PROJECT REPORT

Of

VETIVER OIL

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Vetiver Oil**

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

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VETIVER OIL

Introduction

Vetiver is a species of tropical grass, known as khus. There are two types of vetiver grass: one originated from North India and one from South India. It is important to distinguish between the two types as the South Indian type is domesticated and is therefore found all over the world, whereas the North Indian type is wild and can become a weed.

Vetiver essential oil, also called khus oil, is extracted from the vetiver plant, a clumpy, green grass native to India that can grow five feet high or more. Vetiver is in the same family as other grasses used for their essential oils, including lemongrass and citronella.

Vetiver oil is quite fragrant, with a distinctive sharp and earthy scent you may recognize from men's cologne. Vetiver essential oil is distilled from the vetiver plant's roots, which are aged before being soaked in water. The highly concentrated oil that is released is then skimmed off the top of the water. It's used in holistic practice for its soothing, grounding capabilities.

History of vetiver oil

Derived from the aromatic roots of the Vetiveria zizanioides (Linn), Vetiver Essential Oil has come to be known as both the **"Oil of Tranquillity**" and **"The Fragrance of the Soil**" in India and Sri Lanka, due to its grounding, sensuous, and deeply calming scent. Vetiver belongs to the Grass family, and is sometimes referred to as Vetivert and Khus.

Since ancient times, almost the entire Vetiver plant has been used for various applications including the making of perfumes, soaps, and cosmetics. Used in foods and drinks, Vetiver made a cooling beverage and sorbet flavouring. In tropical countries, Vetiver roots were traditionally used in the production of homemade evaporative

coolers, which functioned as air conditioners before the inception of electricity. Due to their coolness, the roots were ideal for use in making grass mats.

Uses of Vetiver Oil

The uses of Vetiver Oil are abundant, ranging from medicinal and odorous to cosmetic. Its many forms include oils, gels, lotions, soaps, shampoos, sprays, perfumes, and candles.

- Used in aromatherapy applications, the scent of Vetiver functions as a natural aphrodisiac, stimulating sensual desire. To ease a stressed mind, which is known to consequently relax the body and thereby boost libido, simply dilute and diffuse Vetiver Essential Oil.

- Used in cosmetic applications, Vetiver Oil can be diluted in a regular lotion or cream before being applied to the skin.

- Vetiver can be applied to the hair and scalp to soothe inflammation associated with dandruff, psoriasis, or eczema.

- Vetiver Oil is known to ease physical and mental exhaustion, accelerate the relief of aches, and have an invigorating, regenerative effect on skin.

Health benefits of vetiver oil

Vetiver essential oil provides the following health benefits:

- Enhances libido and awakens sexual desire
- Provides relief to insomnia patients
- Speeds up eradication of scars and other skin marks
- Has antiseptic properties
- Provides relief from all types of inflammation
- Improves and maintains good nerve health
- Rejuvenates the body and helps boost immunity
- Helps heal wounds by promoting growth of new tissues

How does Vetiver oil works

Since essential oils are extremely potent, vetiver oil to be diluted with a carrier oil, such as coconut oil. You can start with one drop to one to three teaspoons of carrier oil. With caution, increase the essential oil as needed.

Vetiver oil works in vapour therapy16 – it can address nervous complaints, dispel anger and irritability, and relieve insomnia this way. It can also be blended in a massage oil or diluted in the bath. Through this mode of administration, it can assist with mental and physical exhaustion, nervous complaints, rheumatism and arthritic pain, and skin healing. This essential oil also works in a cream or lotion, moisturizing and nourishing skin. It especially benefits dry, irritated, and dehydrated skin, and helps reduce wrinkles and stretch marks. On the other hand, it is generally NOT recommended to be taken internally.

Description of Vetiver oil Machines

Machinery for Vetiver oil Processing includes the following:

- Heating tank
- Furnace
- Condenser
- Separator

These Machines are used to produce Vetiver Grass oil substance from the raw material. With the help of this machine the work of Heating, formulation, preparation & separation completes in a cycle time of vetiver oil.

Vetiver oil Market Analysis

Vetiver Oil Market size may witness significant gains in the forecast timeframe owing to growing cosmetic industry.

Essential oil market is expected to surpass 370 kilo tons by 2025. Vetiver oil is extensively utilized in the perfume industry for manufacturing incense, scents and colognes. Increasing personal grooming trend owing to rising disposable incomes would propel vetiver oil market growth.

Asia-Pacific led by Japan, India and China may witness substantial gains in the forecast timeframe.

The global vetiver oil market size is expected to reach USD 88.0 million by 2027, expanding at a revenue-based CAGR of 9.4%, according to a new report by Grand View Research, Inc. The market is expected to witness surging product demand owing to its increasing applications in pharmaceutical, food and beverage, and fragrance.

Extraction of vetiver essential Oil

The techniques for extraction of essential oils from plant matter can be classified into three techniques: continuous conventional, discontinuous conventional and non-conventional. The type of extraction method used directly affects the quality, yield and odour of the essential oil. The steps below describe the mass transfer mechanism for the extraction of essential oils from plant material.

1. **Constant extraction rate** – The external surface of the particles (plant material) are completely covered with oil.
2. **Falling extraction rate** – Phase where the external surface oil has been depleted by mass transfer into the extracting fluid and the surface area of the particles are only partially covered.
3. **Diffusion period –** No oil is present on the external surface of the particle and hence diffusion occurs.

According to survey, 70% of extracted oils are extracted in the constant and falling rate extraction periods of which 50% is extracted in the constant rate period. Therefore the process can be modelled considering convective processes only. However, vetiver

roots do not easily yield oils as the oils are located in the inside root tissue and hence the slow physical process of diffusion must occur before oils are extracted.

Processing of vetiver oil

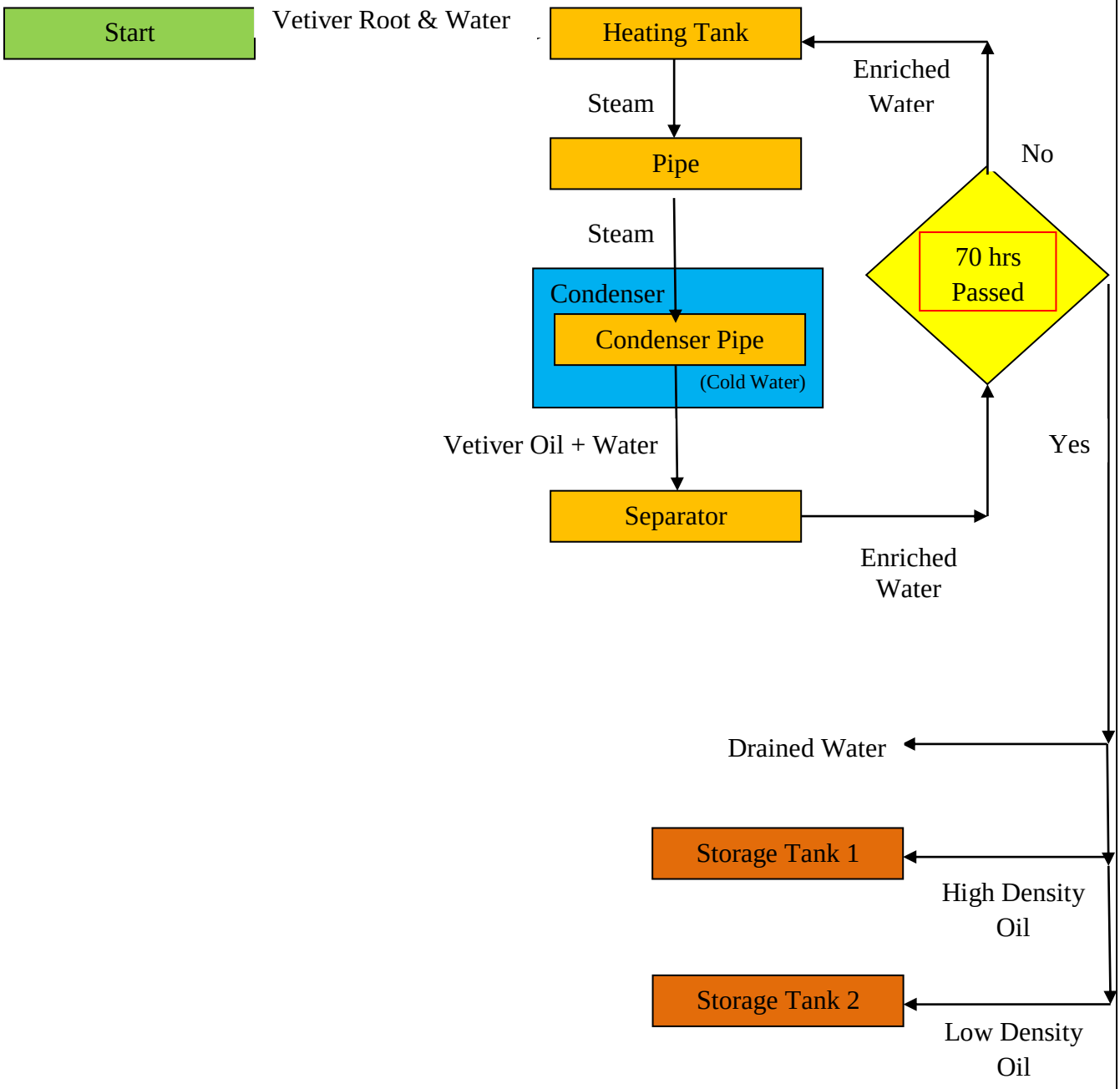
1. Employed Process

The manufacturing process utilized in this project is Distillation Process to extract Vetiver Grass's Root Oil. The Distillation Apparatus is used to obtain 2 products High Density & Low Density Vetiver Oil utilizing specialized separator.

Field Distillation Apparatus

Field Distillation Unit is used to separate the oil within the material at field side; it's a simple distillation unit which is utilized to separate oil & water within the crop, extra water is added in case of crops in order to prevent burning of crop.

It's composed of Heating Tank, Condenser, Separator, Furnace & Steam Pipe these components are fundamental requirement of a distillation system.



Process Flow Chart

2. Cultivation Procedure

Saplings are sown in field by end of January after appropriately preparing the field (Levelling & Ploughing) followed by which water is continuously supplied to field in order to ensure good growth.

The micro & macro nutrients are provided via fertilizers and manure as and when required to ensure a disease free plentiful yield. The Vetiver is an annual crop thus crops become ready for harvesting by beginning of December.

3. Harvesting Procedure

Vetiver Oil is obtained from roots thus unrooting needs to performed once crop are prepared but as shoot of Vetiver is relatively bulky cutting of shoot is performed earlier followed by careful unrooting. Both cutting and unrooting can be performed manually or by machine.

In case of machines human pulled harvesters for vetiver can be used but it's advisable to avoid any machinery while heavy machinery cannot be used as required part of crop is root which might be damaged due to machine weight.

The unrooting on the other hand can be performed by JCB's, this method is advisable as Vetiver has fibrous type roots which are likely to be damaged in manual unrooting.

The removed roots are cleaned followed by removal stock and supplied to Field Distillation Unit for extraction of oil.

4. Detailed Plant Procedure

The roots obtained from field or one purchased from other farmers is washed in a large washing tank followed by soaking of roots in same tank for a day in order to allow the roots to swell in order to allow coagulation of vetiver root oil for easy and efficient extraction.

The Vetiver Roots are boiled with water in heating tank and are boiled for 60 to 70 hrs, during this period the steam generated carries along with it Vetiver Root Oil.

This steam is transferred to condenser via steam pipe, as condenser is circulated with cooling water continuously, thus steam transferred to condenser undergoes condensation completing distillation process.

The contents (Water + Vetiver Root Oil) obtained from condenser are supplied to separator which has an outlet at centre & a tap at bottom. The liquid is allowed to settle down and as oil and water are immiscible, water settles in-between low & high density oil, and is drained by centre outlet and supplied back to heating tank; entire process is repeated for enrichment purpose.

The enrichment process continues for 60 to 70 hrs, after which high density vetiver root oil is initially obtained by pouring its content into a storage tank, once high density oil stop flowing into storage tank tap is closed and then reopened after replacing storage tank. The contents of both storage tanks are then packaged into Plastic Containers and marked appropriately with labels for sale.

Plant & machinery cost:

Machinery cost for 1 tonne Capacity plant is as follow:

Particulars	**Amount**
Distillation Tank Plant Cost	4,00,000
GST @ 18%	72,000
Total Cost	4,72,000

Land &Building required:

Land required 5 Acre & 2000 Square Feet (5 acre for field + 2000 Square Feet for plant)

Approximate rent (per acre) for the same is Rs. 10,000 Per year Annum.

Labour Requirement:

1 permanent Labour is required for the Vetiver oil unit for the full year. On the other hand Casual labour is required at the time of Planting of crop, harvesting, digging for the two times in a year (First in the start of process & other after final harvesting for digging).

Raw Material Requirement of Vetiver oil

Vetiver Grass is required as raw material for vetiver oil processing unit.

Other than this other consumables Like Fuel (Firewood or Cow Dung Cake) and Plastic Containers is also required.

Description of Crop expenditure

S.N.	Particulars	Cost Per Acre (in Rs.)
1	Water	5,000
2	Land preparation cost	1,000
3	Chemical Fertilizer cost	2,000
4	Planting Cost	2,000
5	Other expenses	5,000
6	Earthing	2000
7	Harvesting	4500
8	Digging with JCB	15000
9	Removing soil from Roots	5000
10	Roots separation & cutting	2500
Total expenditure		44,000

Note: Digging process can be done with Khus digger it includes fixed cost of Rs. 70,000 for Digger Machine & variable cost will be Rs. 5,000 for tractor.

Description of Distillation Process expenditure

S.N.	Particulars	Cost Per Batch (in Rs.)
1	Wood For fuel (25 quintals)	2,500*4 per KG= 10,000
2	Labour Charges Loading & unloading	1,000
Distillation Cost per Batch		11,000
Total batch Per Acre		2 Batch
Total Distillation process Cost Per Acre		**11,000*2=22,000**

Project assumptions

S.N.	Particulars	Description
1	Scale Of production	Large scale (5 acre Land)
2	Vetiver Roots production	1000 to 1500 KG per Acre (average 1200 KG)
2	Raw Material	Vetiver Grass's Roots (Crop Field)
3	Cycle Time	1 year (cropping to harvesting & final processing)
4	Process equipment's	(Heating Tank, Condenser, Separator, Furnace, Steam Pipe) Field Distillation Unit, Piping and Pump of 1 Tonne Capacity.
5	Consumable	Wood, Fuel (Firewood or Cow Dung Cake) and Plastic Containers
6	Area	5 Acres for crop + 2000 square feet for plant setup
7	Capital Cost	Rs. 4,00,000 to 5,00,000 for Plant & Machinery
8	Recovery	1% of input

8	Sales Revenue	Rs. 18,000 - 20,000 Per KG
9	Power Supply	2 KW connection

Note: At the time of digging waste is generated and that waste can be sold in the market as it is used for preparation of biomass briquettes and also as feeding food of animals. Revenue is approx. Rs. 2 per KG & digging process is done twice in a year and it generate approx. 2 tonne waste per round per Acre.

Other Cost

There will be one time planting material cost of Rs. 22,000 per acre in the 1st initial year.

Vetiver Oil Unit License &registration

For Proprietor:

- Obtain the GST registration.
- Additionally, obtain the Udyog Aadhar Registeration.
- Choice of a Brand Name of the product and secure the name with Trademark if required.

Implementation Schedule

S.N.	Activity	Time Required (in Months)
1	Acquisition Of premises	1
2	Construction (if Applicable)	1- 2 Months
3	Procurement & installation of Plant & Machinery	1
4	Arrangement of Finance	1
5	Requirement of required Manpower	1
	Total time Required (some activities shall run concurrently)	2-3 Months

FINANCIAL ASSISTANCE REQUIRED

Term Loan of Rs. 5.40 Lacs and Working Capital limit of Rs. 1.35 Lacs

COST OF PROJECT

PARTICULARS	AMOUNT	AMOUNT	AMOUNT
		10.00%	90.00%
Land (Lease)			
Plant & Machinery	5.44	0.54	4.90
Fixtures and Other Assets	0.56	0.06	0.50
Working capital	1.50	0.15	1.35
Total	**7.50**	**0.75**	**6.75**

MEANS OF FINANCE

PARTICULARS	AMOUNT
Own Contribution	0.75
Bank Loan	5.40
Working capital Limit	1.35
Total	**7.50**

COMPUTATION OF PRODUCTION OF VETIVER OIL

Items to be Manufactured

Vetiver Oil

Vetiver Grass production Per annum	1200	KG per Acre
Total Land for cultivation	5	Acre
Total Vetiver Grass Production per annum	6000	KG
Oil Recovery in distillation process	1%	of input
Total Oil Production per annum	60	KG

Production of Vetiver Oil

Production	Capacity	Vetiver Oil (KG)
1st year	70%	42
2nd year	75%	45
3rd year	80%	48
4th year	85%	51
5th year	90%	54

Crop Cost		
Year	**Per Acre**	**Amount (Rs. in lacs)**
1st year	44,000.00	2.20
2nd year	46,200.00	2.31
3rd year	48,510.00	2.43
4th year	50,935.50	2.55
5th year	53,482.28	2.67

Distillation cost		
Year	**Per Acre**	**Amount (Rs. in lacs)**
1st year	22,000.00	1.10
2nd year	23,100.00	1.16
3rd year	24,255.00	1.21
4th year	25,467.75	1.27
5th year	26,741.14	1.34

COMPUTATION OF SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year
Op Stock	-	1.75	1.88	2.00	2.13
Production	42.00	45.00	48.00	51.00	54.00
Less : Closing Stock	1.75	1.88	2.00	2.13	2.25
Net Sale	**40.25**	**44.88**	**47.88**	**50.88**	**53.88**
sale price per KG	20,000	20,400	20,808	21,224	21,649
Sales (in Lacs)	8.05	9.15	9.96	10.80	11.66

COMPUTATION OF BY PRODUCT SALE

Particulars	1st year	2nd year	3rd year	4th year	5th year
Capacity Utilization %	70%	75%	80%	85%	90%
waste Per Acre	4,000.00	4,000.00	4,000.00	4,000.00	4,000.00
Total Waste In KG	14,000	15,000	16,000	17,000	18,000
Net Sale	**14,000**	**15,000**	**16,000**	**17,000**	**18,000**
sale price per KG	2.00	2.10	2.21	2.32	2.43
Sales (in Lacs)	0.28	0.32	0.35	0.39	0.44

BREAK UP OF LABOUR CHARGES

Particulars	Wages Per Month	No of Employees	Total Salary
Helper	5000	1	5000
Total Salary Per Month			5000
Total Annual Labour Charges	**(in Lacs)**		**0.60**

Utility Charges

Particulars	value	Description
Power connection required	2	KWH
processing Hours per batch	60	Hours
Consumption per batch	120	Units
Total Batches	10	
Rate per Unit	7	Rs.
power Bill Per Annum	8,400	Rs.

PROJECTED PROFITABILITY STATEMENT					**(in Lacs)**
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Capacity Utilisation %	**70%**	**75%**	**80%**	**85%**	**90%**
SALES					
Gross Sale					
Vetiver Oil	8.05	9.15	9.96	10.80	11.66
Buy Product Sale	0.28	0.32	0.35	0.39	0.44
Total	**8.33**	**9.47**	**10.31**	**11.19**	**12.10**
COST OF SALES					
Crop cost	2.20	2.31	2.43	2.55	2.67
Electricity Expenses	0.08	0.09	0.10	0.11	0.12
Depreciation	0.87	0.74	0.63	0.54	0.46
Other direct cost	0.12	0.14	0.15	0.17	0.18
Repair & maintenance	0.04	0.08	0.10	0.13	0.15
One time planting Material cost	1.10				
Distillation charges	1.10	1.16	1.21	1.27	1.34
Labour	0.60	0.66	0.73	0.80	0.88
Cost of Production	6.12	5.19	5.36	5.57	5.81
Add: Opening Stock /WIP	-	0.26	0.22	0.22	0.23
Less: Closing Stock /WIP	0.26	0.22	0.22	0.23	0.24
Cost of Sales	5.87	5.22	5.35	5.56	5.80
GROSS PROFIT	**2.46**	**4.24**	**4.97**	**5.63**	**6.30**
Interest on Term Loan	0.43	0.38	0.27	0.17	0.05
Interest on working Capital	0.12	0.12	0.12	0.12	0.12
Rent	0.52	0.57	0.63	0.69	0.76
Selling & distribution expense	0.02	0.09	0.10	0.11	0.12
TOTAL	**1.09**	**1.17**	**1.13**	**1.09**	**1.05**

NET PROFIT	1.37	3.07	3.84	4.54	5.25
Taxation					0.04
PROFIT (After Tax)	1.37	3.07	3.84	4.54	5.21

PROJECTED BALANCE SHEET **(in Lacs)**

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Liabilities					
Capital					
opening balance		1.12	2.20	3.03	4.07
Add:- Own Capital	0.75				
Add:- Retained Profit	1.37	3.07	3.84	4.54	5.21
Less:- Drawings	1.00	2.00	3.00	3.50	4.00
Closing Balance	1.12	2.20	3.03	4.07	5.28
Term Loan	4.80	3.60	2.40	1.20	-
Working Capital Limit	1.35	1.35	1.35	1.35	1.35
Sundry Creditors	0.09	0.10	0.10	0.11	0.11
TOTAL :	**7.36**	**7.24**	**6.88**	**6.73**	**6.74**
Assets					
Fixed Assets (Gross)	6.00	6.00	6.00	6.00	6.00
Gross Dep.	0.87	1.62	2.25	2.79	3.26
Net Fixed Assets	**5.13**	**4.38**	**3.75**	**3.21**	**2.74**
Current Assets					
Sundry Debtors	0.35	0.79	0.86	0.93	1.01
Stock in Hand	0.81	0.99	1.03	1.08	1.13
Cash and Bank	1.08	1.08	1.24	1.51	1.86
TOTAL :	**7.36**	**7.24**	**6.88**	**6.73**	**6.74**

PROJECTED CASH FLOW STATEMENT **(in Lacs)**

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
SOURCES OF FUND					
Own Margin	0.75				
Net Profit	1.37	3.07	3.84	4.54	5.25
Depreciation & Exp. W/off	0.87	0.74	0.63	0.54	0.46
Increase in Cash Credit	1.35	-	-	-	-
Increase In Term Loan	5.40	-	-	-	-
Increase in Creditors	0.09	0.00	0.00	0.01	0.01
TOTAL :	**9.84**	**3.82**	**4.48**	**5.09**	**5.72**
APPLICATION OF FUND					
Increase in Fixed Assets	6.00				
Increase in Stock	0.81	0.18	0.05	0.05	0.05
Increase in Debtors	0.35	0.44	0.07	0.07	0.08
Repayment of Term Loan	0.60	1.20	1.20	1.20	1.20
Drawings	1.00	2.00	3.00	3.50	4.00
Taxation	-	-	-	-	0.04
TOTAL :	**8.75**	**3.82**	**4.32**	**4.82**	**5.37**
Opening Cash & Bank Balance	-	1.08	1.08	1.24	1.51
Add : Surplus	1.08	0.00	0.16	0.26	0.35
Closing Cash & Bank Balance	**1.08**	**1.08**	**1.24**	**1.51**	**1.86**

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					(In Lacs)
PARTICULARS	**1st year**	**2nd year**	**3rd year**	**4th year**	**5th year**
Finished Goods					
	0.26	0.22	0.22	0.23	0.24
Raw Material					
	0.55	0.77	0.81	0.85	0.89
Closing Stock	**0.81**	**0.99**	**1.03**	**1.08**	**1.13**

COMPUTATION OF WORKING CAPITAL	(In Lacs)
Turnover Method	
(i) Projected Sales	8.05
(ii) Working Capital Requirement	2.01
(25% of Projected Sales)	
(iii) Margin	0.40
5% of Projected Sales	
(iv) MPBF	1.61
Working Capital Required	**1.50**

COMPUTATION OF DEPRECIATION **(in Lacs)**

Description	**Plant & Machinery**	**Furniture**	**TOTAL**
Rate of Depreciation	**15.00%**	**10.00%**	
Opening Balance	-	-	-
Addition	5.44	0.56	6.00
Total	5.44	0.56	6.00
Less : Depreciation	0.82	0.06	0.87
WDV at end of Year	**4.62**	**0.50**	**5.13**
Additions During The Year	-	-	-
Total	4.62	0.50	5.13
Less : Depreciation	0.69	0.05	0.74
WDV at end of Year	**3.93**	**0.45**	**4.38**
Additions During The Year	-	-	-
Total	3.93	0.45	4.38
Less : Depreciation	0.59	0.05	0.63
WDV at end of Year	**3.34**	**0.41**	**3.75**
Additions During The Year	-	-	-
Total	3.34	0.41	3.75
Less : Depreciation	0.50	0.04	0.54
WDV at end of Year	**2.84**	**0.37**	**3.21**
Additions During The Year	-	-	-
Total	2.84	0.37	3.21
Less : Depreciation	0.43	0.04	0.46
WDV at end of Year	**2.41**	**0.33**	**2.74**
s	-	-	-
Total	2.41	0.33	2.74

Less : Depreciation	0.36	0.03	0.40
WDV at end of Year	**2.05**	**0.30**	**2.35**
Less : Depreciation	0.31	0.03	0.34
WDV at end of Year	**1.74**	**0.27**	**2.01**
Less : Depreciation	0.26	0.03	0.29
WDV at end of Year	**1.48**	**0.24**	**1.72**

CALCULATION OF D.S.C.R

PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	2.24	3.82	4.47	5.08	5.67
Interest on Term Loan	0.43	0.38	0.27	0.17	0.05
Total	2.68	4.20	4.75	5.25	5.72
REPAYMENT					
Instalment of Term Loan	0.60	1.20	1.20	1.20	1.20
Interest on Term Loan	0.43	0.38	0.27	0.17	0.05
Total	1.03	1.58	1.47	1.37	1.25
DEBT SERVICE COVERAGE RATIO	**2.59**	**2.65**	**3.22**	**3.84**	**4.58**
AVERAGE D.S.C.R.	**3.38**				

REPAYMENT SCHEDULE OF TERM LOAN

					Interest	9.00%
Year	**Particulars**	**Amount**	**Addition**	**Total**	**Interest**	**Repayment**	**Closing Balance**
ist	Opening Balance						
	1st month	-	5.40	5.40	-	-	5.40
	2nd month	5.40	-	5.40	0.04	-	5.40
	3rd month	5.40	-	5.40	0.04	-	5.40
	4th month	5.40	-	5.40	0.04		5.40
	5th month	5.40	-	5.40	0.04		5.40
	6th month	5.40	-	5.40	0.04		5.40
	7th month	5.40	-	5.40	0.04	0.100	5.30
	8th month	5.30	-	5.30	0.04	0.100	5.20
	9th month	5.20	-	5.20	0.04	0.100	5.10
	10th month	5.10	-	5.10	0.04	0.100	5.00
	11th month	5.00	-	5.00	0.04	0.100	4.90
	12th month	4.90	-	4.90	0.04	0.100	4.80
					0.43	0.600	
2nd	Opening Balance						
	1st month	4.80	-	4.80	0.04	0.100	4.70
	2nd month	4.70	-	4.70	0.04	0.100	4.60
	3rd month	4.60	-	4.60	0.03	0.100	4.50
	4th month	4.50	-	4.50	0.03	0.100	4.40
	5th month	4.40	-	4.40	0.03	0.100	4.30
	6th month	4.30	-	4.30	0.03	0.100	4.20
	7th month	4.20	-	4.20	0.03	0.100	4.10
	8th month	4.10	-	4.10	0.03	0.100	4.00
	9th month	4.00	-	4.00	0.03	0.100	3.90
	10th month	3.90	-	3.90	0.03	0.100	3.80
	11th month	3.80	-	3.80	0.03	0.100	3.70
	12th month	3.70	-	3.70	0.03	0.100	3.60

					0.38	**1.200**	
3rd	Opening Balance						
	1st month	3.60	-	3.60	0.03	0.100	3.50
	2nd month	3.50	-	3.50	0.03	0.100	3.40
	3rd month	3.40	-	3.40	0.03	0.100	3.30
	4th month	3.30	-	3.30	0.02	0.100	3.20
	5th month	3.20	-	3.20	0.02	0.100	3.10
	6th month	3.10	-	3.10	0.02	0.100	3.00
	7th month	3.00	-	3.00	0.02	0.100	2.90
	8th month	2.90	-	2.90	0.02	0.100	2.80
	9th month	2.80	-	2.80	0.02	0.100	2.70
	10th month	2.70	-	2.70	0.02	0.100	2.60
	11th month	2.60	-	2.60	0.02	0.100	2.50
	12th month	2.50	-	2.50	0.02	0.100	2.40
					0.27	**1.200**	
4th	Opening Balance						
	1st month	2.40	-	2.40	0.02	0.100	2.30
	2nd month	2.30	-	2.30	0.02	0.100	2.20
	3rd month	2.20	-	2.20	0.02	0.100	2.10
	4th month	2.10	-	2.10	0.02	0.100	2.00
	5th month	2.00	-	2.00	0.02	0.100	1.90
	6th month	1.90	-	1.90	0.01	0.100	1.80
	7th month	1.80	-	1.80	0.01	0.100	1.70
	8th month	1.70	-	1.70	0.01	0.100	1.60
	9th month	1.60	-	1.60	0.01	0.100	1.50
	10th month	1.50	-	1.50	0.01	0.100	1.40
	11th month	1.40	-	1.40	0.01	0.100	1.30
	12th month	1.30	-	1.30	0.01	0.100	1.20
					0.17	**1.200**	
5th	Opening Balance						
	1st month	1.20	-	1.20	0.01	0.100	1.10

2nd month	1.10	-	1.10	0.01	0.100	1.00
3rd month	1.00	-	1.00	0.01	0.100	0.90
4th month	0.90	-	0.90	0.01	0.100	0.80
5th month	0.80	-	0.80	0.01	0.100	0.70
6th month	0.70	-	0.70	0.01	0.100	0.60
7th month	0.60	-	0.60	0.00	0.100	0.50
8th month	0.50	-	0.50	0.00	0.100	0.40
9th month	0.40	-	0.40	0.00	0.100	0.30
10th month	0.30	-	0.30	0.00	0.100	0.20
11th month	0.20	-	0.20	0.00	0.100	0.10
12th month	0.10	-	0.10	0.00	0.100	0.00
				0.05	**1.20**	

DOOR TO DOOR	60	MONTHS
MORATORIUM PERIOD	6	MONTHS
REPAYMENT PERIOD	54	MONTHS

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