

PROJECT REPORT

Of

CIGARETTE CELLULOSE FIBRE

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding cigarette waste cellulose fibre Manufacturing unit.

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.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



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PROJECT AT GLANCE

1 Name of Proprietor/Director	XXXXXXXXXX
2 Firm Name	XXXXXXXXXX
3 Registered Address	XXXXXXXXXX
4 Nature of Activity	XXXXXXXXXX
5 Category of Applicant	XXXXXXXXXX
6 Location of Unit	XXXXXXXXXX
7 Cost of Project	20.76 Rs. In Lakhs
8 Means of Finance	
i) Own Contribution	2.08 Rs. In Lakhs
ii) Term Loan	12.20 Rs. In Lakhs
iii) Working Capital	6.49 Rs. In Lakhs
9 Debt Service Coverage Ratio	3.50
10 Break Even Point	36%
11 Power Requirement	18 KW
12 Employment	10 Persons
13 Major Raw Materials	Cigarette butts and biodegradable chemicals
14 Details of Cost of Project & Means of Finance	

Cost of Project	Amount in Lacs
Particulars	Amount
Land and building	Owned/Leased
Plant & Machinery	12.05
Furniture & Fixture	-
Other Misc Assets	1.50
Working Capital Requirement	7.21
Total	20.76

Means of Finance	Amount
Particulars	Amount
Own Contribution	2.08
Term Loan	12.20
Working capital Loan	6.49
Total	20.76

1. INTRODUCTION



Every year, trillions of cigarette butts end up in the environment, where they leech nicotine and heavy metals before decomposing into microplastic pollution. Every year, around 6.5 trillion cigarettes are purchased by smokers all over the world. Every day, that's 18 billion. When a cigarette is smoked, the majority of the guts and paper wrapping dissolve, but not everything is burned. There are billions of cigarette filters—also known as butts or ends—left over, with just about a third of them ending up in the trash. The rest are thrown into the street or out a window carelessly. Because cigarette butts, which are typically thrown on the ground or into common trash, may include cigarette pollutants and chemicals created during combustion, they have been identified as harmful residues. As a result, pollutants in cigarette butts can be washed into surface water by rain, polluting the ecosystem. All leftovers must be disposed of in an environmentally acceptable manner in Brazil, according to the National Policy on Solid Waste. Despite the fact that cigarette butts are not specifically listed in the law, they may be regarded as hazardous waste due to their features. Alkaline pulping was used to develop a cellulose pulp production process from cigarette butts at the University of Brasilia. This method is given as an alternative to a more environmentally responsible final disposal of the residue. A dark liquor is produced throughout the procedure, which was discovered to contain lignin, carbonyls, metals, nicotine, and particular tobacco nitrosamines.

Every year, around 100 billion cigarette butts are discarded in India's landfills. The cigarette filter is constructed of cellulose acetate, a type of non-biodegradable plastic that takes over ten years to totally degrade. As a result, cigarette waste is not only harmful to one's health but also to the environment. When cigarette trash is collected, it is separated: the tobacco that is typically left behind, as well as the paper that covers the cigarette butt, are degraded and used to produce manure, while the filter is recycled through a treatment process. The waste, mainly ash, tobacco, paper and the filter, is then separated manually. The paper and tobacco are converted into manure and the filters are treated and then made into cushions, toys and mosquito repellents. The cellulose fibres market is a high-capital-intensive industry that necessitates specialised knowledge. The market's players are always working on new product and technology advancements through research and development. The industry's key hurdles are fluctuating raw material prices, strict forestry and environmental regulations, and falling cotton production.

2. PRODUCT DESCRIPTION

2.1 PRODUCT USES

Due to their similar qualities to designed fibres, cellulose fibres are used primarily in the textile sector, as chemical filters, and as fibre-reinforcement composites. They are also another alternative for bio composites and polymer composites. It's also used to fill toys in the soft toy business.

2.2 MANUFACTURING PROCESS

The paper wrapping of a cigarette burns and disintegrates after use, but the filters, sometimes known as stubs or butts, are discarded on the streets. Only about a third makes it to the trash can, according to reports. Upcycle everything that's left over after a cigarette is smoked to make goods ranging from pillows to soft toys. The group also employs a lot of people as a result of its long-term initiatives. This process can be broken down into the following steps:

- **Raw Material collection-** At first collect cigarette waste from the streets, offices and other places collected in Vbins and in turn ensure the vendors a rate of Rs 250 for a kilo of cigarette butts.
- **Segregation-** The waste, mainly ash, tobacco, paper and the filter, is then separated manually. The paper and tobacco are converted into manure and the filters are treated and then made into cushions, toys and mosquito repellents. The procured cigarette butts are separated into three categories i.e. cellulose acetate, paper covering and leftover tobacco manually with necessary precautionary measures like gloves, masks and thread cutters in place for the workers. The butts are opened manually and the fibre like material is moved forward for fibre making process.
- **Shredding-** The cellulose acetate is shredded by an industrial shredder.
- **Treating-** The shredded cellulose is then treated using a biodegradable chemical composition for 24- 36 hours. After a thorough quality check, the cellulose acetate is shredded by an industrial shredder, treated for 24-36 hours with a biodegradable chemical composition.
- **Drying-** The cleaned cellulose is then dried for further process.
- **Fibre Opening-** In this step the cellulose is then opened and loosened to look like sponge fibre which is used to fill cushions or soft toys. Carded by a carding machine to enhance fibre softness, and manufactured into various products such as handicrafts, cushions, mattresses, and soft toys."
- **Packaging-** The loosened fibre is then packaged for further usage.

3. PROJECT COMPONENTS

3.1 Land & Building

The land required for this manufacturing unit will be approx. around 1200 square feet. Land Purchase and Building Civil Work Cost have not been considered as part of the cost of project. It is expected that the premises will be on rental and approximate rentals assumed of the same will be Rs.30,000 per month.

- **Workshop Area-** This area includes the setup and foundation space for all equipment's, work floor area, etc. Total workshop area is approx.600 Sqft.

- Inventory Area- This area includes the storage space for all the raw materials and finished goods. Total inventory area is approx. 300 Sqft.
- Office Area – This space includes staff working region, their accommodation space. Total workshop area is approx. 200 Sqft. This may be considered above the ground floor.
- Parking Space, Electric Mounting Space, and Others. This could be approx. 100 Sqft.

Land and building requirement may vary depending on the size of project.

3.2 Plant & Machinery

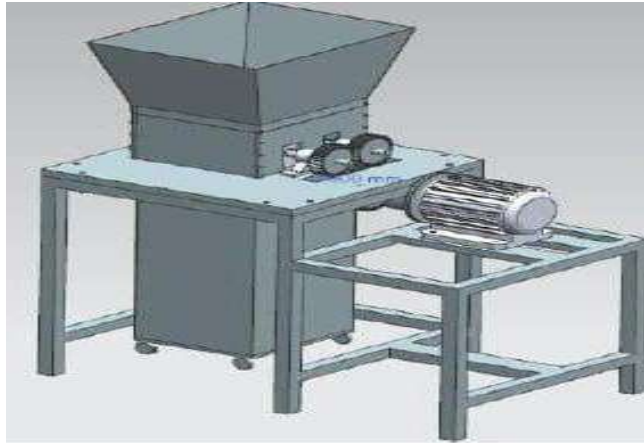
- **Fiber Cleaning Machine:** It is the initial stage of processing fibre and it removes wastes separately and pure fibres are used for next process.



- **Centrifugal Dryer:** A centrifugal dryer is used to remove excess water, oils, rinses or paints from the processed workpieces.



- **Shredder Machine:** A shredder is a machine that facilitates the shredding of articles into small pieces so that they are useless and unreadable.



- **Fiber Opening Carding Machine:** The machine used to open treated fiber into loosed shaggy soft material.



Additional Machinery:

- **Weighing machine**
- **Conveyors**

Machine	Quantity	Price
Fiber Cleaning Machine	1	1,20,000
Centrifugal Dryer	1	1,80,000
Shredder Machine	1	5,58,000
Fiber Opening Carding Machine	1	3,47,000
TOTAL		12,05,000

Note: Total Machinery cost shall be Rs 12.05 lakhs (Approx.) including GST and Transportation Cost.

4 LICENSE & APPROVALS

Basic registration required in this project:

- MSME Udyam registration
- GST registration
- NOC for fire safety board
- NOC from Pollution Control Board
- Trade License
- Factory License (Optional)
- Import/Export License (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if required.

Projected Profitability

<u>PROJECTED PROFITABILITY STATEMENT</u>					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
Capacity Utilisation %	50%	55%	60%	65%	70%
<u>SALES</u>					
Gross Sale					
Cellulose Fibre	84.38	99.58	113.83	129.87	146.92
By Product	0.16	0.20	0.22	0.23	0.25
Total	84.55	99.78	114.04	130.10	147.17
<u>COST OF SALES</u>					
Raw Material Consumed	51.84	60.19	69.12	78.62	88.70
Electricity Expenses	1.73	1.90	2.07	2.25	2.42
Depreciation	2.03	1.73	1.47	1.25	1.06
Wages & labour	8.28	8.45	9.12	10.22	11.75
Repair & maintenance	1.69	2.00	2.28	2.60	2.94
Packaging	1.94	2.99	3.88	4.55	5.15
Cost of Production	67.52	77.25	87.94	99.49	112.03
Add: Opening Stock	-	1.58	1.80	2.05	2.32
Less: Closing Stock	1.58	1.80	2.05	2.32	2.61
Cost of Sales	65.94	77.03	87.69	99.22	111.73
GROSS PROFIT	18.61	22.75	26.35	30.88	35.44
	22.01%	22.80%	23.11%	23.74%	24.08%
Salary to Staff	5.28	6.60	7.52	8.58	9.01
Interest on Term Loan	1.20	1.06	0.76	0.46	0.16
Interest on working Capital	0.71	0.71	0.71	0.71	0.71
Rent	3.60	4.14	4.76	5.48	6.30
Selling & Administrative Exp.	2.54	2.99	3.42	3.90	4.42
TOTAL	13.33	15.50	17.18	19.13	20.59
NET PROFIT	5.28	7.25	9.17	11.75	14.85
	6.24%	7.26%	8.04%	9.03%	10.09%
Taxation	0.06	0.47	0.87	0.86	1.82
PROFIT (After Tax)	5.22	6.78	8.30	10.90	13.02

Projected Balance Sheet

<u>PROJECTED BALANCE SHEET</u>					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>Liabilities</u>					
Capital					
Opening balance		3.80	5.38	7.88	10.47
<i>Add:- Own Capital</i>	2.08				
Add:- Retained Profit	5.22	6.78	8.30	10.90	13.02
Less:- Drawings	3.50	5.20	5.80	8.30	9.95
Closing Balance	3.80	5.38	7.88	10.47	13.55
Term Loan	10.84	8.13	5.42	2.71	-
Working Capital Limit	6.49	6.49	6.49	6.49	6.49
Sundry Creditors	1.73	2.01	2.30	2.62	2.96
Provisions & Other Liability	0.40	0.48	0.58	0.80	0.96
TOTAL :	23.25	22.48	22.67	23.10	23.95
<u>Assets</u>					
Fixed Assets (Gross)					
	13.55	13.55	13.55	13.55	13.55
Gross Dep.	2.03	3.76	5.23	6.48	7.54
Net Fixed Assets	11.52	9.79	8.32	7.07	6.01
Current Assets					
Sundry Debtors	5.64	6.65	7.60	8.67	9.81
Stock in Hand	3.30	3.81	4.36	4.94	5.57
Cash and Bank	0.30	0.13	0.19	0.11	0.16
Loans & Advances /Other Current Assets	2.50	2.10	2.20	2.30	2.40
TOTAL :	23.25	22.48	22.67	23.10	23.95

Projected Cash Flow Statement

<u>PROJECTED CASH FLOW STATEMENT</u>					(in Lacs)
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
<u>SOURCES OF FUND</u>					
Own Margin	2.08				
Net Profit	5.28	7.25	9.17	11.75	14.85
Depreciation & Exp. W/off	2.03	1.73	1.47	1.25	1.06
Increase in Cash Credit	6.49	-	-	-	-
Increase In Term Loan	12.20	-	-	-	-
Increase in Creditors	1.73	0.28	0.30	0.32	0.34
Increase in Provisions & Oth labilities	0.40	0.08	0.10	0.22	0.16
	-				
TOTAL :	30.20	9.33	11.03	13.54	16.40
<u>APPLICATION OF FUND</u>					
Increase in Fixed Assets	13.55				
Increase in Stock	3.30	0.51	0.55	0.59	0.63
Increase in Debtors	5.64	1.02	0.95	1.07	1.14
Repayment of Term Loan	1.36	2.71	2.71	2.71	2.71
Loans & Advances /Other Current Assets	2.50	-			
	2.50	0.40	0.10	0.10	0.10
Drawings	3.50	5.20	5.80	8.30	9.95
Taxation	0.06	0.47	0.87	0.86	1.82
TOTAL :	29.90	9.50	10.98	13.63	16.35
Opening Cash & Bank Balance	-	0.30	0.13	0.19	0.11
Add : Surplus	0.30	(0.17)	0.06	(0.08)	0.05
Closing Cash & Bank Balance	0.30	0.13	0.19	0.11	0.16

DSCR

<u>CALCULATION OF D.S.C.R</u>					
PARTICULARS	1st year	2nd year	3rd year	4th year	5th year
CASH ACCRUALS	7.25	8.51	9.77	12.14	14.08
Interest on Term Loan	1.20	1.06	0.76	0.46	0.16
Total	8.45	9.56	10.53	12.60	14.25
REPAYMENT					
Instalment of Term Loan	1.36	2.71	2.71	2.71	2.71
Interest on Term Loan	1.20	1.06	0.76	0.46	0.16
Total	2.55	3.77	3.47	3.17	2.87
DEBT SERVICE COVERAGE RATIO	3.31	2.54	3.04	3.98	4.96
AVERAGE D.S.C.R.					3.50

Repayment schedule

REPAYMENT SCHEDULE OF TERM LOAN							
					Interest	11.00%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	Closing Balance
1st	Opening Balance						
	1st month	-	12.20	12.20	-	-	12.20
	2nd month	12.20	-	12.20	0.11	-	12.20
	3rd month	12.20	-	12.20	0.11	-	12.20
	4th month	12.20	-	12.20	0.11		12.20
	5th month	12.20	-	12.20	0.11		12.20
	6th month	12.20	-	12.20	0.11		12.20
	7th month	12.20	-	12.20	0.11	0.23	11.97
	8th month	11.97	-	11.97	0.11	0.23	11.74
	9th month	11.74	-	11.74	0.11	0.23	11.52
	10th month	11.52	-	11.52	0.11	0.23	11.29
	11th month	11.29	-	11.29	0.10	0.23	11.07
	12th month	11.07	-	11.07	0.10	0.23	10.84
					1.20	1.36	
2nd	Opening Balance						
	1st month	10.84	-	10.84	0.10	0.23	10.61
	2nd month	10.61	-	10.61	0.10	0.23	10.39
	3rd month	10.39	-	10.39	0.10	0.23	10.16
	4th month	10.16	-	10.16	0.09	0.23	9.94
	5th month	9.94	-	9.94	0.09	0.23	9.71
	6th month	9.71	-	9.71	0.09	0.23	9.48

	7th month	9.48	-	9.48	0.09	0.23	9.26
	8th month	9.26	-	9.26	0.08	0.23	9.03
	9th month	9.03	-	9.03	0.08	0.23	8.81
	10th month	8.81	-	8.81	0.08	0.23	8.58
	11th month	8.58	-	8.58	0.08	0.23	8.36
	12th month	8.36	-	8.36	0.08	0.23	8.13
					1.06	2.71	
3rd	Opening Balance						
	1st month	8.13	-	8.13	0.07	0.23	7.90
	2nd month	7.90	-	7.90	0.07	0.23	7.68
	3rd month	7.68	-	7.68	0.07	0.23	7.45
	4th month	7.45	-	7.45	0.07	0.23	7.23
	5th month	7.23	-	7.23	0.07	0.23	7.00
	6th month	7.00	-	7.00	0.06	0.23	6.77
	7th month	6.77	-	6.77	0.06	0.23	6.55
	8th month	6.55	-	6.55	0.06	0.23	6.32
	9th month	6.32	-	6.32	0.06	0.23	6.10
	10th month	6.10	-	6.10	0.06	0.23	5.87
	11th month	5.87	-	5.87	0.05	0.23	5.65
	12th month	5.65	-	5.65	0.05	0.23	5.42
					0.76	2.71	
4th	Opening Balance						
	1st month	5.42	-	5.42	0.05	0.23	5.19
	2nd month	5.19	-	5.19	0.05	0.23	4.97
	3rd month	4.97	-	4.97	0.05	0.23	4.74

	4th month	4.74	-	4.74	0.04	0.23	4.52
	5th month	4.52	-	4.52	0.04	0.23	4.29
	6th month	4.29	-	4.29	0.04	0.23	4.06
	7th month	4.06	-	4.06	0.04	0.23	3.84
	8th month	3.84	-	3.84	0.04	0.23	3.61
	9th month	3.61	-	3.61	0.03	0.23	3.39
	10th month	3.39	-	3.39	0.03	0.23	3.16
	11th month	3.16	-	3.16	0.03	0.23	2.94
	12th month	2.94	-	2.94	0.03	0.23	2.71
					0.46	2.71	
5th	Opening Balance						
	1st month	2.71	-	2.71	0.02	0.23	2.48
	2nd month	2.48	-	2.48	0.02	0.23	2.26
	3rd month	2.26	-	2.26	0.02	0.23	2.03
	4th month	2.03	-	2.03	0.02	0.23	1.81
	5th month	1.81	-	1.81	0.02	0.23	1.58
	6th month	1.58	-	1.58	0.01	0.23	1.35
	7th month	1.35	-	1.35	0.01	0.23	1.13
	8th month	1.13	-	1.13	0.01	0.23	0.90
	9th month	0.90	-	0.90	0.01	0.23	0.68
	10th month	0.68	-	0.68	0.01	0.23	0.45
	11th month	0.45	-	0.45	0.00	0.23	0.23
	12th month	0.23	-	0.23	0.00	0.23	-
					0.16	2.71	
	DOOR TO DOOR MORATORIUM PERIOD	60		MONTHS			
		6		MONTHS			
	REPAYMENT PERIOD	54		MONTHS			

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