SETTING UP OF ESSENTIAL OIL

1. INTRODUCTION

Uttarakhand is filled with lush green forests with a rich source of aromatic plants and herbs. These include varieties of lavender, mint, lemongrass, basil, and rosemary, among others. The state is popular for its rich lavender farms, particularly in the areas like Chamoli and Almora. Lavender known for its calming properties is a prominent choice for essential oil production. Uttarakhand is a significant producer of peppermint, particularly in the Dehradun region. Besides, its key use as a spice ingredient in food items, the leaves of peppermint make an excellent resource for essential oil production. The region's rich biodiversity and access to water resources make it a prime location for sourcing readily available raw materials and materializing them into essential oil production with the help of skilled labor.

2. PRODUCT & ITS APPLICATION

Mentha Arvensis, popularly known as peppermint, yields an invigorating essential oil with a crisp, minty aroma. Other oils such as lavender and eucalyptus oil are celebrated for their soothing and aromatic qualities. These oils have a range of applications such as in aromatherapy, personal care, and medicinal products. Essential oils are a key ingredient in skincare products, providing a cooling effect and promoting skin health. It is incorporated into personal care items such as shampoos, soaps, and lotions due to its pleasing fragrance and potential skin benefits. The essential oils offer a multitude of applications in the fields of well-being, personal care, and health.

3. DESIRED QUALIFICATION FOR PROMOTER

While formal qualifications can be helpful, a person should hold knowledge of essential oils and specific plants/herbs. Additionally, awareness of sustainability and environmental issues will be helpful, especially for businesses sourcing raw materials from natural ecosystems.

4. INDUSTRY LOOKOUT AND TRENDS

Indian essential oil producers, including the ones in Uttarakhand, are exploring export markets, especially in the U.S. and U.K. Moreover, the natural beauty and aromatic plant cultivation have opened up opportunities for agro-tourism and eco-tourism ventures that complement essential oil production there. There has been a global trend towards the use of natural and organic products in every consumable item. Consumers are seeking natural remedies, aromatherapy, and organic skincare, contributing to the demand for high-quality essential oils. The COVID-19 pandemic had varying effects on the industry leading to increased demand for oils and medications with antimicrobial properties. Essential oils are increasingly used in wellness and spa treatments and the partnerships between oil producers and the spa industry is on the rise.

5. MARKET POTENTIAL AND MARKETING ISSUES; IF ANY

The rising demand for natural and organic products including essential oils, presents a significant opportunity for pursuing a business in Uttarakhand. The diverse and rich biodiversity allows for the cultivation of aromatic herbs/plants leading to supply to various market segments and consumers. The local demand for essential oils is influenced by traditional and cultural practices in Uttarakhand. This offers a steady domestic market for essential oils. Moreover, with the potential to create high-quality essential oils, Uttarakhand's producers have wider opportunities to tap into international markets.

The essential oil market is highly competitive. Besides the plethora of marketing places, one has to focus on product differentiation and unique selling propositions. Understanding customer preferences and effective branding are critical. Since there are big competitors in this industry, small businesses may struggle to build a strong brand identity. Efficient supply chain management is crucial for ensuring a consistent supply of raw materials and continuous processing for a smooth supply of essential oils.

6. RAW MATERIAL REQUIREMENTS

The key raw materials used are peppermint leaves, lavender flowers, and eucalyptus leaves.

7. MANUFACTURING PROCESS

The process of extracting essential oils from the raw materials varies with methods like steam distillation, cold-press extraction, and solvent extraction. Steam distillation is widely used for extracting essential oils from aromatic plants.

The first step in steam distillation is cleaning and cutting the harvested material into finer pieces. These pieces are then loaded in the distillation unit called a still or a distillation apparatus. Water is heated in a separate chamber to produce steam. This steam is introduced into the chamber containing plant material. As the steam passes through the plant material, the essential oil within the plants evaporates. The vapor contains essential oil and steam that rises through the coiled tube or a condenser where it is exposed to cold water or a cooling system. The cold water makes the vapor condense back to liquid which is a mixture of essential oil and water. They are then collected in a receiving vessel where water and oil naturally separate. The oil which is less dense than water, floats on the surface and is carefully skimmed off. The collected oil undergoes a final filtration process where impurities and water droplets are removed. The process ends with quality control testing and kept in dark, airtight containers to protect it from light and oxygen.

8. MANPOWER REQUIREMENT

Sr. No	Particulars	No.	No of month in year	Wages/Salaries per month (Rs. In Lakhs)	Annual Expense (Rs. In Lakhs)
1	Production Manager	1	12	0.35	4.20
2	Skilled	2	12	0.15	3.60
3	Semi-skilled	1	12	0.10	1.20
	Total				**9.00**

9. IMPLEMENTATION SCHEDULE

Sr. No.	Activity	Time Required *(in months)*
1	Acquisition of premises	1
2	Construction (if applicable)	1.5
3	Procurement & installation of Plant & Machinery	2.5
4	Arrangement of Finance	1
5	Recruitment of required manpower	1
	Total time required	3

10. COST OF PROJECT

Sr. No	Particulars	Annual Expenses (Rs. in lakhs)
1	Pre-operative and preliminary Exp.	0.17
3	Machinery Exp.	8.40
4	Equipment and Furniture Exp.	2.05
5	Working Capital	7.31
	Total Project Cost	**17.93**

11. MEANS OF FINANCE

Bank-term loans are assumed @ 60%

Sr. No.	Particulars	Annual Expenses (Rs. in lakhs)
1	Promoter's contribution	7.17
2	Bank Finance	10.76
	Total	**17.93**

12. LIST OF MACHINERY REQUIRED

A. Machinery

Sr. No	Particulars	Unit	Price per Unit (Rs. in lakhs)	Total Amount (Rs. in lakhs)
1	Field Distillation Unit comprising water-steam distillation still, 3 tone herb charge cap, with condenser & receiver (including chain-pulley for loading & unloading of herbs in the unit)	2	3.00	6.00
2	Furnace	2	0.40	0.80
3	Overhead tank, pump with motor	1	0.70	0.70
4	Laboratory & Miscellaneous	1	0.30	0.30
5	Miscellaneous	1	0.20	0.20
6	Motor Pump	1	0.10	0.10
Total Amount				**8.10**
Tax, Transportation, Insurance etc.				0.20
Electrification Exp.				0.10
Grand Total Amount				**8.40**

B. Furniture & Equipment

Sr. No	Particulars	Unit	Price per Unit (Rs. in lakhs)	Total Amount (Rs. in lakhs)
1	Vehicle	1	0.80	0.80
2	Computers	1	0.50	0.50
3	Office table & chair	3	0.25	0.75
	Total			**2.05**

Local manufacturers in India offer a wide range of machines and equipment. The entrepreneur can avail machines and required tools after thorough research and analysis. Below are the tentative suppliers of steam distillation unit and other laboratory equipment in India. Besides these, online platforms such as India Mart can also be explored for ordering machinery online

1. Andel Technologies Inc.
   B No Plot No - 298,
   Industrial Area Phase 9, Mohali-160062
   Punjab, India

2. Ylem Energy
   29/21, Gali No -6, Anand Parbat Industrail Area,
   Patel Nagar-110005,
   Delhi, India

3. Shristi Solutions
   92, Faizabad Road, Naka Satrikh,
   Barabanki-225001,
   Uttar Pradesh, India

4. Bundelkhand Scientific & Educational Suppliers
   1st Floor, Railway Station Road, PNB Building,
   Orai, Jalaun-285001,
   Uttar Pradesh, India

13. PROFITABILITY CALCULATIONS

The basis of profitability calculation:

Sr. No	Particulars	Annual Expenses (Rs. in lakhs)
A.	Sales realization	60.60
B.	Cost of production	
i)	Raw materials	39.33
ii)	Utilities	2.52
iii)	Manpower Cost (Salaries/wages)	9.00
iv)	Administrative expenses	0.42
v)	Selling & distribution expenses	1.80
vii)	Rent	1.10
viii)	Interest	0.48
	Total (B)	54.65
	No of Unit production	3000
	Cost of Goods Sold per unit	0.02
	Gross profit/loss (A – B)	5.95
	Less: Depreciation	1.16
C.	PBIT	4.79
D	Income-tax	0.48
E	Net profit/loss	4.31
F.	Repayment (Annual)	0.47
G	Retained surplus (E-F)	3.84

The production capacity of the unit is estimated at 80%.

14. BREAKEVEN ANALYSIS

(Rs. in lakhs)

Fixed cost	
Land & Building Rent	1.10
Depreciation	1.16
Interest	0.48
Manpower	2.70
Total Fixed cost	5.44
Variable cost	
Raw materials	39.33
Utilities	2.52
Manpower	6.30
Administrative expenses	0.42
Selling & distribution expenses	1.80
Total Variable cost	50.37
Variable cost per Unit	1679.00
Revenue per unit	2020.00
Margin per Unit	341.00
Number of Units for Break-Even Point	**1596**
Actual Capacity	**3000**

15. STATUTORY/GOVERNMENT APPROVALS

Depending on the type and scale of operations, many legislative and government approvals may be necessary for the essential oils industry. These approvals are necessary to assure regulatory compliance as well as the quality and safety of products. Here are a few examples of common statutory and government approvals pertinent to the essential oils industry:

1. FSSAI License: Essential oils are frequently used in food and drinks for the prevention of bacteria, fungi, and mycotoxins in stored food. Hence, the business will require a Food Safety and Standards Authority of India (FSSAI) license for the manufacturing and sale of essential oils.
2. MSME Registration: Since the business qualifies as a micro, small, or medium-sized enterprise, an advantage of MSME registration will provide a variety of benefits and assistance.
3. Drug License: Since the essential oils have medicinal or therapeutic properties, there is a need for a drug license, particularly because the goods are meant for medical use.

16. TRAINING CENTERS AND COURSES

There are few specialized Institutes that provide degree certification in processing, value addition, quality assessments, and marketing of essential oils and aromatic plants. The most famous and authenticate Institutions are as follows:

1. Centre for Aromatic Plants
   Selaqui Industrial Area,
   Selakui-248011,
   Uttarakhand, India

2. Fragrance & Flavour Development Centre (FFDC)
   G. T. Road, Makrand Nagar,
   Kannauj-209726,
   Uttar Pradesh, India

3. Indian Institute of Skill Development Training
   1187, Scheme No. 114(Part 1),
   Vijay Nagar-- 452010
   Madhya Pradesh, 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.