

# **MODEL DETAILED PROJECT REPORT**

## **ON**

### **PATCHOULI OIL**

#### **(Essential oil for Perfume making)**

Submitted to:



Submitted by:



Project Implementation Unit  
Grant Thornton Bharat LLP  
21<sup>st</sup> Floor, DLF Square  
Jacaranda marg, DLF Phase II  
Gurugram-122002  
Haryana, India

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## 1. Introduction

Patchouli essential oil, derived from the leaves of the Pogostemon cablin plant, is a highly valued product in the global market due to its versatile applications and numerous benefits. Known for its rich, earthy, and musky aroma, patchouli oil is extensively used in the perfume industry as a base note, providing long-lasting fragrance. Additionally, it holds significant therapeutic properties, making it a popular choice in aromatherapy for alleviating stress, anxiety, and depression. The oil's anti-inflammatory and antiseptic qualities also make it beneficial for skincare, aiding in the treatment of acne, eczema, and dry skin. Furthermore, patchouli oil serves as an effective natural insect repellent and is utilized in various household products. The production of high-quality patchouli oil involves meticulous cultivation, harvesting, and steam distillation processes, ensuring its purity and potency. Establishing a patchouli essential oil production unit in Northeast India leverages the region's favorable climatic conditions and rich biodiversity, promising a profitable and sustainable business venture.

### a. About the project

The project "Patchouli Essential Oil Production Unit in Assam" aims to establish a state-of-the-art facility dedicated to the extraction and processing of high-quality patchouli essential oil. Leveraging Assam's favorable climatic conditions and rich biodiversity, this project will focus on cultivating Pogostemon cablin plants, known for their superior oil yield and aromatic properties. The production unit will employ advanced steam distillation techniques to ensure the purity and potency of the oil, catering to the growing demand in the aromatherapy, perfumery, and skincare industries. By integrating sustainable agricultural practices and modern technology, the project not only promises economic benefits for local farmers and entrepreneurs but also contributes to the region's socio-economic development. The establishment of this unit will position Assam as a key player in the global essential oil market, promoting the state's natural resources and fostering a sustainable business ecosystem.

### b. Indian Scenario

In India, the scenario for patchouli oil production is evolving rapidly, driven by increasing domestic and international demand. India currently imports a significant portion of its patchouli oil, primarily from Indonesia, to meet the annual demand of approximately 220 metric tons. This presents a substantial opportunity for local production units to bridge the supply gap. The favorable climatic conditions in regions like Assam make it an ideal location for cultivating Pogostemon cablin, the plant from which patchouli oil is derived. The Indian government supports the cultivation of medicinal and aromatic plants through various schemes and subsidies, encouraging farmers to diversify their crops and adopt sustainable agricultural practices. By leveraging advanced distillation technologies and improving agricultural practices, India can enhance the yield and quality of patchouli oil, reducing dependency on imports and boosting the local economy. This shift not only promises economic benefits for farmers and entrepreneurs but also positions India as a significant player in the global essential oil market.

### c. State Profile

Assam, with its favorable climatic conditions and rich biodiversity, is emerging as a significant hub for patchouli oil production in India. The state's tropical and subtropical climate is ideal for cultivating Pogostemon cablin, the plant from which patchouli oil is derived. Assam's agricultural landscape, traditionally dominated by tea and rice, is diversifying with the introduction of high-value crops like patchouli. This shift is supported by various government initiatives aimed at promoting medicinal and aromatic plant cultivation. The establishment of patchouli oil production units in Assam not only promises economic benefits for local farmers and entrepreneurs but also contributes to the state's socio-economic development. By leveraging advanced steam distillation techniques and sustainable agricultural practices, Assam is well-positioned to meet the growing domestic and international demand for high-quality patchouli oil, reducing dependency on imports and enhancing the state's profile in the global essential oil market.

### d. Sector Overview

The patchouli essential oil sector in Assam is poised for significant growth, driven by the increasing global demand for natural and organic products. Patchouli oil, known for its distinctive earthy and musky aroma, is extensively

used in the fragrance, cosmetics, and aromatherapy industries. Assam's favorable climatic conditions and rich biodiversity make it an ideal location for cultivating Pogostemon cablin, the plant from which patchouli oil is derived. The state's agricultural landscape, traditionally dominated by tea and rice, is diversifying with the introduction of high-value crops like patchouli, supported by various government initiatives aimed at promoting medicinal and aromatic plant cultivation.

### Market Potential

The global patchouli oil market is experiencing notable growth, with an estimated compound annual growth rate (CAGR) of around 3% to 3.8% from 2024 to 2030<sup>12</sup>. The market is driven by the rising consumer preference for natural and organic ingredients, the growing popularity of aromatherapy, and the expanding market for niche fragrance products. In India, the demand for patchouli oil is significant, with an annual requirement of approximately 220 metric tons, valued at around ₹33 crores<sup>3</sup>. However, domestic production is currently insufficient to meet this demand, leading to substantial imports. This gap presents a lucrative opportunity for local production units in Assam to bridge the supply gap and reduce dependency on imports.

### Technological Advancements

Technological advancements play a crucial role in enhancing the efficiency and quality of patchouli oil production. Key advancements include:

- **Advanced Steam Distillation Techniques:** Modern steam distillation units are designed to maximize oil yield and purity while minimizing energy consumption. These units ensure that the essential oils retain their therapeutic properties and aromatic qualities.
- **Sustainable Cultivation Practices:** The adoption of sustainable agricultural practices, such as organic farming and integrated pest management, helps in maintaining soil health and reducing environmental impact. These practices also enhance the quality of the raw material, leading to superior oil quality.
- **Automation and Mechanization:** The use of automated harvesting and processing machinery reduces labor costs and increases efficiency. Mechanized cleaning and sorting machines ensure that only high-quality leaves are used for oil extraction.
- **Quality Control and Testing:** Advanced analytical techniques, such as gas chromatography and mass spectrometry, are used to ensure the purity and consistency of the essential oils. These techniques help in detecting any adulteration and maintaining high standards of quality.
- **Packaging Innovations:** Innovations in packaging materials and techniques help in preserving the quality and extending the shelf life of essential oils. Eco-friendly and sustainable packaging options are also gaining popularity, aligning with consumer preferences for environmentally responsible products.

By leveraging these technological advancements, the patchouli oil production sector in Assam can enhance its competitiveness and meet the growing demand for high-quality essential oils both domestically and internationally.

### SWOT Analysis

#### Strengths

- **Favorable Climatic Conditions:** Assam's tropical and subtropical climate is ideal for cultivating Pogostemon cablin, ensuring high-quality raw material.
- **Rich Biodiversity:** The region's diverse flora supports sustainable agricultural practices and enhances the quality of patchouli oil.



- **Government Support:** Various government initiatives and subsidies promote the cultivation of medicinal and aromatic plants, providing financial and technical assistance to farmers.
- **Growing Market Demand:** Increasing global and domestic demand for natural and organic products boosts the market potential for patchouli oil.
- **Skilled Labor:** Availability of skilled labor familiar with agricultural practices and essential oil extraction techniques.

#### Weaknesses

- **High Initial Investment:** Setting up a production unit requires significant capital investment in machinery, infrastructure, and training.
- **Limited Awareness:** Lack of awareness among local farmers about the benefits and cultivation practices of patchouli can hinder adoption.
- **Supply Chain Challenges:** Inadequate infrastructure and logistics can affect the timely supply of raw materials and distribution of finished products.
- **Quality Control:** Ensuring consistent quality and purity of the oil can be challenging without advanced testing and quality control measures.

#### Opportunities

- **Import Substitution:** Increasing domestic production can reduce dependency on imports, saving foreign exchange and enhancing self-reliance.
- **Export Potential:** High-quality patchouli oil from Assam can cater to international markets, boosting export revenues.
- **Value Addition:** Developing value-added products like blended essential oils, perfumes, and skincare products can enhance profitability.
- **Sustainable Practices:** Adoption of organic farming and sustainable practices can attract environmentally conscious consumers and premium pricing.
- **Technological Advancements:** Leveraging modern distillation techniques and automation can improve efficiency and reduce production costs.

#### Threats

- **Market Competition:** Competition from established producers in countries like Indonesia can impact market share and pricing.
- **Climate Variability:** Changes in climate patterns can affect crop yield and quality, posing a risk to consistent production.
- **Pest and Disease Outbreaks:** Susceptibility to pests and diseases can affect crop health and yield, requiring effective management practices.
- **Regulatory Changes:** Changes in government policies and regulations related to agriculture and essential oil production can impact operations.
- **Economic Fluctuations:** Variations in market demand and economic conditions can affect pricing and profitability.

This SWOT analysis highlights the key factors influencing the patchouli oil production sector in Assam, providing insights into the strengths, weaknesses, opportunities, and threats associated with this venture.



## 2. Investor's Background

Details of all Investors in below format

Name	To be filled by the applicant
DOB	To be filled by the applicant
PAN	To be filled by the applicant
Address	To be filled by the applicant
Academic Qualification	To be filled by the applicant
Experience in business	To be filled by the applicant
Functional Responsibility in Unit	To be filled by the applicant
Name of associate concern (if any)	To be filled by the applicant
Nature of association (if any)	To be filled by the applicant
Net Worth	To be filled by the applicant

## 3. Company Profile

Name of the Unit	To be filled by the applicant
Constitution	To be filled by the applicant
PAN	To be filled by the applicant
Registered Office address	To be filled by the applicant
Activity	To be filled by the applicant
Loan details	To be filled by the applicant
Director	To be filled by the applicant
Unit Registration	To be filled by the applicant
Unit Location	To be filled by the applicant
Category of Project (Manufacturing/Service)	To be filled by the applicant
Zone	To be filled by the applicant
District	To be filled by the applicant
State	To be filled by the applicant

## 4. Details of product and its marketing potential

### Product Details

Patchouli essential oil is extracted from the leaves of the Pogostemon cablin plant through steam distillation. The oil is renowned for its rich, earthy, and musky aroma, which makes it a popular ingredient in the fragrance, cosmetics, and aromatherapy industries. The primary chemical constituents of patchouli oil include patchoulol,  $\alpha$ -patchoulene,  $\beta$ -

patchoulene, and  $\alpha$ -guaiene, which contribute to its therapeutic properties. Patchouli oil is known for its anti-inflammatory, antiseptic, and antidepressant effects, making it beneficial for skincare, stress relief, and overall wellness. It is commonly used in perfumes, skincare products, massage oils, and household cleaning solutions.

### Market Potential

The global patchouli oil market is experiencing steady growth, driven by increasing consumer preference for natural and organic products. The market was valued at approximately \$43.4 million in 2022 and is projected to reach \$64.4 million by 2032, growing at a compound annual growth rate (CAGR) of 4.1%<sup>1</sup>. This growth is fueled by the rising popularity of aromatherapy, the expanding wellness and spa industries, and the demand for natural ingredients in personal care products.

In India, the demand for patchouli oil is significant, with an annual requirement of around 220 metric tons, valued at approximately ₹33 crores<sup>2</sup>. However, domestic production currently falls short, leading to substantial imports, primarily from Indonesia. This supply gap presents a lucrative opportunity for local production units in regions like Assam, which offer favorable climatic conditions for patchouli cultivation.

Technological advancements in steam distillation and sustainable agricultural practices can enhance the efficiency and quality of patchouli oil production. By leveraging these technologies, producers can meet the growing demand for high-quality essential oils both domestically and internationally. Additionally, government support through various schemes and subsidies for the cultivation of medicinal and aromatic plants further boosts the market potential for patchouli oil production in India<sup>3</sup>.

Overall, the market potential for patchouli essential oil is robust, with opportunities for growth in both domestic and international markets. Establishing a production unit in Assam can capitalize on these opportunities, contributing to the region's economic development and positioning India as a key player in the global essential oil market.

### Marketing Plan

#### 1. Market Research and Analysis

- Objective: Understand the market dynamics, customer preferences, and competitive landscape.
- Market Segmentation: Identify target markets such as aromatherapy, perfumery, cosmetics, and natural health products.
- Customer Analysis: Conduct surveys and focus groups to understand customer preferences and demand for natural and organic products.
- Competitive Analysis: Analyze competitors in both domestic and international markets, focusing on their strengths, weaknesses, and market strategies.

#### 2. Product Positioning

- Objective: Establish a unique value proposition for patchouli essential oil from Assam.
- Quality Assurance: Emphasize the purity, therapeutic properties, and sustainable production methods of the oil.
- Branding: Develop a strong brand identity that highlights the natural and organic origins of the product, leveraging Assam's rich biodiversity.
- Certifications: Obtain organic and fair-trade certifications to enhance credibility and appeal to environmentally conscious consumers.

#### 3. Pricing Strategy

- Objective: Set competitive and profitable pricing.



- **Cost Analysis:** Calculate production costs, including raw materials, labor, energy, and packaging.
- **Competitive Pricing:** Set prices based on market rates, ensuring competitiveness while maintaining profitability.
- **Premium Pricing:** For high-quality, certified organic products, consider premium pricing to target niche markets willing to pay more for superior quality.

#### 4. Distribution Channels

- **Objective:** Ensure efficient and widespread distribution of the product.
- **Direct Sales:** Establish an online store to sell directly to consumers, offering convenience and direct engagement.
- **Retail Partnerships:** Partner with health stores, spas, and cosmetic retailers to reach a broader audience.
- **Export Markets:** Identify and establish relationships with international distributors and retailers to tap into global markets.

#### 5. Promotion and Advertising

- **Objective:** Increase brand awareness and drive sales.
- **Digital Marketing:** Utilize social media platforms, SEO, and content marketing to reach and engage with potential customers.
- **Influencer Collaborations:** Partner with influencers in the wellness and beauty sectors to promote the product.
- **Trade Shows and Expos:** Participate in industry events to showcase the product and network with potential buyers and distributors.
- **Public Relations:** Develop press releases and media kits to gain coverage in health, beauty, and lifestyle publications.

#### 6. Customer Relationship Management

- **Objective:** Build and maintain strong relationships with customers.
- **Customer Feedback:** Implement feedback mechanisms to gather customer insights and improve product offerings.
- **Loyalty Programs:** Introduce loyalty programs and special offers to retain customers and encourage repeat purchases.
- **Customer Support:** Provide excellent customer service to address inquiries and resolve issues promptly.

#### 7. Monitoring and Evaluation

- **Objective:** Continuously assess the effectiveness of marketing strategies.
- **Performance Metrics:** Track key performance indicators (KPIs) such as sales volume, market share, and customer satisfaction.
- **Market Trends:** Stay updated on market trends and adjust strategies accordingly.
- **Continuous Improvement:** Regularly review and refine marketing strategies based on performance data and market feedback.

By implementing this comprehensive marketing plan, the patchouli essential oil production unit in Assam can effectively penetrate the market, build a strong brand presence, and achieve sustainable growth.

#### 5. Details of Required Consumables with quantity

Supplier	Consumable	Quantity	Year	Cost
To be filled by the applicant	Storage	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Administrative Consumables	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Stationary items	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Monitoring/Internet/Research facilities	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Lights & fans/exhausts	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Sewage treatment	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Machinery auxiliaries & maintenance	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Waste disposals	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant
	Any other	To be filled by the applicant	To be filled by the applicant	To be filled by the applicant

#### 6. Proposed location and Site Plan

Sl. No.	Particulars	Details
1	Land Area	To be filled by applicant
2	Status of Legal title & Possession	To be filled by applicant
3	if leased, Period of lease	To be filled by applicant
4	Coordinates of location	To be filled by applicant
5	Details of CLU	To be filled by applicant
6	Connectivity to roads	To be filled by applicant
	i) State Highway (in Km.)	
	ii) National Highway (in Km.)	
7	Availability of Water	To be filled by applicant
8	Availability of Power	To be filled by applicant

## Also to include details of Layout plan & documents as per guidelines.

**a. Electrical Power**

Electricity (30 KW power required for 300 Days with 2 Shift i.e. Effective Hr. 016 hr. Present rate- Rs. 7.00/Unit

**i. Construction Phase**

KW	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

**ii. Steady Phase**

KW	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

**iii. Peak Phase**

KW	Quarter of the Year
To be filled by the applicant	To be filled by the applicant

**b. Water Requirement (Administrative + Machinery plant + Waste management)**

**i. Construction Phase**

Quantity	Quarter of the Year
In Liter	To be filled by the applicant

**ii. Steady Phase**

Quantity	Quarter of the Year
In Liter	To be filled by the applicant

**iii. Peak Phase**

Quantity	Quarter of the Year
In Liter	To be filled by the applicant

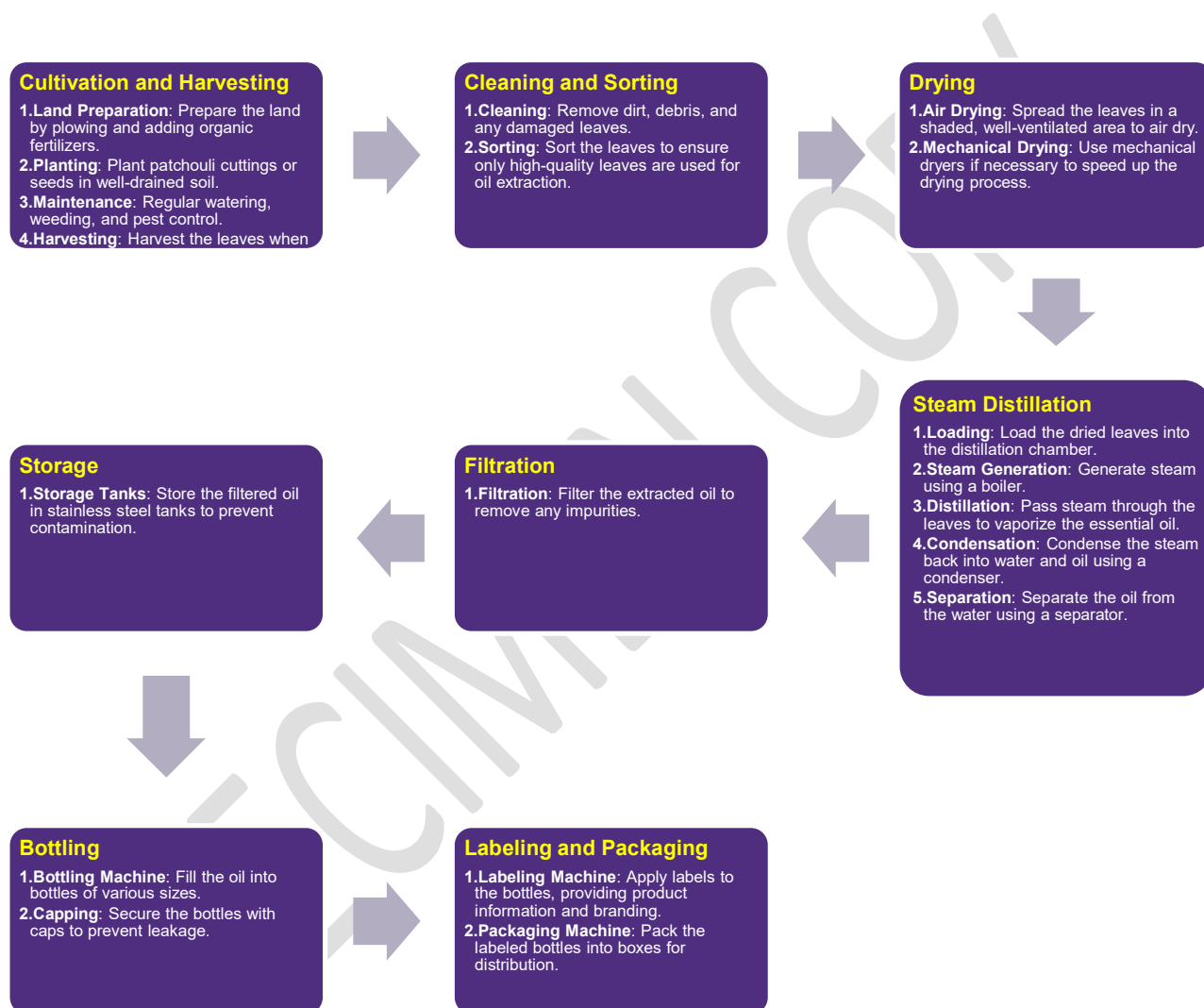
**c. Transportation System**

**d. Local Infrastructure**

**e. Raw material procurement for daily production**

## 7. Production Process Flow

Product development stages to be defined with details of input required at each stage of service setup and output generated after each stage.



## 8. Cost of the Project

Particulars	Amount (Rs. In Lacs)
Land and Site Development	20,00,000.00
Civil Construction	50,00,000.00
Plant & Machinery	2,00,60,000.00
Electrical Installation	5,00,000.00
Preliminary and Preoperative Expenses	20,00,000.00
Miscellaneous Fixed Assets	5,00,000.00
Margin for Working Capital	10,00,000.00
Contingency Fund	7,01,800.00
<b>Total Project Cost</b>	<b>3,17,61,800.00</b>

### a. Land details

The assumed required area for setting up the resort is Unit is approx. 5555.5 Sq. Ft. The rate for Land is- Rs. 1,80/Sq. ft.

So, the Cost of Land- Rs. 760.00 x 2631.5 = Rs. 20,00,000.00

### b. Building and civil works details

Applicant to include Detailed BOQ for Civil constructions.

Civil works estimate- Rs.50,00,000.00

### c. Plant and machinery details

Stage	Machinery	Function	Estimated Cost (INR)	Taxes (INR)	Total Cost (INR)
<b>Collection &amp; Cleaning</b>	Harvesting Machine	Harvests patchouli leaves	20,00,000	3,60,000	23,60,000
	Cleaning and Sorting Machine	Cleans and sorts the harvested leaves	10,00,000	1,80,000	11,80,000
<b>Extraction</b>	Steam Distillation Unit	Extracts oil from the leaves using steam	50,00,000	9,00,000	59,00,000
	Condenser	Condenses steam back into water	8,00,000	1,44,000	9,44,000
	Separator	Separates oil from water	5,00,000	90,000	5,90,000
<b>Filtration</b>	Filtration Unit	Filters impurities from the extracted oil	12,00,000	2,16,000	14,16,000

<b>Storage</b>	Storage Tanks (Stainless Steel)	Stores the filtered oil	15,00,000	2,70,000	17,70,000
<b>Bottling</b>	Bottling Machine	Bottles the oil into containers	25,00,000	4,50,000	29,50,000
<b>Labelling &amp; Packaging</b>	Labelling Machine	Labels the bottles	10,00,000	1,80,000	11,80,000
	Packaging Machine	Packages the labelled bottles	15,00,000	2,70,000	17,70,000

**d. Pre-operative expenses details**

Approx- Rs. 20,00,000.00



e. Working Capital details

i) Utilities (Per Annum)

S. No.	Particulars	Rs. per Kw	Total KW	in lakh	"@70% CU	"@75% CU	"@80% CU	"@85% CU	"@90% CU
1	Fixed (per Kw)	300	135	4.86	3.40	3.65	3.89	4.13	4.37
2	Variable cost (unit)	7.00	39	10.48	7.34	7.86	8.39	8.91	9.43
4	DG Set (65 KVA)	20	55	10.56	7.39	7.92	8.45	8.98	9.50
	<b>Total cost (in Lakhs)</b>				<b>14.73</b>	<b>15.78</b>	<b>16.83</b>	<b>17.89</b>	<b>18.94</b>

ii) Salary & Wages (Per Annum)

Manpower for Admin and services					
Name of Position	No	Unit	Rate in INR	Salary per year	Salary per year
Plant manager	1	Month	50,000.00	12	6,00,000.00
Accountant	1	Month	30,000.00	12	3,60,000.00
Data Operator	1	Month	20,000.00	12	2,40,000.00
Operator	2	Month	25,000.00	12	6,00,000.00
Security Guard	1	Month	10,000.00	12	1,20,000.00
Helper	4	Day	15,000.00	12	7,20,000.00
Cleaner	2	Month	10,000.00	12	2,40,000.00
<b>Total</b>					<b>2880000.00</b>
<b>In Lakh</b>					<b>28.80</b>



**Note:** Every year increment @ 5% has been considered towards financial calculation

**iii) Raw materials for consumables:**

Raw materials required for consumable

Assuming Rs. 6,02,59,000.00 per annum.

**iv) Selling & General Administration (Annum)**

Sl. No.	Designation	No.	/Month (Rs.)	Total/Annum (Rs.)
1	Digital Media Handler	1	10,000	1,20,000
1	Salesperson	2	20,000	4,80,000
<b>GRAND TOTAL</b>				<b>6,00,000/-</b>

**v) Advertisement & General Stores**

Sl. No.	Items	Cost (Rs.)
1	Advertisement per Annum	1,00,000/-
2	General Stores & Inventory	1,85,500/-
<b>Total</b>		<b>2,85,500/-</b>

**WORKING CAPITAL= I+II+III= 14,73,000 +28,80,000 + 6,02,59,000.00 /- = Rs.6,46,12,000 .00/-**





9. Proposed Means of Finance

Particulars	Amount (Rs. In Lakhs)
Promoter's Capital	117.618
Unsecured Loans	-
Term Loan form Bank/ Financial Institution	200.00
<b>Total</b>	<b>317.618</b>

**10. Implementation Schedule with time chart**

Activities	Starting Month	Ending Month
Arrangement of land	To be filled by applicant	To be filled by applicant
Single window clearance	To be filled by applicant	To be filled by applicant
Land development	To be filled by applicant	To be filled by applicant
Building and Civil Works	To be filled by applicant	To be filled by applicant
Order and delivery of P&M	To be filled by applicant	To be filled by applicant
Power arrangement	To be filled by applicant	To be filled by applicant
Manpower arrangement	To be filled by applicant	To be filled by applicant
Procurement of raw materials	To be filled by applicant	To be filled by applicant
Trial Operation	To be filled by applicant	To be filled by applicant
Commercial Operation	To be filled by applicant	To be filled by applicant



### 11. Projected Financial Analysis

a. Installed Production Capacity	MT per day
Patchouli Oil	0.12
Production Capacity Per Annum in MT	36

b. SCHEDULE OF PRODUCTION AND SALES					
RAW MATERIAL MIX AND CONSUMABLES REQUIRED					
Item	Quantity	Unit	Rate	Amount	
Raw Material					
Raw Flower & leaves	10	MT	20000	₹ 6,00,00,000.00	
End-to end consumable expenses (Rubber Rolls, Sieves, etc.)	600	MT	15	₹ 9,000.00	
PP Bags & bottles	10000	Nos.	25	₹ 2,50,000.00	
c. Cost of Raw Material Consumed/Annum				₹ 6,02,59,000.00	
Parameters	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year
Capacity Utilization	70%	75%	80%	85%	90%
Total production capacity per annum (in MT)	36	36	36	36	36
Production (In MT) as per Capacity Utilized	25.2	27	28.8	30.6	32.4
d. BREAK UP PRODUCTION AS PER UTILIZED CAPACITY					
ITEMS	1 <sup>st</sup> Year	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year
Capacity Utilization	70%	75%	80%	85%	90%



Processed oil	25.2	27	28.8	30.6	32.4
<b>TOTAL PRODUCTION</b>	<b>25.2</b>	<b>27</b>	<b>28.8</b>	<b>30.6</b>	<b>32.4</b>
<b>Sales Details</b>					
<b>Items</b>	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> Year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>5<sup>th</sup> Year</b>
Processed oil	176400000	189000000	201600000	214200000	226800000
<b>GST RATE@18%</b>	<b>31752000</b>	<b>34020000</b>	<b>36288000</b>	<b>38556000</b>	<b>40824000</b>
<b>GROSS Sales Price</b>	<b>208152000</b>	<b>223020000</b>	<b>237888000</b>	<b>252756000</b>	<b>267624000</b>
<b>e. COST OF PRODUCTION</b>					
<b>Items</b>	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>5<sup>th</sup> Year</b>
Capacity utilization	70%	75%	80%	85%	90%
Raw Materials Consumed	₹ 4,21,81,300.00	₹ 4,51,94,250.00	₹ 4,82,07,200.00	₹ 5,12,20,150.00	₹ 5,42,33,100.00
Power & Fuel	1813000	1942500	2072000	2201500	2331000
Direct Labor & Wages	2880000	2880000	2880000	2880000	2880000
Consumable Stores	181300	194250	207200	220150	233100
Repairs & Maintenance	280000	300000	320000	340000	360000
Other Manufacturing Exp.	12250	13125	14000	14875	15750
<b>COST OF PRODUCTION</b>	<b>47347850</b>	<b>50524125</b>	<b>53700400</b>	<b>56876675</b>	<b>60052950</b>
<b>f. PROJECTED PROFITABILITY STATEMENT</b>					
	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>5<sup>th</sup> Year</b>
Capacity Utilized	70%	75%	80%	85%	90%
<b>A. Sales</b>					
Gross Sales	208152000	223020000	237888000	252756000	267624000
Less: GST	31752000	34020000	36288000	38556000	40824000
<b>NET SALES</b>	<b>176400000</b>	<b>189000000</b>	<b>201600000</b>	<b>214200000</b>	<b>226800000</b>



<b>B. Cost of Production</b>					
<b>Raw Materials Consumed</b>	₹ 4,21,81,300.00	₹ 4,51,94,250.00	₹ 4,82,07,200.00	₹ 5,12,20,150.00	₹ 5,42,33,100.00
<b>Power &amp; Fuel</b>	1813000	1942500	2072000	2201500	2331000
<b>Direct Labour &amp; Wages</b>	2880000	2880000	2880000	2880000	2880000
<b>Consumable Stores</b>	181300	194250	207200	220150	233100
<b>Repairs &amp; Maintenance</b>	280000	300000	320000	340000	360000
<b>Other Manufacturing Exp.</b>	12250	13125	14000	14875	15750
<b>Total Cost of Production (C)</b>	<b>47347850</b>	<b>50524125</b>	<b>53700400</b>	<b>56876675</b>	<b>60052950</b>
<b>g. Gross Profit (A-C)</b>	160804150	172495875	184187600	195879325	207571050
<b>Interest Expenses</b>					
<b>Interest Expenses (Term Loan) @12% /Annum for 10 yr.</b>	4681323.79	4401638.86	2800122.63	3155248.27	3555412.72
<b>Interest Expenses (WC Loan) @12% /Annum</b>	760000	600000	660000	720000	780000
<b>Selling, General &amp; Administrative Exp.</b>	257500	257500	257500	257500	257500
<b>Profit before Taxation</b>	155105326.2	167236736.1	180469977.4	191746576.7	202978137.3
<b>Provision for Taxation</b>	46531597.86	50171020.84	54140993.21	57523973.02	60893441.18
<b>Profit After Taxation</b>	<b>108573728.3</b>	<b>117065715.3</b>	<b>126328984.2</b>	<b>134222603.7</b>	<b>142084696.1</b>
<b>h. DEBT SERVICE COVERAGE RATIO (COMPANY AS A WHOLE)</b>					
	<b>1<sup>st</sup> Year</b>	<b>2<sup>nd</sup> year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>5<sup>th</sup> Year</b>
<b>Profit After Tax</b>	108573728.3	117065715.3	126328984.2	134222603.7	142084696.1
<b>Add: - Interest Expenses (Term Loan) @12% /Annum for 10yrs</b>	4681323.79	4401638.86	2800122.63	3155248.27	3555412.72
<b>Interest Expenses (WC Loan) @12% /Annum for 10 yrs</b>	103000	77000	83000	89000	95000
<b>Depreciation</b>	257500	257500	257500	257500	257500
<b>Total (A)</b>	<b>3274251.1</b>	<b>4678789.7</b>	<b>5338345.48</b>	<b>5997684.14</b>	<b>6669998.27</b>



Interest Expenses (Term Loan) @12% /Annum for 10yrs	4681323.79	4401638.86	2800122.63	3155248.27	3555412.72
Interest Expenses (WC Loan) @12% /Annum for 10 yrs	760000	600000	660000	720000	780000
Depreciation	257500	257500	257500	257500	257500
<b>Total (A)</b>	<b>3274251.1</b>	<b>4678789.7</b>	<b>5338345.48</b>	<b>5997684.14</b>	<b>6669998.27</b>
Interest Expenses (Term Loan) @12% /Annum for 10yrs	4681323.79	335134	253147	161672	59612
Interest Expenses (WC Loan) @12% /Annum for 10 yrs	760000	708400	708400	708400	708400
Term Loan Repayment	635019	708503	790490	881964	984024
<b>Total Debt Payment (B)</b>	<b>6076342.79</b>	<b>1752037</b>	<b>1752037</b>	<b>1752036</b>	<b>1752036</b>
<b>DSCR (A/B)</b>	<b>0.43</b>	<b>2.27</b>	<b>2.60</b>	<b>2.92</b>	<b>3.25</b>
<b>Cash Inflow</b>	<b>2639232.1</b>	<b>3970286.7</b>	<b>4547855.48</b>	<b>5115720.14</b>	<b>5685974.27</b>
<b>i. BREAK EVEN ANALYSIS</b>	<b>1<sup>st</sup> year</b>	<b>2<sup>nd</sup> year</b>	<b>3<sup>rd</sup> Year</b>	<b>4<sup>th</sup> Year</b>	<b>5<sup>th</sup> Year</b>
<b>A. Net Sales</b>	176400000	189000000	201600000	214200000	226800000
<b>B. Variable Expenses</b>					
Raw Materials Consumed	42181300	45194250	48207200	51220150	54233100
Power & Fuel	1813000	1942500	2072000	2201500	2331000
Consumable Stores	181300	194250	207200	220150	233100
Repairs & Maintenance	280000	300000	320000	340000	360000
Other Manufacturing Exp.	12250	13125	14000	14875	15750
	<b>44467850</b>	<b>47644125</b>	<b>50820400</b>	<b>53996675</b>	<b>57172950</b>
<b>C. Contribution (A-B)</b>	131932150	141355875	150779600	160203325	169627050
<b>D. Fixed Expenses</b>					
Direct Labour & Wages	2880000	2880000	2880000	2880000	2880000
Selling, General & Administration	257500	257500	257500	257500	257500
	<b>3137500</b>	<b>3137500</b>	<b>3137500</b>	<b>3137500</b>	<b>3137500</b>
<b>Breakeven Sales at Operating Capacity</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>

Projected Balance Sheet					
	1st Year	2nd Year	3rd Year	4th Year	5th Year
<b>Liabilities</b>					
Capital	79109650	82285925	85462200	88638475	91814750
Revenue Reserves	16602600	17788500	18974400	20160300	21346200
<b>Net Worth</b>	<b>95712250</b>	<b>100074425</b>	<b>104436600</b>	<b>108798775</b>	<b>113160950</b>
Term Loan	20000000	20000000	20000000	20000000	20000000
Working Capital Limit	1000000	1000000	1000000	1000000	1000000
<b>Current Liabilities</b>					
Creditors	32914370	34184880	35455390	36725900	9608790
Liability for expenses	20572119	20645603	20727590	20819064	20921124
<b>Total</b>	<b>31937268.1</b>	<b>39286723.7</b>	<b>45973492.48</b>	<b>53441356.14</b>	<b>79361610.27</b>
<b>Assets</b>					
<b>Fixed Assets</b>					
Gross block	20000000	23000000	27600000	34500000	44850000
Depreciation	259800	259800	259800	259800	259800
<b>Net Fixed Assets</b>	19740200	22740200	27340200	34240200	44590200
Non-Current asset/investments	0	0	0	0	15000000
<b>Current assets</b>					
Inventory	7546000	10564400	12073600	12073600	12073600
Debtors					
Security Deposits					
Loans and Advances					
Cash & Bank Balance	4651068.1	5982123.7	6559692.48	7127556.14	7697810.27
<b>Total</b>	<b>31937268.1</b>	<b>39286723.7</b>	<b>45973492.48</b>	<b>53441356.14</b>	<b>79361610.27</b>

Investment	317.618	Lakhs
Cash In Flow (5 yrs)	219.59	Lakhs
(PAT- Depreciation- Interest)		
PAY BACK PERIOD	6	Years

## 12. Projected Employment Details

Plant manager	1	Month
Accountant	1	Month
Data Operator	1	Month
Operator	2	Month
Security Guard	1	Month
Helper	4	Day
Cleaner	2	Month
Total	12	

## 13. Requirement of Statutory clearances

Item	Status
Partnership Deed	
Lease deed registration	
PAN	
GST Registration	
UDYAM	
Trade License	
NOC form local authority	