quarter	18.00	-	18.00	0.50	1.00	17.00
	Ivth Quarter	17.00	-	17.00	0.47	1.00	16.00
					1.95	2.00	
II	Opening Balance						
	Ist Quarter	16.00	-	16.00	0.44	1.00	15.00
	IInd Quarter	15.00	-	15.00	0.41	1.00	14.00
	IIIrd Quarter	14.00	-	14.00	0.39	1.00	13.00
	Ivth Quarter	13.00		13.00	0.36	1.00	12.00
					1.60	4.00	
III	Opening Balance						
	Ist Quarter	12.00	-	12.00	0.33	1.00	11.00
	IInd Quarter	11.00	-	11.00	0.30	1.00	10.00
	IIIrd Quarter	10.00	-	10.00	0.28	1.00	9.00
	Ivth Quarter	9.00		9.00	0.25	1.00	8.00
					1.16	4.00	
IV	Opening Balance						
	Ist Quarter	8.00	-	8.00	0.22	1.00	7.00
	IInd Quarter	7.00	-	7.00	0.19	1.00	6.00
	IIIrd Quarter	6.00	-	6.00	0.17	1.00	5.00
	Ivth Quarter	5.00		5.00	0.14	1.00	4.00
					0.72	4.00	
V	Opening Balance						
	Ist Quarter	4.00	-	4.00	0.11	1.00	3.00
	IInd Quarter	3.00	-	3.00	0.08	1.00	2.00
	IIIrd Quarter	2.00	-	2.00	0.06	1.00	1.00
	Ivth Quarter	1.00		1.00	0.03	1.00	-
					0.28	4.00	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R

PARTICULARS	I	II	III	IV	V
<u>CASH ACCRUALS</u>	3.90	6.89	9.74	12.67	15.76
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	5.85	8.48	10.89	13.39	16.04
<u>REPAYMENT</u>					
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	3.95	5.60	5.16	4.72	4.28
DEBT SERVICE COVERAGE RATIO	1.48	1.52	2.11	2.84	3.75
AVERAGE D.S.C.R.			2.31		

COMPUTATION OF ELECTRICITY

(A) POWER CONNECTION			
Total Working Hour per day	Hours	8	
Electric Load Required	HP	25	
Load Factor		0.7460	
Electricity Charges	per unit	7.50	
Total Working Days		300	
Electricity Charges			3.36
Add : Minimim Charges (@ 10%)			
(B) DG set			
No. of Working Days		300	days
No of Working Hours		0.5	Hour per day
Total no of Hour		150	
Diesel Consumption per Hour		8	
Total Consumption of Diesel		1,200	
Cost of Diesel		65.00	Rs. /Ltr
Total cost of Diesel		0.78	
Add : Lube Cost @15%		0.12	
Total		0.90	
Total cost of Power & Fuel at 100%			4.25
Year	Capacity		Amount (in Lacs)
I	50%		2.13
II	55%		2.34
III	60%		2.55
IV	65%		2.77
V	70%		2.98

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