



**DETAILED PROJECT REPORT**  
**BAY LEAF ESSENTIAL OIL UNIT**  
**UNDER PMFME SCHEME**



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**1. PROJECT SUMMARY**

1. Name of the proposed project	:	Bay Leaf Essential Oil Unit
2. Nature of proposed project	:	Proprietorship/Company/Partnership
3. Proposed project capacity	:	16200 Ltr. /annum (30,35,40,45&50% capacity utilization in 1 <sup>st</sup> to 5 <sup>th</sup> Year respectively)
4. Raw material	:	Bay Leaves
5. Major product outputs	:	Bay Leaf Essential Oil
6. Total project cost	:	Rs. 26.13 Lakh
• Land development, building & Civil Construction	:	Nil
• Machinery and equipment's	:	Rs. 15.20 Lakh
• Miscellaneous Fixed Assets	:	Rs. 2.50 Lakh
• Working capital	:	Rs. 8.43 Lakh
7. Means of Finance		
• Subsidy (max 10lakhs)	:	Rs. 6.20 Lakh
• Promoter's contribution (min10%)	:	Rs. 2.60 Lakh
• Term loan	:	Rs. 9.74 Lakh
• Working Capital Requirement	:	Rs. 7.59 Lakh
8. Profit after Depreciation, Interest & Tax		
• 1 <sup>st</sup> year	:	Rs. 1.40 Lakh
• 2 <sup>nd</sup> year	:	Rs. 4.43 Lakh
• 3 <sup>rd</sup> year	:	Rs. 7.89 Lakh
• 4 <sup>th</sup> year	:	Rs. 10.91 Lakh
• 5 <sup>th</sup> year	:	Rs. 14.06 Lakh
9. Average DSCR	:	4.04
10. Term loan repayment	:	5 Years with 6 months grace period

## **2. ABOUT THE PRODUCT**

### **2.1. PRODUCT INTRODUCTION:**

Bay leaf (*Laurus nobilis*) belongs to laurel family (*Lauraceae*) is an evergreen perennial shrub. The genus has 2400 to 2500 species and native to Tropics of eastern Africa, southern Mediterranean region, south and America, Asia minor, south and America and the Balkans. Two laurel species are found: *Laurus azorica* and *L. nobilis*. *L. nobilis* is typically known as bay leaf or sweet bay. It is known as waraq ghaar in Arabic, it is known as lorbeer in German, Tejpatta in India, dafni in Greek. *Laurus nobilis* is a small tree having oblong leaf. The plant grows to the height of 20 – 30 feet. The fruit is 10 -15mm, black and ovoid when ripe. The bark may be olive green or reddish blue. The leaves are plucked and dried for use in flavouring for various of dishes. Bark is also used for medicinal tea.

It has a sharp and bitter taste. The fragrance and aroma are due to the presence of essential oil in leaves. It has tannins, citric acid, eugenol, flavonoids, carbohydrate, alkaloids, steroids, triterpenoids and essential oil. Each of this chemical compound varies depending on the type of species. The essential oil of bay leaf varies from 0.3% to 3%. Bay leaves has traces of fat hence low in caloric value. It is main source of vitamin A and minerals. Bay leaf is also good source of fibre.

Bay leaves is full of antioxidants, minerals and fibres. It is used for stomach ache, clearing up of mucus in the lungs, cold and sore throat, to treat headaches, gastrointestinal problem and analgesic effect. It has antidiarrheal, antidiabetic and anti-inflammatory properties, boosts immune system.

## **2.2. MARKET POTENTIAL:**

The increase in awareness of healthy diet has increased consumption of natural ingredients. The rapidly rising urbanization and changing lifestyle had changed the food preference towards healthy choices owing to the medicinal properties of herbs and spices. Bay leaf owing to its medicinal properties such as antioxidant properties is gaining attention among health-conscious consumers. The anti-inflammatory property of the bay leaf reduces the chances of arthritis and also the consumption of bay leaf improves insulin function which the reason it is beneficial for diabetics. The increasing use of bay leaf by nutraceutical is also driving the global bay leaf market. Consumption of bay leaf extracts as health supplement is increasing the demand for bay leaf in all region by health-conscious consumers.

Increased use of bay leaf in sauces, pickles, seasoning, dressing gives ample opportunity to bay leaf producers to grow in market. The bay leaf and its powder are gaining market due to its application in French cuisine and Indian cuisine. It is also used as flavoring in liquors and vinegars. The bay leaf powder is also used in packaged food industry and exotic cuisines.

Rising demand for organic products and environmentally friendly ingredients uses in cosmetic and personal care boosted the market of essential oil. The essential oil of bay leaf is increasingly used in various cosmetic products such as serums, face mask, shampoo, hair oils, soaps, moisturizers owing to its antioxidant properties. It has essential oil content ranging from 1.5 – 2.5% by weight. It can treat various skin problem hence increasingly being used in home remedies as well.

Essential oil of spices can successfully replace powdered or whole spice in food preparation and other application. As essential oil is liquid in state, they are easier to handle than powdered spices. Essential oil has very low growth of microbes and other contaminating micro-organisms as compared to whole or powdered spices, therefore gives longer shelf life to product.

### 2.3. RAW MATERIAL DESCRIPTION:

The only raw material required for bay leaf essential oil manufacturing is bay leaves.

## 3. PROCESS FLOW CHART

### Harvesting

The yield per tree is dependent on the age and size of tree. The collection from small trees ranges from 30 – 40kg/tree/harvest and for bigger tree it ranges from 55- 65 kg/tree/harvest. Cleaning and wedding are the main activities involved in cultivation of bay leaf. Leaves are harvested during November to February. Harvesting is done once every two years.

### Sorting and grading

The bay leaves are received at the production facility where they are sorted and graded depending on the type of quality. The grading is done on the basis of absence/ presence of unwanted objects in the bundle. Two grade of bay leaves are available as follow

S.NO	GRADE	CHARACTERISTICS
1	Grade 1	Leaves with twigs
2	Grade 2	Leaves without twigs

### Drying

Drying of bay leaves in the sun or spread in the clean mats. The leaves should be turned frequently to ensure even drying. Better drying leads to the development of deeper flavor. The

final moisture content of dried leaves should be 8-10%. During rainy season leaves can be dried using mechanical tray dryer at 60°C for 1 hour.

### Winnowing

The dried leaves are winnowed using winnowing basket to remove dust and other foreign matter. Air current can also be used for removal of dirt and dust. Majority of bay leaf are packed in bundles and transported with no value addition at local level.

### Bay leaf oil extraction

Steam distillation is most widely used method for extraction of volatile oil from spices and herbs. It is a unit operation in which live steam is passed through a well packed bed of leaves. The resultant vapors contain volatile essential oil and steam are condensed and condensate forming two immiscible oil are separated into essential oil and water in a separator. The latter is called aromatic water of leaves and is discarded if has no commercial value.

### Packaging of essential oils

Unsuitable packaging material can cause alteration in the active components of essential oil. The essential oil depending on the quantity can be packed in aluminium bottle or amber glass bottle.



Flow chart of bay leaves essential oil manufacturing



## **4. ECONOMICS OF THE PROJECT**

### **4.1. BASIS & PRESUMPTIONS**

1. Production Capacity of Bay Leaf Essential Oil is 60 ltr. per day. First year, Capacity has been taken @ 30%.
2. Working shift of 8 hours per day has been considered.
3. Raw Material stock is for 10 days and Finished goods Closing Stock has been taken for 10 days.
4. Credit period to Sundry Debtors has been given for 15 days.
5. Credit period by the Sundry Creditors has been provided for 10 days.
6. Depreciation and Income tax has been taken as per the Income tax Act, 1961.
7. Interest on working Capital Loan and Term loan has been taken at 11%.
8. Salary and wages rates are taken as per the Current Market Scenario.
9. Power Consumption has been taken at 20 KW.
10. Increase in sales and raw material costing has been taken @ 5% on a yearly basis.

## 4.2. CAPACITY, UTILIZATION, PRODUCTION & OUTPUT

<b>COMPUTATION OF PRODUCTION OF BAY LEAF ESSENTIAL OIL</b>		
<b>Items to be Manufactured</b>		
Bay leaf essential oil		
Total working Hours	8	
Plant capacity Per Day	60	Ltr.
Working days in a month	25	Days
Working days per annum	300	
Wastage Considered	10%	
Raw material requirement	18000	Ltr.
Final Output per annum after wastage	16200	Ltr.
Final Product to be packed in 100 ml bottle		
Number of Bottles per annum	162000	100 ml bottle

<b>Production of Bay leaf essential oil</b>		
<b>Production</b>	<b>Capacity</b>	<b>LTR.</b>
1st year	30%	48,600
2nd year	35%	56,700
3rd year	40%	64,800
4th year	45%	72,900
5th year	50%	81,000




<b>Raw Material Cost</b>			
<b>Year</b>	<b>Capacity Utilisation</b>	<b>Rate (per bottle.)</b>	<b>Amount (Rs. in lacs)</b>
1st year	30%	140.00	68.04
2nd year	35%	147.00	83.35
3rd year	40%	154.00	99.79
4th year	45%	162.00	118.10
5th year	50%	170.00	137.70



<b>COMPUTATION OF SALE</b>					
<b>Particulars</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
Op Stock	-	1,620	1,890	2,160	2,430
Production	48,600	56,700	64,800	72,900	81,000
Less : Closing Stock	1,620	1,890	2,160	2,430	2,700
<b>Net Sale</b>	<b>46,980</b>	<b>56,430</b>	<b>64,530</b>	<b>72,630</b>	<b>80,730</b>
Sale price per bottle	225.00	236.00	248.00	260.00	273.00
<b>Sales (in Lacs)</b>	<b>105.71</b>	<b>133.17</b>	<b>160.03</b>	<b>188.84</b>	<b>220.39</b>

### 4.3. PREMISES/INFRASTRUCTURE

The approximate total area required for complete factory setup is 2000-2500 Sq. ft. for smooth production including storage area. It is expected that the premises will be on rental.

#### 4.4. MACHINERY & EQUIPMENTS

Machine Name	Description	Machine Image.
Vibrating separator	<p>A vibrating separator is a multifunctional machinery used for pre-treatment and cleaning. Adopting high frequency and small vibrating amplitude motor, it can efficiently separate and clean impurities of different sizes. The outlet is equipped with a circulation air separator to remove dust and light impurities.</p>	
Steam distillation unit	<p>Distillation unit is made up of stainless steel. It is specially designed so that the steam distillation as well as solvent extraction can be done in the same unit at atmosphere. There are two layers inside layer for heating outside layer for insulation. It is equipped with filter screen for effective filtering of impurities. The condenser is highly efficient and built in the system.</p>	
Packaging machine	<p>Oil filling machine consists of filling nozzle, when filling sealing ring is opened and when filling is completed the sealing is blocked up. Consist of cap pressing machine, bottle caps automatically go into bottle cap slot by adopting cap pulling device. The machine</p>	

	<p>consists of conveyor to convey filled and empty bottles. The machine can be used for glass bottle as well as plastic bottle.</p>	
<p>Tray dryer</p>	<p>Industrial tray drying machine / Hot air-drying machine is made with stainless steel and equipped with plastic, stainless steel and customized drying racks. The drying method can be co current or counter current air flow. The temperature is controlled and speed of the conveyor can be adjusted according to the drying time required. The heating source is electricity to generate hot air.</p>	
<p>Material handling and other Equipment's</p>	<p>These Equipment's are used for material handling. Other equipment's like water pumps, silos, bucket elevator, belt conveyors, unloading bin, etc are also used.</p>	

<b>Machine</b>	<b>Unit</b>	<b>Rate</b>	<b>Price</b>
Vibrating separator	1	175000	175000
Steam distillation unit	1	450000	450000
Packaging machine	1	300000	300000
Tray dryer	1	245000	245000
Material handling and other equipment's (Trolley, weighing machine, storage bins, etc.)	-	350000	350000

**Note:** Total Machinery cost shall be Rs 15.20 lakh including equipment's but excluding GST and Transportation Cost.

#### **4.5. MISCELLANEOUS FIXED ASSETS**

- Water Supply Arrangements
- Furniture & Fixtures
- Computers & Printers

**4.6. TOTAL COST OF PROJECT**

<b>COST OF PROJECT</b>	
	(in Lacs)
<b>PARTICULARS</b>	<b>Amount</b>
Land & Building	Owned/Rented
Plant & Machinery	15.20
Miscellaneous Assets	2.50
Working capital	8.43
<b>Total</b>	<b>26.13</b>

**4.7. MEANS OF FINANCE**

<b>MEANS OF FINANCE</b>	
<b>PARTICULARS</b>	<b>AMOUNT</b>
Own Contribution (min 10%)	2.60
Subsidy @35%(Max. Rs 10 Lac)	6.20
Term Loan @ 55%	9.74
Working Capital (Bank Finance)	7.59
<b>Total</b>	<b>26.13</b>

**4.8. TERM LOAN:** Term loan of Rs. 9.74 Lakh is required for project cost of Rs. 26.13 Lakh

**4.9. TERM LOAN REPAYMENT& INTEREST SCHEDULE**

<b>REPAYMENT SCHEDULE OF TERM LOAN</b>							
					Interest	11.00%	
<b>Year</b>	<b>Particulars</b>	<b>Amount</b>	<b>Addition</b>	<b>Total</b>	<b>Interest</b>	<b>Repayment</b>	<b>Closing Balance</b>
<b>1st</b>	Opening Balance						
	1st month	-	9.74	9.74	-	-	9.74
	2nd month	9.74	-	9.74	0.09	-	9.74
	3rd month	9.74	-	9.74	0.09	-	9.74
	4th month	9.74	-	9.74	0.09	-	9.74
	5th month	9.74	-	9.74	0.09	-	9.74
	6th month	9.74	-	9.74	0.09	-	9.74
	7th month	9.74	-	9.74	0.09	0.18	9.55
	8th month	9.55	-	9.55	0.09	0.18	9.37
	9th month	9.37	-	9.37	0.09	0.18	9.19
	10th month	9.19	-	9.19	0.08	0.18	9.01
	11th month	9.01	-	9.01	0.08	0.18	8.83
	12th month	8.83	-	8.83	0.08	0.18	8.65
					0.96	1.08	
<b>2nd</b>	Opening Balance						
	1st month	8.65	-	8.65	0.08	0.18	8.47
	2nd month	8.47	-	8.47	0.08	0.18	8.29



PM FME- Detailed Project Report of Bay Leaf Essential Oil Unit

3rd month	8.29	-	8.29	0.08	0.18	8.11
4th month	8.11	-	8.11	0.07	0.18	7.93
5th month	7.93	-	7.93	0.07	0.18	7.75
6th month	7.75	-	7.75	0.07	0.18	7.57
7th month	7.57	-	7.57	0.07	0.18	7.39
8th month	7.39	-	7.39	0.07	0.18	7.21
9th month	7.21	-	7.21	0.07	0.18	7.03
10th month	7.03	-	7.03	0.06	0.18	6.85
11th month	6.85	-	6.85	0.06	0.18	6.67
12th month	6.67	-	6.67	0.06	0.18	6.49
				<b>0.84</b>	<b>2.16</b>	
<b>3rd</b>	<b>Opening Balance</b>					
1st month	6.49	-	6.49	0.06	0.18	6.31
2nd month	6.31	-	6.31	0.06	0.18	6.13
3rd month	6.13	-	6.13	0.06	0.18	5.95
4th month	5.95	-	5.95	0.05	0.18	5.77
5th month	5.77	-	5.77	0.05	0.18	5.59
6th month	5.59	-	5.59	0.05	0.18	5.41
7th month	5.41	-	5.41	0.05	0.18	5.23
8th month	5.23	-	5.23	0.05	0.18	5.05
9th month	5.05	-	5.05	0.05	0.18	4.87
10th month	4.87	-	4.87	0.04	0.18	4.69
11th month	4.69	-	4.69	0.04	0.18	4.51
12th month	4.51	-	4.51	0.04	0.18	4.33

PM FME- Detailed Project Report of Bay Leaf Essential Oil Unit

				<b>0.60</b>	<b>2.16</b>	
<b>4th</b>	Opening Balance					
	1st month	4.33	-	4.33	0.04	4.15
	2nd month	4.15	-	4.15	0.04	3.97
	3rd month	3.97	-	3.97	0.04	3.79
	4th month	3.79	-	3.79	0.03	3.61
	5th month	3.61	-	3.61	0.03	3.43
	6th month	3.43	-	3.43	0.03	3.25
	7th month	3.25	-	3.25	0.03	3.06
	8th month	3.06	-	3.06	0.03	2.88
	9th month	2.88	-	2.88	0.03	2.70
	10th month	2.70	-	2.70	0.02	2.52
	11th month	2.52	-	2.52	0.02	2.34
	12th month	2.34	-	2.34	0.02	2.16
				<b>0.37</b>	<b>2.16</b>	
<b>5th</b>	Opening Balance					
	1st month	2.16	-	2.16	0.02	1.98
	2nd month	1.98	-	1.98	0.02	1.80
	3rd month	1.80	-	1.80	0.02	1.62
	4th month	1.62	-	1.62	0.01	1.44
	5th month	1.44	-	1.44	0.01	1.26
	6th month	1.26	-	1.26	0.01	1.08
	7th month	1.08	-	1.08	0.01	0.90
	8th month	0.90	-	0.90	0.01	0.72
	9th month	0.72	-		0.01	0.54

			0.72			
10th month	0.54	-	0.54	0.00	0.18	0.36
11th month	0.36	-	0.36	0.00	0.18	0.18
12th month	0.18	-	0.18	0.00	0.18	-
				<b>0.13</b>	<b>2.16</b>	
DOOR TO DOOR MORATORIUM PERIOD	60	MONTHS				
REPAYMENT PERIOD	6	MONTHS				
	54	MONTHS				

#### 4.10. WORKING CAPITAL CALCULATIONS

<b>COMPUTATION OF CLOSING STOCK &amp; WORKING CAPITAL</b>					(in Lacs)
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
<b><u>Finished Goods</u></b>					
	3.14	3.80	4.49	5.25	6.06
<b><u>Raw Material</u></b>					
	2.27	2.78	3.33	3.94	4.59
<b>Closing Stock</b>	<b>5.41</b>	<b>6.57</b>	<b>7.81</b>	<b>9.19</b>	<b>10.65</b>

<b>COMPUTATION OF WORKING CAPITAL REQUIREMENT</b>					
<b>TRADITIONAL METHOD</b>					(in Lacs)
<b>Particulars</b>	<b>Amount</b>	<b>Own Margin</b>		<b>Bank Finance</b>	
Finished Goods & Raw Material	5.41				
Less : Creditors	2.27				
<b>Paid stock</b>	<b>3.14</b>	<b>10%</b>	<b>0.31</b>	<b>90%</b>	<b>2.83</b>
<b>Sundry Debtors</b>	<b>5.29</b>	<b>10%</b>	<b>0.53</b>	<b>90%</b>	<b>4.76</b>
	<b>8.43</b>		<b>0.84</b>		<b>7.59</b>
<b>MPBF</b>					<b>7.59</b>
<b>WORKING CAPITAL LIMIT DEMAND ( from Bank)</b>					<b>7.59</b>
<b>Working Capital Margin</b>					<b>0.84</b>

**4.11. SALARY & WAGES**

<b><u>BREAK UP OF LABOUR CHARGES</u></b>			
<b>Particulars</b>	<b>Wages</b>	<b>No of</b>	<b>Total</b>
	<b>Rs. per Month</b>	<b>Employees</b>	<b>Salary</b>
Plant Operator	15,000	2	30,000
Supervisor	18,000	1	18,000
Skilled (in thousand rupees)	12,000	3	36,000
Unskilled (in thousand rupees)	8,500	4	34,000
<b>Total salary per month</b>			<b>1,18,000</b>
<b>Total annual labour charges</b>	<b>(in lacs)</b>		<b>14.16</b>

<b><u>BREAK UP OF STAFF SALARY CHARGES</u></b>			
<b>Particulars</b>	<b>Salary</b>	<b>No of</b>	<b>Total</b>
	<b>Rs. per Month</b>	<b>Employees</b>	<b>Salary</b>
Administrative Staff	7,000	2	14,000
Manager	20,000	1	20,000
Accountant	18,000	1	18,000
<b>Total salary per month</b>			<b>52,000</b>
<b>Total annual Staff charges</b>	<b>(in lacs)</b>		<b>6.24</b>

## 4.12 POWER REQUIREMENT

<b>Utility Charges (per month)</b>		
<b>Particulars</b>	<b>value</b>	<b>Description</b>
Power connection required	20	KWH
consumption per day	160	units
Consumption per month	4,000	units
Rate per Unit	10	Rs.
power Bill per month	40,000	Rs.

## 4.13. DEPRECIATION CALCULATION

<b>COMPUTATION OF DEPRECIATION</b>			(in Lacs)
<b>Description</b>	<b>Plant &amp; Machinery</b>	<b>Miss. Assets</b>	<b>TOTAL</b>
Rate of Depreciation	<b>15.00%</b>	<b>10.00%</b>	
<b>Opening Balance</b>	-	-	-
Addition	15.20	2.50	17.70
Total	15.20	2.50	17.70
Less : Depreciation	2.28	0.25	2.53
<b>WDV at end of Year</b>	<b>12.92</b>	<b>2.25</b>	<b>15.17</b>
Additions During The Year	-	-	-
Total	12.92	2.25	15.17
Less : Depreciation	1.94	0.23	2.16
<b>WDV at end of Year</b>	<b>10.98</b>	<b>2.03</b>	<b>13.01</b>
Additions During The Year	-	-	-
Total	10.98	2.03	13.01
Less : Depreciation	1.65	0.20	1.85
<b>WDV at end of Year</b>	<b>9.33</b>	<b>1.82</b>	<b>11.16</b>
Additions During The Year	-	-	-
Total	9.33	1.82	11.16
Less : Depreciation	1.40	0.18	1.58
<b>WDV at end of Year</b>	<b>7.93</b>	<b>1.64</b>	<b>9.57</b>
Additions During The Year	-	-	-
Total	7.93	1.64	9.57
Less : Depreciation	1.19	0.16	1.35
<b>WDV at end of Year</b>	<b>6.74</b>	<b>1.48</b>	<b>8.22</b>

**4.14. REPAIR & MAINTENANCE:** Repair & Maintenance is 2.5% of Gross Sale.

**4.15. PROJECTIONS OF PROFITABILITY ANALYSIS:**

<b><u>PROJECTED PROFITABILITY STATEMENT</u></b>					<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
Capacity Utilisation %	<b>30%</b>	<b>35%</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>
<b><u>SALES</u></b>					
<b>Gross Sale</b>					
Bay leaf essential oil	105.71	133.17	160.03	188.84	220.39
<b>Total</b>	<b>105.71</b>	<b>133.17</b>	<b>160.03</b>	<b>188.84</b>	<b>220.39</b>
<b><u>COST OF SALES</u></b>					
Raw Material Consumed	68.04	83.35	99.79	118.10	137.70
Electricity Expenses	4.80	5.52	6.35	7.30	8.03
Depreciation	2.53	2.16	1.85	1.58	1.35
Wages & labour	14.16	16.85	19.38	22.09	24.74
Repair & maintenance	2.64	3.33	4.00	4.72	5.51
Packaging	2.11	2.66	3.20	3.78	4.41
<b>Cost of Production</b>	<b>94.29</b>	<b>113.88</b>	<b>134.57</b>	<b>157.57</b>	<b>181.74</b>
<b>Add: Opening Stock /WIP</b>	<b>-</b>	<b>3.14</b>	<b>3.80</b>	<b>4.49</b>	<b>5.25</b>
<b>Less: Closing Stock /WIP</b>	<b>3.14</b>	<b>3.80</b>	<b>4.49</b>	<b>5.25</b>	<b>6.06</b>
Cost of Sales	91.14	113.22	133.88	156.80	180.94
<b>GROSS PROFIT</b>	<b>14.56</b>	<b>19.95</b>	<b>26.16</b>	<b>32.04</b>	<b>39.46</b>
	<b>13.78%</b>	<b>14.98%</b>	<b>16.34%</b>	<b>16.97%</b>	<b>17.90%</b>
Salary to Staff	6.24	7.49	8.75	10.07	11.27
Interest on Term Loan	0.96	0.84	0.60	0.37	0.13
Interest on working Capital	0.83	0.83	0.83	0.83	0.83
Rent	3.60	3.96	4.36	4.79	5.27
selling & adm exp	1.53	2.40	2.80	3.02	4.41
<b>TOTAL</b>	<b>13.16</b>	<b>15.52</b>	<b>17.35</b>	<b>19.08</b>	<b>21.92</b>
<b>NET PROFIT</b>	<b>1.40</b>	<b>4.43</b>	<b>8.81</b>	<b>12.96</b>	<b>17.54</b>
	<b>1.32%</b>	<b>3.33%</b>	<b>5.50%</b>	<b>6.86%</b>	<b>7.96%</b>
Taxation	-	-	0.92	2.05	3.48
<b>PROFIT (After Tax)</b>	<b>1.40</b>	<b>4.43</b>	<b>7.89</b>	<b>10.91</b>	<b>14.06</b>

#### 4.16. BREAK EVEN POINT ANALYSIS

<b>BREAK EVEN POINT ANALYSIS</b>					
<b>Year</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>
<b>Net Sales &amp; Other Income</b>	105.71	133.17	160.03	188.84	220.39
Less : Op. WIP Goods	-	3.14	3.80	4.49	5.25
Add : Cl. WIP Goods	3.14	3.80	4.49	5.25	6.06
<b>Total Sales</b>	<b>108.85</b>	<b>133.83</b>	<b>160.72</b>	<b>189.60</b>	<b>221.20</b>
<b>Variable &amp; Semi Variable Exp.</b>					
Raw Material Consumed	68.04	83.35	99.79	118.10	137.70
Electricity Exp/Coal Consumption at 85%	4.08	4.69	5.40	6.21	6.83
Wages & Salary at 60%	12.24	14.60	16.88	19.29	21.61
Selling & administrative Expenses 80%	1.23	1.92	2.24	2.42	3.53
Interest on working Capital	0.834386	0.834386	0.834386	0.834386	0.834386
Repair & maintenance	2.64	3.33	4.00	4.72	5.51
Packaging	2.11	2.66	3.20	3.78	4.41
<b>Total Variable &amp; Semi Variable Exp</b>	<b>91.18</b>	<b>111.39</b>	<b>132.34</b>	<b>155.35</b>	<b>180.41</b>
<b>Contribution</b>	<b>17.67</b>	<b>22.44</b>	<b>28.38</b>	<b>34.26</b>	<b>40.79</b>
<b>Fixed &amp; Semi Fixed Expenses</b>					
Electricity Exp/Coal Consumption at 15%	0.72	0.83	0.95	1.10	1.20
Wages & Salary at 40%	8.16	9.74	11.25	12.86	14.41
Interest on Term Loan	0.96	0.84	0.60	0.37	0.13
Depreciation	2.53	2.16	1.85	1.58	1.35
Selling & administrative Expenses 20%	0.31	0.48	0.56	0.60	0.88
Rent	3.60	3.96	4.36	4.79	5.27
<b>Total Fixed Expenses</b>	<b>16.27</b>	<b>18.01</b>	<b>19.57</b>	<b>21.30</b>	<b>23.25</b>
<b>Capacity Utilization</b>	<b>30%</b>	<b>35%</b>	<b>40%</b>	<b>45%</b>	<b>50%</b>
<b>OPERATING PROFIT</b>	<b>1.40</b>	<b>4.43</b>	<b>8.81</b>	<b>12.96</b>	<b>17.54</b>
<b>BREAK EVEN POINT</b>	<b>28%</b>	<b>28%</b>	<b>28%</b>	<b>28%</b>	<b>28%</b>
<b>BREAK EVEN SALES</b>	<b>100.24</b>	<b>107.41</b>	<b>110.85</b>	<b>117.90</b>	<b>126.07</b>

**4.17. PROJECTED BALANCE SHEET**

<b>PROJECTED BALANCE SHEET</b>					<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
<b><u>Liabilities</u></b>					
Capital					
opening balance		8.20	10.23	12.62	15.52
Add:- Own Capital	2.60				
Add:- Retained Profit	1.40	4.43	7.89	10.91	14.06
Less:- Drawings	2.00	2.40	5.50	8.00	10.50
Subsidy/grant	6.20				
Closing Balance	8.20	10.23	12.62	15.52	19.09
Term Loan	8.65	6.49	4.33	2.16	-
Working Capital Limit	7.59	7.59	7.59	7.59	7.59
Sundry Creditors	2.27	2.78	3.33	3.94	4.59
Provisions & Other Liab	0.40	0.50	0.60	0.72	0.86
<b>TOTAL :</b>	<b>27.10</b>	<b>27.58</b>	<b>28.45</b>	<b>29.93</b>	<b>32.13</b>
<b><u>Assets</u></b>					
<b>Fixed Assets ( Gross)</b>	17.70	17.70	17.70	17.70	17.70
Gross Dep.	2.53	4.69	6.54	8.13	9.48
<b>Net Fixed Assets</b>	<b>15.17</b>	<b>13.01</b>	<b>11.16</b>	<b>9.57</b>	<b>8.22</b>
<b>Current Assets</b>					
Sundry Debtors	5.29	6.66	8.00	9.44	11.02
Stock in Hand	5.41	6.57	7.81	9.19	10.65
Cash and Bank	1.24	1.34	1.48	1.72	2.24
<b>TOTAL :</b>	<b>27.10</b>	<b>27.58</b>	<b>28.45</b>	<b>29.93</b>	<b>32.13</b>



**4.18. CASH FLOW STATEMENT**

<b><u>PROJECTED CASH FLOW STATEMENT</u></b>					<b>(in Lacs)</b>
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
<b><u>SOURCES OF FUND</u></b>					
Own Margin	2.60				
Net Profit	1.40	4.43	8.81	12.96	17.54
Depriciation & Exp. W/off	2.53	2.16	1.85	1.58	1.35
Increase in Cash Credit	7.59	-	-	-	-
Increase In Term Loan	9.74	-	-	-	-
Increase in Creditors	2.27	0.51	0.55	0.61	0.65
Increase in Provisions & Oth lib	0.40	0.10	0.10	0.12	0.14
Sunsidy/grant	6.20				
<b>TOTAL :</b>	<b>32.71</b>	<b>7.20</b>	<b>11.31</b>	<b>15.27</b>	<b>19.69</b>
<b><u>APPLICATION OF FUND</u></b>					
Increase in Fixed Assets	17.70				
Increase in Stock	5.41	1.16	1.24	1.38	1.46
Increase in Debtors	5.29	1.37	1.34	1.44	1.58
Repayment of Term Loan	1.08	2.16	2.16	2.16	2.16
Drawings	2.00	2.40	5.50	8.00	10.50
Taxation	-	-	0.92	2.05	3.48
<b>TOTAL :</b>	<b>31.48</b>	<b>7.10</b>	<b>11.16</b>	<b>15.03</b>	<b>19.18</b>
Opening Cash & Bank Balance	-	1.24	1.34	1.48	1.72
Add : Surplus	1.24	0.10	0.14	0.24	0.51
Closing Cash & Bank Balance	<b>1.24</b>	<b>1.34</b>	<b>1.48</b>	<b>1.72</b>	<b>2.24</b>

**4.19. DEBT SERVICE COVERAGE RATIO**

<b><u>CALCULATION OF D.S.C.R</u></b>					
<b>PARTICULARS</b>	<b>1st year</b>	<b>2nd year</b>	<b>3rd year</b>	<b>4th year</b>	<b>5th year</b>
CASH ACCRUALS	3.93	6.59	9.74	12.49	15.42
Interest on Term Loan	0.96	0.84	0.60	0.37	0.13
<b>Total</b>	<b>4.88</b>	<b>7.44</b>	<b>10.34</b>	<b>12.86</b>	<b>15.55</b>
<b><u>REPAYMENT</u></b>					
Instalment of Term Loan	1.08	2.16	2.16	2.16	2.16
Interest on Term Loan	0.96	0.84	0.60	0.37	0.13
<b>Total</b>	<b>2.04</b>	<b>3.01</b>	<b>2.77</b>	<b>2.53</b>	<b>2.29</b>
<b>DEBT SERVICE COVERAGE RATIO</b>	<b>2.40</b>	<b>2.47</b>	<b>3.74</b>	<b>5.08</b>	<b>6.78</b>
<b>AVERAGE D.S.C.R.</b>	<b>4.04</b>				