

# ***Essential Oil Processing***

Unit Establishment Plan.

## ***Essential Oil Extraction***

***(Lemongrass, Citronella,  
Lavender, Rosemary and  
Peppermint)***



# Introduction

An essential oil may be a concentrated hydrophobic liquid containing volatile (easily evaporated at normal temperatures) chemical compounds from plants. Essential oils also are referred to as volatile oils, ethereal oils, aetherolea, or just because the oil of the plant from which they were extracted, such as oil of clove. An essential oil is "essential" within the sense that it contains the "essence of" the plant's fragrance—the characteristic fragrance of the plant from which it's derived. The term "essential" used here doesn't mean indispensable or usable by the human body, like the terms essential amino acid or essential fatty acid, which are so called because they're nutritionally required by a given living organism.

**Related Projects:** - [Essential Oils, Phytochemicals, Aromatic Chemicals, Aromatic Compounds, Spice Oils and Oleoresins Projects](#)

Essential oils are often used for aromatherapy, a sort of medicine during which healing effects are ascribed to aromatic compounds. Aromatherapy could also be useful to induce relaxation, but there's not sufficient evidence that essential oils can effectively treat any condition. Improper use of essential oils may cause harm including allergic reactions and skin irritation, and youngsters could also be particularly susceptible to the toxic effects of improper use. Lemongrass oil are often extracted, and it has been utilized by healthcare providers to treat digestive problems and high blood pressure. It's many other potential health benefits, too. In fact, lemongrass essential oil may be a popular tool in aromatherapy to assist relieve stress, anxiety, and depression.

**Related Books:** - [Essential Oils Extraction and Processing, Aromatic Chemicals, Aromatic Compounds, Flavours, Fragrances and Perfumes](#)

Citronella oil is an important oil obtained from the leaves and stems of different species of Cymbopogon (lemongrass). The oil is used extensively as a source of perfumery chemicals like citronellal, citronellol, and geraniol. These chemicals find extensive use in soap, candles and incense, perfumery, [cosmetic](#), and flavouring industries throughout the planet.

Lavender essential oil has been found to eliminate harmful bacteria, relieve muscle spasms, relieve flatulence, disinfect and soothe inflamed skin especially when resulting from a venomous, itchy bug bite, promote speedy healing of irritated and scarred skin, and to alleviate muscle tension when utilized in a massage.

**Related Videos: - [Essential Oils, Phytochemicals, Aromatic Chemicals, Aromatic Compounds, Spice Oils and Oleoresins Projects](#)**

Rosemary may be a fragrant herb that's native to the Mediterranean and receives its name from the Latin words “ros” (dew) and “marinus” (sea), which suggests “dew of the sea.” Rosemary essential oil is derived from the aromatic herb Rosmarinus Officinalis, a plant belonging to the mint family, which incorporates Basil, Lavender, Myrtle, and Sage. Its appearance, too, is analogous to Lavender with flat pine needles that have a light-weight trace of silver.

This peppermint essential oil by Naturalis contains 100% pure and not a mix of isolated compounds. It's manufactured without dilution and adulteration. There's no addition or deletion made during this oil, and it's also freed from solvents. This oil is made by steam distillation of the peppermint herb leaves.



## Uses and Applications

The applications of essential oils are very extensive and cover a wide range of human activities. A few important uses are in the manufacture of soaps, [cosmetics](#), perfume, confectioneries, perfumed chewing delicacies aerated water and syrups. Besides perfumery applications they are also used in pharmaceutical industry because of their antiseptic, carminative, stimulative, diuretic, and flavoring properties.

Commercially, essential oils are used in three primary ways:

**Flavors:** Present in bakery goods, candies, confections, meat, pickles, and soft drink.

**Pharmaceuticals:** Appear in dental products and a wide but diminishing group of medicines.

**Odorants:** Use in [cosmetics](#), perfumes, soaps, detergents, and miscellaneous industrial products ranging from animals feed to insecticides to paints.

**Use of Essential oils in various industries is given below:**

1. Flavour for the food industry - 55-60%
2. Fragrance for perfumery cosmetics- 15-20%
3. Starting Material for isolation of Component- 10-20%
4. Active Substance in [pharmaceutical](#) preparation- 15-10%
5. Natural Products- 20-5%

**Market Research: - [Market Research Report](#)**



## **Health Benefits of Essential Oils**

Stress and anxiety

Headaches and migraines

Sleep and insomnia

Reducing inflammation

Antibiotic and antimicrobial





## **Manufacturing Process**

Basically essential oils are made up of flowers are extracted within the modern age by supercritical liquid Carbon-dioxide method. This process is expensive one but product quality is that the best and yield is additionally the most effective. Sometimes solvent extraction process is used it's not such a lot costly but product quality isn't pretty much as good as liquid carbon-dioxide extraction process. Cheapest extraction process is steam distillation process or steam water distillation process. Now here we'll discuss the steam distillation process for the manufacturing of volatile oil from Lemongrass, Citronella, Lavender, Rosemary and Peppermint.

**Projects: - Project Identification**

## **Process Details**

Lemongrass, Citronella, Lavender, Rosemary and Peppermint contents essential oil varied from 0.6%-2.2%. Assume here average oil content of the flowers are going to be 0.5- 1%. Take the flowers on weight basis within the distillation vessel. Distillation vessel is attached with long bend condensers. Distillation apparatus is formed by mild steel sheet of 5 mm. thick, distillation vessels containing fall roof, top opening and side opening. Condensers pipe is attached with chilling line. Flowers are weighted and pour within the distillation vessel, put water at the height of the falls roof. Put steam (temperature 105°C) at the bottom through water and lift to temperature of 60□-80□C within the distillation unit.

**Projects: - Project Consultancy, Reports & Profiles**

Essential oil within the flower is distilled of and passes through the condenser. Condensers temperature maintained  $5^{\circ}\text{C}$ - $8^{\circ}\text{C}$ , such all the oil vapours should condensed. Condensed oil collected within the airtight close container oil contents some water, which is take away by decantation process and collect the pure oil through the silica gel. Collected pure oil is packed within the close container consistent with requirement. Container could also be made by aluminium for 1000 Kegs. flower to steam distillation, completely time required about 2-3 hours, where distillation apparatus working volume 1000 lites with proportionately dimensioned condensers and chilling temperature  $5^{\circ}\text{C}$ - $10^{\circ}\text{C}$ .

**Books: - [BOOKS & DATABASES](#)**

## **Essential Oil Production**

Essential oils can be produced in a number of different ways:

### **Steam Distillation**

Most essential oils are produced by steam distillation (see picture montage on this page of Nana Mint production in Morocco). Steam distillation should ideally be by low or medium pressure without the utilization of [chemical](#) solvents. Unfortunately, the distiller or producer is usually more concerned with profit than with the right treatment of the plants. High steam pressure and quick distillation are more cost effective, but rarely create a fine and precious product.



This is often why organic farmers distill their plants very carefully with the slower method of low steam distillation once they create organic essential oils.

**Related Projects:** [Essential Oil \(lemongrass, Citronella, Lavender, Rosemary And Peppermint\)](#)

Many plants require an extended time to distill so as to extract the whole spectrum from head to tail of active substances (particularly the slow boiling sesquiterpenes) within the [essential](#) oil. These slow low pressure methods yield a richer, therapeutically more effective essential oil.

### **Cold Pressing**

Most citrus essential oils are produced through the strategy of cold pressing. This involves gentle abrasion of the rind of the fruit, releasing the oil contained in tiny oil glands within the peel.

**Related Video:** - [Extraction and Production of Essential Oils](#)

## **Extraction**

This is the standard method for the assembly of oils from very fragrant flower plants like Jasmine, Tuberose, and Red Champaca (in fact many of the oils utilized in perfumery). Oils produced during this way are referred to as absolutes. The material is thoroughly mixed with a solvent such as hexane, which dissolves out the aromatic substances, and also waxes and other products. The solvent is then recovered, leaving a residue known as a concrete. The waxes and other unrequired ingredients are far away from the concrete with [alcohol](#), leaving the oil.

**Related Video: - [Essential Oils Extraction and Manufacturing Industry](#)**



## **CO2 Extraction**

CO2 extraction uses carbon dioxide to extract the aromatic substances from the plants. This method allows a coffee 'cold' treatment of the plants because the oil can be extracted at temperatures of about 30 degrees Celsius (90 degrees Fahrenheit). In many cases the end result's a very subtle, round aroma, (e.g. Jasmine CO2) particularly suitable for the flavour industry. However, the energy of those oils mostly does not show the same results as found in distilled products.

**Related Project:- [Essential Oil \(lemongrass, Citronella, Lavender, Rosemary And Peppermint\)](#)**



## **Hydro Diffusion**

Hydro diffusion is another variation of steam distillation. The steam is injected from the highest of the still rather than being induced from the bottom. The distillation time is shorter and therefore the process often allows for a far better penetration of the steam into the plant material. Hydro diffused oils sometimes tend to possess a slightly subtler note.

## **Enfleurage**

Enfleurage might be compared to certain aspects employed in maceration, but is completed in an exceedingly slightly different way. Glass plates during a frame (called a chassis) are covered with highly purified and odorless vegetable or fat and therefore the petals of the botanical matter that are being extracted are spread across it and pressed in. The flowers are normally freshly picked before so encased in their fatty bed.



The petals remain during this greasy compound for a couple of days to permit the essence to disperse into the compound, after which the then depleted petals are removed and replaced with a fresh harvest of petals.

**Market Research: - [Market Research Reports, India and Global Industry Analysis](#)**

This process is repeated until the greasy mix is saturated with the essence, and wishes to be repeated a few of times until saturation is achieved. When the combination has reached saturation the flowers are removed and therefore the Enfleurage pomade – the fat and fragrant oil – then washed with [alcohol](#) to separate the extract from the remaining fat, which is then used to make soap



As soon because the alcohol evaporates from the mixture you are left with the essential oils. This is often a really labor-intensive way of extraction, and needless to say a really costly way to obtain essential oil and is nowadays only sometimes wont to extract essential oil from tuberose and jasmine.

**Related Project:- Essential Oil (lemongrass, Citronella, Lavender, Rosemary And Peppermint)**



## Market Outlook

Rising demand for organic products is another factor influencing consumer trends. Further implementation of regulations favoring the utilization of environmentally friendly ingredients in cosmetics and therefore the food and beverage industry has awakened people's interest to hunt products made up of natural ingredients. The industry has witnessed a pointy increase in demand for 100% plant-based oils that are barren of synthetic fragrances and animal-derived components.

A majority of consumers demand essential oils for various purposes such as for enhancing air freshness reception by adding drops of essential oils in aroma pots or aroma diffusers, which diffuse oil within the variety of atomized particles, and in aroma bath by adding oils to the water, etc. Young women use essential oils for creating homemade cosmetics because of their natural content and medicinal benefits.

Growing demand for essential oils in [cosmetics](#), food and beverages, pharmaceuticals, air care, and other end-use industries is boosting the market growth of essential oils globally. The growing customer inclination towards aromatized [cosmetics](#) and air care products is further catalyzing the market growth. Additionally, the growing adoption of aromatherapy among consumers is probably going to foster the market demand for essential oils over the forecast period. Rapid industrialization in countries such as India, China, and Brazil has boosted end-use industries, which is leading to a greater demand for aromatics and flavors.

**Market Research: - [Market Research Report](#)**



Essential oils are generally used for the aromatherapy, which may be a variety of the medical alternative. It contains ethereal oil or essential oil having aroma similar to the plants. Essential oils are obtained from different herbs which include eucalyptus, lemon, corn mint, peppermint, and orange. They're extracted from the roots, seeds, flowers, fruits, stems, leaves, and other parts of the plant. The essential oils have a wide range of applications in household cleaning, soap, perfumes, and [cosmetics](#) because of their antibiotic and antiseptic properties.

The global essential oils market demand was estimated at 247.08 kilotons in 2020 and is expected to grow at a compound annual growth rate (CAGR) of 7.5% from 2020 to 2027. The market is expected to be driven by increasing demand from major end-use industries, such as food and beverage, personal care and [cosmetics](#), and aromatherapy.

Several health benefits related to essential oils are projected to drive their demand in pharmaceutical and medical applications. Unlike most of the conventional medicines and drugs, essential oils have no major side effects. Such traits of essential oils are projected to be the major factor for market growth. In addition, rising prevalence of health problems, such as cardiovascular problems, Alzheimer's, and bronchitis, is creating more demand for beneficial essential oils in aromatherapy applications.



## **Essential Oils Market Growth Drivers:**

### **The Food and Beverage Industry**

Essential oils have found a secure purpose in the food and beverage industry. Instead of adding herbs, and juices directly, a drop or two of essential oils is being used to enhance the flavor of a dish. This helps in accentuating the needed flavor, while preserving the need for increased usage of herbs. A flavoring and preservation agents profile leads to robust essential oils market growth.



## **Aromatherapy**

Aromatherapy is one in every of the most prominently recognized forms of alternative medicines, and uses essential oils as its primary component. Essential oils offer a plethora of uses including relaxation, stress reduction, curing headaches, boosting energy, preventing dementia, and strengthening immunity. The process involves inhaling the essential oils, to which our bodies respond positively by absorbing the essential nutrients. Massaging the oil on sore muscles is additionally a part of aromatherapy.





## **Key Players:-**

- A V T Natural Products Ltd
- Absolute Aromatics Ltd.
- Concert Spices & Exports Ltd.
- Industrial Perfumes Ltd.
- Jindal Drugs Pvt. Ltd.
- Kancor Ingredients Ltd.
- Pond'S (India) Ltd

- Sijmak Oils Ltd.
- South East Agro Inds. Ltd.
- Spisys Ltd.
- Surya Vinayak Inds. Ltd.
- Synthite Industries Pvt. Ltd.
- Ultra International Ltd.
- Vaishali (India) Ltd.
- Vinayak Ingredients (India) Pvt. Ltd.

# Machinery Photographs



**DISTILLATION VESSEL**



**PIPELINE AND VALVES**



**COOLING TOWER  
(WITH PUMP & PIPING)**



**PACKAGING MACHINE**

COST OF PROJECT				MEANS OF FINANCE			
Particulars	Existing	Proposed	Total	Particulars	Existing	Proposed	Total
Land & Site							
Development Exp.	0.00	0.00	0.00	Capital	0.00	22.52	22.52
Buildings	0.00	0.00	0.00	Share Premium	0.00	0.00	0.00
				Other Type Share			
Plant & Machineries	0.00	41.17	41.17	Capital	0.00	0.00	0.00
Motor Vehicles	0.00	4.00	4.00	Reserves & Surplus	0.00	0.00	0.00
Office Automation							
Equipments	0.00	12.50	12.50	Cash Subsidy	0.00	0.00	0.00
Technical Knowhow				Internal Cash			
Fees & Exp.	0.00	5.00	5.00	Accruals	0.00	0.00	0.00
Franchise & Other				Long/Medium Term			
Deposits	0.00	0.00	0.00	Borrowings	0.00	67.56	67.56
Preliminary & Pre-operative Exp	0.00	0.50	0.50	Debentures / Bonds	0.00	0.00	0.00
Provision for				Unsecured			
Contingencies	0.00	4.00	4.00	Loans/Deposits	0.00	0.00	0.00
Margin Money -							
Working Capital	0.00	22.92	22.92				
<b>TOTAL</b>	<b>0.00</b>	<b>90.09</b>	<b>90.09</b>	<b>TOTAL</b>	<b>0.00</b>	<b>90.09</b>	<b>90.09</b>

# Project at a Glance

Year	Annualised		Book Value	Debt	Dividend	Retained Earnings		Payout	Probable Market Price	P/E Ratio	Yield Price/Book Value
	EPS	CEPS	Per Share		Per Share	Per Share		%		No.of Times	%
1-2	4.92	9.03	14.92	24.00	0.00	100.00	4.92	0.00	4.92	1.00	0.00
2-3	8.44	11.99	23.37	18.00	0.00	100.00	8.44	0.00	8.44	1.00	0.00
3-4	11.92	14.99	35.28	12.00	0.00	100.00	11.92	0.00	11.92	1.00	0.00
4-5	15.17	17.83	50.46	6.00	0.00	100.00	15.17	0.00	15.17	1.00	0.00
5-6	18.16	20.47	68.61	0.00	0.00	100.00	18.16	0.00	18.16	1.00	0.00

# Project at a Glance

Year	D. S. C. R.			Debt / - Deposits Debt	Equity as- Equity	Total Net Worth	Return on Net Worth	Profitability Ratio					Assets Turnover Ratio	Current Ratio
	Individual	Cumulative	Overall					GPM	PBT	PAT	Net Contribution	P/V Ratio		
Initial	(Number of times)			(Number of times)	%	%	%	%	%	%				
1-2	1.33	1.33		3.00	3.00	5.72	4.82%	1.49%	1.13%	139.64	14.21%	4.44	1.11	
2-3	1.70	1.50		0.77	0.77	3.80	5.50%	2.47%	1.66%	157.46	13.74%	4.61	1.17	
3-4	2.14	1.70	2.12	0.34	0.34	2.63	5.95%	3.17%	2.05%	179.83	13.73%	4.60	1.26	
4-5	2.65	1.90		0.12	0.12	1.92	6.24%	3.64%	2.32%	202.19	13.72%	4.48	1.35	
5-6	3.24	2.12		0.00	0.00	1.47	6.41%	3.95%	2.50%	224.56	13.71%	4.32	1.54	

## BEP

BEP - Maximum Utilisation Year	5
Cash BEP (% of Installed Capacity)	68.49%
Total BEP (% of Installed Capacity)	70.81%
IRR, PAYBACK and FACR	
Internal Rate of Return .. ( In %age )	30.96%
Payback Period of the Project is ( In Years )	2 Years 3 Months
Fixed Assets Coverage Ratio ( No. of times )	51.731



## **Major Queries/Questions Answered in the Report?**

- 1. What is Essential Oil Manufacturing industry ?**
- 2. How has the Essential Oil Manufacturing industry performed so far and how will it perform in the coming years ?**
- 3. What is the Project Feasibility of Essential Oil Manufacturing Plant ?**
- 4. What are the requirements of Working Capital for setting up Essential Oil Manufacturing plant ?**

**5. What is the structure of the Essential Oil Manufacturing Business and who are the key/major players ?**

**6. What is the total project cost for setting up Essential Oil Manufacturing Business?**

**7. What are the operating costs for setting up Essential Oil Manufacturing plant ?**

**8. What are the machinery and equipment requirements for setting up Essential Oil Manufacturing plant ?**

- 9. Who are the Suppliers and Manufacturers of Plant & Machinery for setting up Essential Oil Manufacturing plant ?**
- 10. What are the requirements of raw material for setting up Essential Oil Manufacturing plant ?**
- 11. Who are the Suppliers and Manufacturers of Raw materials for setting up Essential Oil Manufacturing Business?**
- 12. What is the Manufacturing Process of Essential Oil ?**

- 13. What is the total size of land required for setting up Essential Oil Manufacturing plant ?**
- 14. What will be the income and expenditures for Essential Oil Manufacturing Business?**
- 15. What are the Projected Balance Sheets of Essential Oil Manufacturing plant ?**
- 16. What are the requirement of utilities and overheads for setting up Essential Oil Manufacturing plant?**
- 17. What is the Built up Area Requirement and cost for setting up Essential Oil Manufacturing Business?**

**18. What are the Personnel (Manpower) Requirements for setting up Essential Oil Manufacturing Business?**

**19. What are Statistics of Import & Export for Essential Oil ?**

**20. What is the time required to break-even of Essential Oil Manufacturing Business?**

**21. What is the Break-Even Analysis of Essential Oil Manufacturing plant?**

**22. What are the Project financials of Essential Oil Manufacturing Business?**

- 23. What are the Profitability Ratios of Essential Oil Manufacturing Project?**
- 24. What is the Sensitivity Analysis-Price/Volume of Essential Oil Manufacturing plant?**
- 25. What are the Projected Pay-Back Period and IRR of Essential Oil Manufacturing plant?**
- 26. What is the Process Flow Sheet Diagram of Essential Oil Manufacturing project?**

- 27. What are the Market Opportunities for setting up Essential Oil Manufacturing plant?**
  
- 28. What is the Market Study and Assessment for setting up Essential Oil Manufacturing Business?**
  
- 29. What is the Plant Layout for setting up Essential Oil Manufacturing Business?**

# Table of Contents of the Project Report



## **1 INTRODUCTION**

- 1.1. LEMONGRASS OIL
- 1.2. CITRONELLA OIL
- 1.3. LAVENDER OIL
- 1.4. ROSEMARY OIL
- 1.5. PEPPERMINT OIL

## **2. ESSENTIAL OILS FROM SOME NATURAL PLANTS**

## **3. USES AND APPLICATIONS**

## **4. HEALTH BENEFITS**

- 4.1. LEMONGRASS ESSENTIAL OILS
- 4.2. CITRONELLA ESSENTIAL OILS
- 4.3. LAVENDER ESSENTIAL OILS
- 4.4. ROSEMARY ESSENTIAL OILS
- 4.5. PEPPERMINT ESSENTIAL OILS

## **5. PHYSICO-CHEMICAL PROPERTIES**

- 5.1. LEMONGRASS ESSENTIAL OILS
  - 5.1.1. Chemical Composition
  - 5.1.2. Properties
- 5.2. CITRONELLA ESSENTIAL OILS
  - 5.2.1. Chemical Composition
  - 5.2.2. Properties
- 5.3. LAVENDER ESSENTIAL OILS
  - 5.3.1. Chemical Composition
  - 5.3.2. Properties
- 5.4. ROSEMARY ESSENTIAL OILS
  - 5.4.1. Chemical Composition
  - 5.4.2. Properties
- 5.5. PEPPERMINT ESSENTIAL OILS
  - 5.5.1. Chemical Composition
  - 5.5.2. Properties

## **6. B.I.S.SPECIFICATIONS**

- 6.1. IS 327: 1991 (REAFFIRMED YEAR: 2019) OIL OF LEMONGRASS
- 6.2. IS 512: 1988 (REAFFIRMED YEAR: 2019) OIL OF CITRONELLA (JAVA)
- 6.3. IS 1616: 1960 OIL OF SPIKE LAVENDER
- 6.4. IS 3249: 1965 OIL OF ROSEMARY
- 6.5. IS 16397: 2015 DRIED PEPPERMINT (MENTHAPIPERITA LINNAEUS) – SPECIFICATION

## **7. MARKET SURVEY**

- 7.1. NATURAL ESSENTIAL OILS SECTOR
- 7.2. GLOBAL MARKET
- 7.3. ESSENTIAL OILS MARKET GROWTH DRIVERS
- 7.4. KEY PLAYERS
- 7.5. ESSENTIAL OILS GLOBAL MARKET GROWTH
- 7.6. LAVENDER ESSENTIAL OILS
- 7.7. PEPPERMINT ESSENTIAL OILS

## **8. EXPORT & IMPORT: ALL COUNTRIES**

### 8.1. EXPORT: ALL COUNTRIES

8.1.1. Lemon Grass Oil

8.1.2. Citronella Oil

8.1.3. Lavender Oil

8.1.4. Rosemary Oil

8.1.5. Essential oil of Peppermint Oil (Mentha Piperita)

### 8.2. IMPORT: ALL COUNTRIES

8.2.1. Lemon Grass Oil

8.2.2. Citronella Oil

8.2.3. Lavender Oil

8.2.4. Rosemary Oil

8.2.5. Essential Oil of Peppermint (Mentha Piperita)

## **9. FINANCIALS & COMPARISON OF MAJOR INDIAN PLAYERS/COMPANIES**

- 9.1. ABOUT FINANCIAL STATEMENTS OF CMIE DATABASE
- 9.2. PROFITS & APPROPRIATIONS
- 9.3. TOTAL LIABILITIES
- 9.4. TOTAL ASSETS
- 9.5. NET CASH FLOW FROM OPERATING ACTIVITIES

### **9.6. SECTION - I**

- 9.6.1. Name of Company with Contact Details
- 9.6.2. Name of Director(S)
- 9.6.3. Credit Ratings
- 9.6.4. Plant Capacity
- 9.6.5. Location of Plant
- 9.6.6. Name of Raw Material(S) Consumed With Quantity & Cost

## **9.7. SECTION – II**

- 9.7.1. Assets
- 9.7.2. Cash Flow
- 9.7.3. Cost as % Ge of Sales
- 9.7.4. Forex Transaction
- 9.7.5. Growth in Assets & Liabilities
- 9.7.6. Growth in Income & Expenditure
- 9.7.7. Income & Expenditure
- 9.7.8. Liabilities
- 9.7.9. Liquidity Ratios
- 9.7.10. Profitability Ratio
- 9.7.11. Profits
- 9.7.12. Return Ratios
- 9.7.13. Structure of Assets & Liabilities (%)
- 9.7.14. Working Capital & Turnover Ratios

## **10. COMPANY PROFILE OF MAJOR PLAYERS**

## **11. EXPORT & IMPORT STATISTICS OF INDIA**

### 11.1. EXPORT STATISTICS

11.1.1. for Lemongrass Essential Oil

11.1.2. for Citronella Essential Oil

11.1.3. for Lavender Essential Oil

11.1.4. for Rosemary Essential Oil

11.1.5. Peppermint Essential Oil

### **11.2. IMPORT STATISTICS**

11.2.1. for Lemongrass Essential Oil

11.2.2. for Citronella Essential Oil

11.2.3. for Lavender Essential Oil

11.2.4. for Rosemary Essential Oil

11.2.5. for Peppermint Essential Oil

**12. PRESENT MANUFACTURERS**

**13. RAW MATERIAL**

13.1. LEMONGRASS

13.2. CITRONELLA GRASS

13.3. LAVENDER

13.4. ROSEMARY

13.5. PEPPERMINT

**14. MANUFACTURING PROCESS**

14.1. BASIC RAW MATERIAL REQUIRED

14.2. BASIC PLANT & MACHINERY REQUIRED

14.3. PROCESS DETAILS

**15. PROCESS FLOW DIAGRAM**



## **16. DIFFERENT METHODS OF PRODUCING ESSENTIAL OILS**

- 16.1. STEAM DISTILLATION
- 16.2. SOLVENT EXTRACTION
- 16.3. ENFLEURAGE
- 16.4. COLD-PRESS EXTRACTION
- 16.5. WATER DISTILLATION

## **17. DIFFERENT METHODS OF PROCESS FLOW DIAGRAM**

- 17.1. STEAM DISTILLATION PROCESS
- 17.2. SOLVENT EXTRACTION PROCESS
- 17.3. ENFLEURAGE PROCESS
- 17.4. COLD-PRESS EXTRACTION PROCESS
- 17.5. WATER DISTILLATION PROCESS

## **18. PACKAGING AND STORAGE**

**19. BUYER'S LIST**

- 19.1. CONTACT DETAILS OF BUYER'S
- 19.2. NAME OF DIRECTOR(S)
- 19.3. PLANT CAPACITY
- 19.4. CREDIT RATINGS
- 19.5. COMPANY WISE CONSUMPTION DETAIL OF THE RAW MATERIALS

**20. SUPPLIERS OF PLANT & MACHINERY**

**21. SUPPLIERS OF RAW MATERIAL**

**22. PHOTOGRAPHS/IMAGES FOR REFERENCE**

- 22.1. MACHINERY PHOTOGRAPHS
- 22.2. RAW MATERIAL PHOTOGRAPHS
- 22.3. PRODUCT PHOTOGRAPHS

**23. QUOTATION OF PLANT, MACHINERY AND EQUIPMENTS FROM SUPPLIER**

# Project Financials

- **Project at a Glance** **Annexure**
- Assumptions for Profitability workings .....1
- Plant Economics.....2
- Production Schedule.....3
- Land & Building.....4
  - Factory Land & Building
  - Site Development Expenses

- **Plant & Machinery.....5**
  - Indigenous Machineries**
  - Other Machineries (Miscellaneous, Laboratory etc.)**
  
- **Other Fixed Assets.....6**
  - Furniture & Fixtures**
  - Pre-operative and Preliminary Expenses**
  - Technical Knowhow**
  - Provision of Contingencies**
  
- **Working Capital Requirement Per Month.....7**
  - Raw Material**
  - Packing Material**
  - Lab & ETP Chemical Cost**
  - Consumable Store**

- **Overheads Required Per Month and Per Annum.....8**
  - Utilities & Overheads (Power, Water and Fuel Expenses etc.)**
  - Royalty and Other Charges**
  - Selling and Distribution Expenses**
- **Salary and Wages .....9**
- **Turnover Per Annum .....10**
- **Share Capital.....11**
  - Equity Capital**
  - Preference Share Capital**

- **Annexure 1 :: Cost of Project and Means of Finance**
- **Annexure 2 :: Profitability and Net Cash Accruals**
  - **Revenue/Income/Realisation**
  - **Expenses/Cost of Products/Services/Items**
  - **Gross Profit**
  - **Financial Charges**
  - **Total Cost of Sales**
  - **Net Profit After Taxes**
  - **Net Cash Accruals**

- **Annexure 3 :: Assessment of Working Capital requirements**
  - **Current Assets**
  - **Gross Working Capital**
  - **Current Liabilities**
  - **Net Working Capital**
  - **Working Note for Calculation of Work-in-process**
  
- **Annexure 4 :: Sources and Disposition of Funds**

- **Annexure 5 :: Projected Balance Sheets**

- ROI (Average of Fixed Assets)
- RONW (Average of Share Capital)
- ROI (Average of Total Assets)

- **Annexure 6 :: Profitability Ratios**

- D.S.C.R
- Earnings Per Share (EPS)
- Debt Equity Ratio



- **Annexure 7 :: Break-Even Analysis**

- **Variable Cost & Expenses**
- **Semi-Variable/Semi-Fixed Expenses**
- **Profit Volume Ratio (PVR)**
- **Fixed Expenses / Cost**
- **B.E.P**

- **Annexure 8 to 11 :: Sensitivity Analysis-Price/Volume**

- **Resultant N.P.B.T**
- **Resultant D.S.C.R**
- **Resultant PV Ratio**
- **Resultant DER**
- **Resultant ROI**
- **Resultant BEP**

- **Annexure 12 :: Shareholding Pattern and Stake Status**

- **Equity Capital**
- **Preference Share Capital**

- **Annexure 13 :: Quantitative Details-Output/Sales/Stocks**

- **Determined Capacity P.A of Products/Services**
- **Achievable Efficiency/Yield % of Products/Services/Items**
- **Net Usable Load/Capacity of Products/Services/Items**
- **Expected Sales/ Revenue/ Income of Products/ Services/ Items**

- **Annexure 14** :: **Product wise Domestic Sales Realisation**
- **Annexure 15** :: **Total Raw Material Cost**
- **Annexure 16** :: **Raw Material Cost per unit**
- **Annexure 17** :: **Total Lab & ETP Chemical Cost**
- **Annexure 18** :: **Consumables, Store etc.**
- **Annexure 19** :: **Packing Material Cost**
- **Annexure 20** :: **Packing Material Cost Per Unit**

- **Annexure 21** :: **Employees Expenses**
- **Annexure 22** :: **Fuel Expenses**
- **Annexure 23** :: **Power/Electricity Expenses**
- **Annexure 24** :: **Royalty & Other Charges**
- **Annexure 25** :: **Repairs & Maintenance Expenses**
- **Annexure 26** :: **Other Manufacturing Expenses**
- **Annexure 27** :: **Administration Expenses**
- **Annexure 28** :: **Selling Expenses**

- **Annexure 29 :: Depreciation Charges – as per Books (Total)**
- **Annexure 30 :: Depreciation Charges – as per Books (P & M)**
- **Annexure 31 :: Depreciation Charges - as per IT Act WDV (Total)**
- **Annexure 32 :: Depreciation Charges - as per IT Act WDV (P & M)**
- **Annexure 33 :: Interest and Repayment - Term Loans**
- **Annexure 34 :: Tax on Profits**
- **Annexure 35 :: Projected Pay-Back Period and IRR**

## **Reasons for Buying our Report:**

- **This report helps you to identify a profitable project for investing or diversifying into by throwing light to crucial areas like industry size, market potential of the product and reasons for investing in the product**
- **This report provides vital information on the product like it's characteristics and segmentation**
- **This report helps you market and place the product correctly by identifying the target customer group of the product**

- **This report helps you understand the viability of the project by disclosing details like machinery required, project costs and snapshot of other project financials**
- **The report provides a glimpse of government regulations applicable on the industry**
- **The report provides forecasts of key parameters which helps to anticipate the industry performance and make sound business decisions**



# Our Approach:

- **Our research reports broadly cover Indian markets, present analysis, outlook and forecast for a period of five years.**
- **The market forecasts are developed on the basis of secondary research and are cross-validated through interactions with the industry players**
- **We use reliable sources of information and databases. And information from such sources is processed by us and included in the report**

## **Scope of the Report**

**The report titled “Market Survey cum Detailed Techno Economic Feasibility Report on Essential Oil .” provides an insight into Essential Oil market in India with focus on uses and applications, Manufacturing Process, Process Flow Sheets, Plant Layout and Project Financials of Essential Oil project. The report assesses the market sizing and growth of the Indian Essential Oil Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line. And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:**

- **Good Present/Future Demand**
- **Export-Import Market Potential**
- **Raw Material & Manpower Availability**
- **Project Costs and Payback Period**

**We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in the Essential Oil sector in India along with its business prospects. Through this report we have identified Essential Oil project as a lucrative investment avenue.**

# Tags

**#Essentialoil extraction      #essentialoillemongrass      #citronelloil**  
**#essentialoilcitronella    #EssentialOilLavender    #EssentialOilRosemary**  
**#essentialoilpeppermint    #aromatherapy    #essentialoilmanufacturing**  
**#essentialoils            #essentialoilbusiness            #EssentialOilMarket**  
**#EssentialOilProject      #EssentialOilProduct      #DetailedProjectReport**  
**#businessconsultant #BusinessPlan #feasibilityReport #NPCS**



***Niir Project Consultancy Services (NPCS)***  
**can provide Detailed Project Report on**

**Essential Oil (Lemongrass, Citronella, Lavender,  
Rosemary and Peppermint)**

**See more**  
**Project Reports & Profiles**  
**BOOKS**  
**Market Research Report**

*Visit us at*

[www.entrepreneurindia.co](http://www.entrepreneurindia.co)

[www.niir.org](http://www.niir.org)

**Take a look at  
Niir Project Consultancy Services  
on #Street View**

<https://goo.gl/VstWkd>

*Locate us on  
Google Maps*

<https://goo.gl/maps/BKkUtq9gevT2>

## OUR CLIENTS

Our inexhaustible Client list includes public-sector companies, Corporate Houses, Government undertaking, individual entrepreneurs, NRI, Foreign investors, non-profit organizations and educational institutions from all parts of the World. The list is just a glimpse of our esteemed & satisfied Clients.

**Click here to take a look**  
**<https://goo.gl/G3ICjV>**



## **Select and Choose the Right Business Startup for You**

### **(Instant Online Project Identification and Selection)**

**Finding the right startup business is one of the most popular subject today. Starting a business is no easy endeavor, but the time, effort, and challenges can be worth it if you succeed. To give yourself the best chance to be successful, take your time to carefully find the right business for you. We, at NPCS, endeavor to make business selection a simple and convenient step for any entrepreneur/startup. Our expert team, by capitalizing on its dexterity and decade's long experience in the field, has created a list of profitable ventures for entrepreneurs who wish to diversify or venture. The list so mentioned is updated regularly to give you a regular dose of new emerging opportunities.**

**Visit:** <https://www.entrepreneurindia.co/project-identification>

## Download Complete List of Project Reports:

### ▪ Detailed Project Reports

**Visit:- <https://www.entrepreneurindia.co/complete-project-list>**

**NPCS is manned by engineers, planners, specialists, financial experts, economic analysts and design specialists with extensive experience in the related industries.**

**Our Market Survey cum Detailed Techno Economic Feasibility Report provides an insight of market in India. The report assesses the market sizing and growth of the Industry. While expanding a current business or while venturing into new business, entrepreneurs are often faced with the dilemma of zeroing in on a suitable product/line.**

**And before diversifying/venturing into any product, they wish to study the following aspects of the identified product:**

- **Good Present/Future Demand**
- **Export-Import Market Potential**
- **Raw Material & Manpower Availability**
- **Project Costs and Payback Period**

**The detailed project report covers all aspect of business, from analyzing the market, confirming availability of various necessities such as Manufacturing Plant, Detailed Project Report, Profile, Business Plan, Industry Trends, Market Research, Survey, Manufacturing Process, Machinery, Raw Materials, Feasibility Study, Investment Opportunities, Cost and Revenue, Plant Economics, Production Schedule,**

**Working Capital Requirement, uses and applications, Plant Layout, Project Financials, Process Flow Sheet, Cost of Project, Projected Balance Sheets, Profitability Ratios, Break Even Analysis. The DPR (Detailed Project Report) is formulated by highly accomplished and experienced consultants and the market research and analysis are supported by a panel of experts and digitalized data bank.**

**We at NPCS, through our reliable expertise in the project consultancy and market research field, have demystified the situation by putting forward the emerging business opportunity in India along with its business prospects.....[Read more](#)**



# **Contact us**

## ***NIIR PROJECT CONSULTANCY SERVICES***

**106-E, Kamla Nagar, Opp. Mall ST,  
New Delhi-110007, India.**

**Email: [npcs.ei@gmail.com](mailto:npcs.ei@gmail.com) , [info@entrepreneurindia.co](mailto:info@entrepreneurindia.co)**

**Tel: +91-11-23843955, 23845654, 23845886**

**Mobile: +91-9097075054, 8800733955**

**Fax: +91-11-23845886**

**Website : [www.entrepreneurindia.co](http://www.entrepreneurindia.co) , [www.niir.org](http://www.niir.org)**

**Take a look at *NIIR PROJECT CONSULTANCY SERVICES* on #StreetView**

**<https://goo.gl/VstWkd>**



# **Niir PROJECT CONSULTANCY SERVICES**

**AN ISO 9001: 2015 CERTIFIED COMPANY**

## Who are we?

- *One of the leading reliable names in industrial world for providing the most comprehensive technical consulting services*
- *We adopt a systematic approach to provide the strong fundamental support needed for the effective delivery of services to our Clients' in India & abroad*

*We at NPCS want to grow with you by providing solutions scale to suit your new operations and help you reduce risk and give a high return on application investments. We have successfully achieved top-notch quality standards with a high level of customer appreciation resulting in long lasting relation and large amount of referral work through technological breakthrough and innovative concepts. A large number of our Indian, Overseas and NRI Clients have appreciated our expertise for excellence which speaks volumes about our commitment and dedication to every client's success.*



*We bring deep, functional expertise, but are known for our holistic perspective: we capture value across boundaries and between the silos of any organization. We have proven a multiplier effect from optimizing the sum of the parts, not just the individual pieces. We actively encourage a culture of innovation, which facilitates the development of new technologies and ensures a high quality product.*

## What do we offer?

- *Project Identification*
- *Detailed Project Reports/Pre-feasibility Reports*
- *Market Research Reports*
- *Business Plan*
- *Technology Books and Directory*
- *Industry Trend*
- *Databases on CD-ROM*
- *Laboratory Testing Services*
- *Turnkey Project Consultancy/Solutions*
- *Entrepreneur India (An Industrial Monthly Journal)*

## How are we different ?

- *We have two decades long experience in project consultancy and market research field*
- *We empower our customers with the prerequisite know-how to take sound business decisions*
- *We help catalyze business growth by providing distinctive and profound market analysis*
- *We serve a wide array of customers , from individual entrepreneurs to Corporations and Foreign Investors*
- *We use authentic & reliable sources to ensure business precision*

# Our Approach

Requirement collection

Thorough analysis of the project

Economic feasibility study of the Project

Market potential survey/research

Report Compilation

## Who do we Serve?

- Public-sector Companies
- Corporates
- Government Undertakings
- Individual Entrepreneurs
- NRI's
- Foreign Investors
- Non-profit Organizations, NBFC's
- Educational Institutions
- Embassies & Consulates
- Consultancies
- Industry / trade associations

## Sectors We Cover

- Ayurvedic And Herbal Medicines, Herbal Cosmetics
- Alcoholic And Non Alcoholic Beverages, Drinks
- Adhesives, Industrial Adhesive, Sealants, Glues, Gum & Resin
- Activated Carbon & Activated Charcoal
- Aluminium And Aluminium Extrusion Profiles & Sections,
- Bio-fertilizers And Biotechnology
- Breakfast Snacks And Cereal Food
- Bicycle Tyres & Tubes, Bicycle Parts, Bicycle Assembling

## **Sectors We Cover** *Cont...*

- Bamboo And Cane Based Projects
- Building Materials And Construction Projects
- Biodegradable & Bioplastic Based Projects
- Chemicals (Organic And Inorganic)
- Confectionery, Bakery/Baking And Other Food
- Cereal Processing
- Coconut And Coconut Based Products
- Cold Storage For Fruits & Vegetables
- Coal & Coal Byproduct

## Sectors We Cover *Cont...*

- Copper & Copper Based Projects
- Dairy/Milk Processing
- Disinfectants, Pesticides, Insecticides, Mosquito Repellents,
- Electrical, Electronic And Computer based Projects
- Essential Oils, Oils & Fats And Allied
- Engineering Goods
- Fibre Glass & Float Glass
- Fast Moving Consumer Goods
- Food, Bakery, Agro Processing



## Sectors We Cover *Cont...*

- Fruits & Vegetables Processing
- Ferro Alloys Based Projects
- Fertilizers & Biofertilizers
- Ginger & Ginger Based Projects
- Herbs And Medicinal Cultivation And Jatropha (Biofuel)
- Hotel & Hospitality Projects
- Hospital Based Projects
- Herbal Based Projects
- Inks, Stationery And Export Industries

## Sectors We Cover

*Cont...*

- Infrastructure Projects
- Jute & Jute Based Products
- Leather And Leather Based Projects
- Leisure & Entertainment Based Projects
- Livestock Farming Of Birds & Animals
- Minerals And Minerals
- Maize Processing(Wet Milling) & Maize Based Projects
- Medical Plastics, Disposables Plastic Syringe, Blood Bags
- Organic Farming, Neem Products Etc.

## Sectors We Cover *Cont...*

- Paints, Pigments, Varnish & Lacquer
- Paper And Paper Board, Paper Recycling Projects
- Printing Inks
- Packaging Based Projects
- Perfumes, Cosmetics And Flavours
- Power Generation Based Projects & Renewable Energy Based Projects
- Pharmaceuticals And Drugs
- Plantations, Farming And Cultivations
- Plastic Film, Plastic Waste And Plastic Compounds
- Plastic, PVC, PET, HDPE, LDPE Etc.

## Sectors We Cover *Cont...*

- Potato And Potato Based Projects
- Printing And Packaging
- Real Estate, Leisure And Hospitality
- Rubber And Rubber Products
- Soaps And Detergents
- Stationary Products
- Spices And Snacks Food
- Steel & Steel Products
- Textile Auxiliary And Chemicals

## Sectors We Cover *Cont...*

- Township & Residential Complex
- Textiles And Readymade Garments
- Waste Management & Recycling
- Wood & Wood Products
- Water Industry(Packaged Drinking Water & Mineral Water)
- Wire & Cable



# MARKET RESEARCH REPORTS

## Objective

- ⌘ To get a detailed scenario of the industry along with its structure and classification
- ⌘ To provide a comprehensive analysis of the industry by covering aspects like:
  - ⌘ Growth drivers of the industry
  - ⌘ Latest market trends
  - ⌘ Insights on regulatory framework
  - ⌘ SWOT Analysis
  - ⌘ Demand-Supply Situation
  - ⌘ Foreign Trade
  - ⌘ Porters 5 Forces Analysis

## Objective

- ∞ To provide forecasts of key parameters which helps to anticipate the industry performance
- ∞ To help chart growth trajectory of a business by detailing the factors that affect the industry growth
- ∞ To help an entrepreneur/manager in keeping abreast with the changes in the industry
- ∞ To evaluate the competitive landscape of the industry by detailing:
  - ∞ Key players with their market shares
  - ∞ Financial comparison of present players

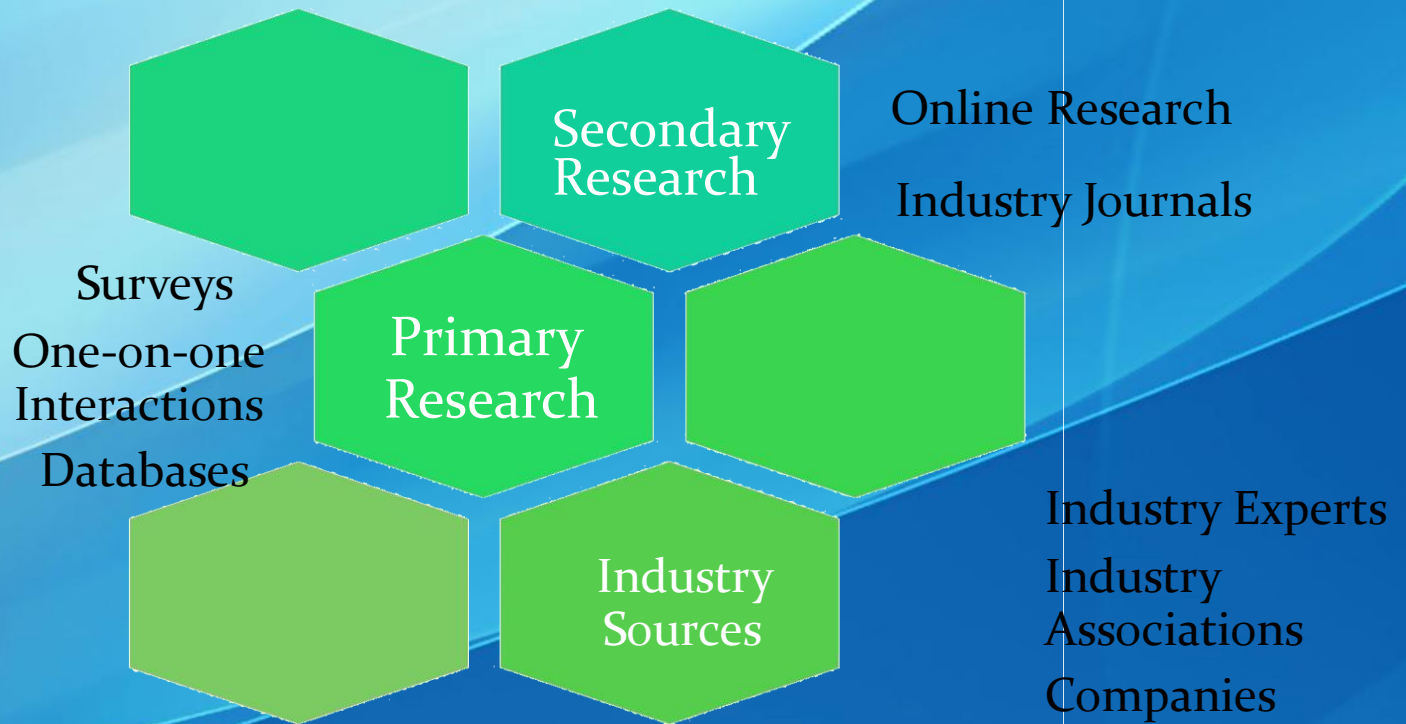


## Clientele

- ⌘Venturist/Capitalists
- ⌘Entrepreneur/Companies
- ⌘Industry Researchers
- ⌘Investment Funds
- ⌘Foreign Investors, NRI's
- ⌘Project Consultants/Chartered Accountants
- ⌘Banks
- ⌘Corporates

[Click here for list](#)

# Data Sources



# Scope & Coverage



## Our Team

- ⌘ Our research team comprises of experts from various financial fields:
- ⌘ MBA's
- ⌘ Industry Researchers
- ⌘ Financial Planners
- ⌘ Research veterans with decades of experience

# Structure of the Report

- 1. Overview
- 2. Market Analysis
  - 2.1 Growth Drivers
  - 2.2 Emerging Trends in the Industry
  - 2.3 Regulatory Framework
  - 2.4 SWOT Analysis
  - 2.5 Herfindahl–Hirschman Index (HHI)
- 3. Market Forecasts
- 4. Key Players

# Structure of the Report

*Cont*

- ⌘5. Key Financials and Analysis
  - ⌘5.1 Contact Information
  - ⌘5.2 Key Financials
  - ⌘5.3 Financial comparison
- ⌘6. Industry Size & Outlook

Take a look at *NIIR PROJECT CONSULTANCY SERVICES* on  
**#Street View**

<https://goo.gl/VstWkd>

# Contact us

## ***NIIR PROJECT CONSULTANCY SERVICES***

106-E, Kamla Nagar, Opp. Mall ST,  
New Delhi-110007, India.

Email: [npcs.ei@gmail.com](mailto:npcs.ei@gmail.com) , [info@entrepreneurindia.co](mailto:info@entrepreneurindia.co)

Tel: +91-11-23843955, 23845654, 23845886

Mobile: +91-9097075054, 8800733955

Fax: +91-11-23845886

Website : [www.entrepreneurindia.co](http://www.entrepreneurindia.co) , [www.niir.org](http://www.niir.org)

Take a look at ***NIIR PROJECT CONSULTANCY SERVICES*** on #StreetView

<https://goo.gl/VstWkd>



# Follow us

➤ <https://www.linkedin.com/company/niir-project-consultancy-services>

➤ <https://www.facebook.com/NIIR.ORG>

➤ <https://www.youtube.com/user/NIIRproject>

➤ [https://twitter.com/npcs\\_in](https://twitter.com/npcs_in)

➤ <https://www.pinterest.com/npcsindia/>

A decorative zigzag line is positioned above the main text.

# Thank You

**For more information, visit us at:**

[www.niir.org](http://www.niir.org)

[www.entrepreneurindia.co](http://www.entrepreneurindia.co)