

PROJECT REPORT

Of

STABLE BLEACHING POWDER

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Stable bleaching powder**.

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 A GLANCE

- 1 Name of the Entrepreneur : xxxxxxxxx
- 2 Constitution (legal Status) : xxxxxxxxx
- 3 Father / Spouse Name : xxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxxx
Pin: xxxxxxx
Mobile : xxxxxxx
- State: xxxxxxxxx
- 5 Product and By Product : **STABLE BLEACHING POWDER**
- 6 Name of the project / business activity proposed : **STABLE BLEACHING POWDER UNIT**
- 7 Cost of Project : Rs.25.56 Lakhs
- 8 Means of Finance
Term Loan : Rs.18 Lakhs
Own Capital : Rs.2.56 Lakhs
Working capital : Rs.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.01
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 44%
- 13 Employment : 8 Persons
- 14 Power Requirement : 20.00 HP
- 15 Major Raw materials : High grade Lime and Chlorine
- 16 Estimated Annual Sales Turnover (Max Capacity) : 104.07 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
	Own/Rented
Land	3.00
Building / Shed 800 Sq ft	16.00
Plant & Machinery	1.00
Furniture & Fixtures	5.56
Working Capital	25.56
Total	25.56

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.56
Working Capital(Finance)	5.00
Term Loan	18.00
Total	25.56

STABLE BLEACHING POWDER

Introduction: Stable Bleaching Powder (Calcium Hypochlorite) is a widely used chemical. It decomposes on contact with water, releasing chlorine at the point of application. This makes it a strong oxidising, bleaching and disinfecting agent. Bleaching powder is basically a bleaching agent. It finds application as a bleaching agent in Textile Mills, Hand Looms and Power Looms, Hosiery, Laundry, Paper, Soap and Silicate manufacturing and as oxidizing agent in organic synthesis. It is not for Medicinal Use. Bleaching powder also known as chlorinated lime is a yellowish-white powder easily soluble in water. The chlorine content of bleaching powder varies from 35 – 40%. If temperature of lime kept between 30°C – 40°C bleaching powder with available chlorine upto 40% is obtained. It is not hygroscopic, if kept under 40°C. It is mainly used as a bleaching agent and as a disinfectant.



Uses & Market Potential: The major use of bleaching powder is in paper industry, textile industry and oil industry. It is also used in all chemical industry where bleaching is required. Disinfecting and deodorizing in food processing, beverage and sugar industries. Calcium hypochlorite is extensively used as a chlorine compound, which is highly effective against several microorganisms such as algae, bacteria, fungi, slime and other harmful and objectionable microorganisms which exist in the environment. Calcium hypochlorite is one of the most widely used bleaching, sanitation and

disinfecting agent in the world. It is an integral component of bleaching powder which also includes calcium chloride and slaked lime.

The principal consumers of bleaching powder are paper industries, textile industries, oil installation, fertilizer units, tea gardens, PHE, railway, hospitals and municipal corporations. It has been estimated that the requirement of bleaching powder in entire N.E. Region is around 3500 MT per annum.

Raw Material: The two main raw materials required for the manufacturing of bleaching powder are high grade lime and chlorine. Chlorine is available as a by product during the electrolysis of brine. When lime is processed with chlorine it has to be free from hydrogen to avoid explosions in the reaction chamber. The lime quality used is utmost importance.

Machinery & equipments: Basic machines & equipments are as follows:

S No.	Machine	Unit	Price
1.	Chlorinator with separator, agitator	2	750000
2.	Reduction gear box	2	200000
3.	Slipring motor	2	150000
4.	Chain & pulley block	1	250000
5.	Lime storage tank	1	100000
6.	Lime storage tank	2	100000
7.	Vacuum pump with motor	2	50000
	Total Amount		1600000

Manufacturing Process: The process of manufacture of bleaching powder is as per Hasen Clever Process of manufacturing Bleaching Powder. In this process there are cast iron cylinders operating in series with hydrated lime and chlorine being fed counter current to each other. The cylinders are provided with rotating blades and are arranged horizontally one above the

other the rotating blades act both as mixed and conveyors of the inside mass. Hydrated lime is charged at one end of the top most cylinder while chlorine is introduced at the other end of bottom most cylinder with the rotation of the blades there is an intimate mixing of chlorine and lime with simultaneous movement of slaked lime counter current to chlorine gas. The chlorinated lime is discharged from the bottom cylinder and the un-reacted chlorine is recovered from the top cylinder and recycled along with the fresh chlorine. The bleaching powder discharged is stored in cast iron drums and wood barrels. To increase the storage life it is mixed with quick lime to yield tropical bleach containing 25% of available chlorine.

Area:

The industrial setup requires space for Inventory, workshop or manufacturing area, space for power supply utilities and auxiliary like Generator setup. Also some of the area of building is required for office staff facilities, documentation, office furniture, etc. Thus, the approximate total area required for complete industrial setup is 1000 to 1500Sqft. Civil work cost will be Rs 3 Lac (Approx.)

Power Requirement: The power consumption required to run all the machinery could be approximated as 20hp

Manpower Requirement: There are requirement of skilled machine operators to run the machine set. Experience quality engineers are required for desired quality control. Some helpers are also required to transfer the material from one work station to other. Office staffs are required to maintain the documentation. The approximate manpower required is 8 including 1 Supervisor, 1 Plant operator, 1 unskilled worker, 1 Helper and 1 Security guard. 3 Skilled worker including Accountant, Manager and Sales person.

Bank Term Loan: Rate of Interest is assumed to be at 11%

Depreciation: Depreciation has been calculated as per the Provisions of Income Tax Act, 1961

Approvals & Registration Requirement:

Basic registration required in this project:

- GST Registration
- Udyog Aadhar Registration (Optional)
- Choice of a Brand Name of the product and secure the name with Trademark if require.

Implementation Schedule:

S No.	Activity	Time required
1.	Acquisition of premises	1-2 Months
2.	Procurement & installation of Plant & Machinery	1-2 Months
3.	Arrangement of Finance	1.5-2 Months
4.	Requirement of required Manpower	1 Month
5.	Commercial Trial Runs	1 Month
	Total time Required (some activities shall run concurrently)	5-6 Months

FINANCIALS

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	2.56	-			
Reserve & Surplus	4.21	5.32	6.20	8.37	10.23
Depriciation & Exp. W/off	2.80	2.40	2.06	1.77	1.52
Increase In Cash Credit	5.00				
Increase In Term Loan	18.00	-	-	-	-
Increase in Creditors	0.82	0.11	0.07	0.07	0.07
TOTAL :	33.39	7.83	8.33	10.21	11.82
APPLICATION OF FUND					
Increase in Fixed Assets	20.00	-	-	-	-
Increase in Stock	4.62	0.60	0.54	0.56	0.57
Increase in Debtors	2.14	0.39	0.30	0.31	0.33
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Taxation	-	0.53	0.62	0.84	1.02
Drawings	1.50	2.00	2.50	4.00	5.50
TOTAL :	30.26	7.52	7.96	9.71	11.43
Opening Cash & Bank Balance	-	3.13	3.43	3.80	4.30
Add : Surplus	3.13	0.31	0.37	0.50	0.39
Closing Cash & Bank Balance	3.13	3.43	3.80	4.30	4.69

PROJECTED BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	5.27	8.05	11.13	14.67
Add: Additions	2.56	-	-	-	-
Add: Net Profit	4.21	4.79	5.58	7.53	9.21
Less: Drawings	1.50	2.00	2.50	4.00	5.50
Closing Balance	5.27	8.05	11.13	14.67	18.37
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	16.00	12.00	8.00	4.00	-
Sundry Creditors	0.82	0.93	1.00	1.07	1.15
TOTAL :	27.09	25.99	25.13	24.74	24.52
APPLICATION OF FUND					
Fixed Assets (Gross)	20.00	20.00	20.00	20.00	20.00
Gross Dep.	2.80	5.20	7.26	9.02	10.54
Net Fixed Assets	17.20	14.80	12.74	10.98	9.46
Current Assets					
Sundry Debtors	2.14	2.53	2.82	3.14	3.47
Stock in Hand	4.62	5.23	5.76	6.32	6.89
Cash and Bank	3.13	3.43	3.80	4.30	4.69
TOTAL :	27.09	25.99	25.13	24.74	24.52

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	64.13	75.76	84.75	94.19	104.07
Total (A)	64.13	75.76	84.75	94.19	104.07
B) COST OF SALES					
Raw Material Consumed	35.10	39.93	43.00	46.07	49.14
Electricity Expenses	1.93	2.10	2.26	2.42	2.58
Repair & Maintenance	5.77	6.06	7.63	8.48	9.37
Labour & Wages	6.43	7.58	9.10	10.92	13.10
Depreciation	2.80	2.40	2.06	1.77	1.52
Cost of Production	52.03	58.07	64.04	69.65	75.70
Add: Opening Stock /WIP	-	2.87	3.23	3.61	4.02
Less: Closing Stock /WIP	2.87	3.23	3.61	4.02	4.44
Cost of Sales (B)	49.16	57.70	63.66	69.25	75.28
C) GROSS PROFIT (A-B)	14.96	18.06	21.09	24.94	28.79
	23.33%	23.83%	24.89%	26.48%	27.66%
D) Bank Interest (Term Loan)	1.95	1.60	1.16	0.72	0.28
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	5.04	6.05	7.26	8.71	10.45
F) Selling & Adm Expenses Exp.	3.21	4.55	5.93	6.59	7.29
TOTAL (D+E)	10.75	12.74	14.89	16.57	18.56
H) NET PROFIT	4.21	5.32	6.20	8.37	10.23
	6.6%	7.0%	7.3%	8.9%	9.8%
I) Taxation	-	0.53	0.62	0.84	1.02
J) PROFIT (After Tax)	4.21	4.79	5.58	7.53	9.21

COMPUTATION OF MAKING OF STABLE BLEACHING POWDER			
Item to be Manufactured Stable Bleaching Powder			
Manufacturing Capacity per day		1,500	Kg
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		4,50,000	Kg
Total Production per Annum		4,50,000	Kg
Year		Capacity	BLEACHING
		Utilisation	
I		60%	2,70,000.00
II		65%	2,92,500.00
III		70%	3,15,000.00
IV		75%	3,37,500.00
V		80%	3,60,000.00

COMPUTATION OF RAW MATERIAL					
Item Name		Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
Slaked Lime		400.00	MT	4,000.00	16,00,000.00
Chlorine gas		200.00	MT	20,000.00	40,00,000.00
Packing material		Lumsum			2,50,000.00
Total					58,50,000.00
Total Raw material in Rs lacs					58.50

Raw Material Consumed	Capacity Utilisation		Amount (Rs.)		
I	60%		35.10		
II	65%		39.93	5% Increase in Cost	
III	70%		43.00	5% Increase in Cost	
IV	75%		46.07	5% Increase in Cost	
V	80%		49.14	5% Increase in Cost	

COMPUTATION OF SALE					
Particulars	I	II	III	IV	V
Op Stock	-	13,500.00	14,625.00	15,750.00	16,875.00
Production	2,70,000.00	2,92,500.00	3,15,000.00	3,37,500.00	3,60,000.00
	2,70,000.00	3,06,000.00	3,29,625.00	3,53,250.00	3,76,875.00
Less : Closing Stock(15 Days)	13,500.00	14,625.00	15,750.00	16,875.00	18,000.00
Net Sale	2,56,500.00	2,91,375.00	3,13,875.00	3,36,375.00	3,58,875.00
Sale Price per Kg	25.00	26.00	27.00	28.00	29.00
Sale (in Lacs)	64.13	75.76	84.75	94.19	104.07

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(15Days requirement)	2.87	3.23	3.61	4.02	4.44
Raw Material					
(15 Days requirement)	1.76	2.00	2.15	2.30	2.46
Closing Stock	4.62	5.23	5.76	6.32	6.89

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	4.62		
Less:			
Sundry Creditors	0.82		
Paid Stock	3.80	0.38	3.42
Sundry Debtors	2.14	0.21	1.92
Working Capital Requirement			5.35
Margin			0.59
MPBF			5.35
Working Capital Demand			5.00

BREAK UP OF LABOUR				
Particulars	Wages Per Month	No of Employees	Total Salary	
Supervisor	15,000.00	1	15,000.00	
Plant Operator	12,000.00	1	12,000.00	
Unskilled Worker	10,000.00	1	10,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
				51,000.00
Add: 5% Fringe Benefit				2,550.00
Total Labour Cost Per Month				53,550.00
Total Labour Cost for the year (In Rs. Lakhs)		5		6.43

BREAK UP OF SALARY				
Particulars	Salary Per Month	No of Employees	Total Salary	
Manager	12,000.00	1	12,000.00	
Accountant cum store keeper	16,000.00	1	16,000.00	
Sales	12,000.00	1	12,000.00	
Total Salary Per Month				40,000.00
Add: 5% Fringe Benefit				2,000.00
Total Salary for the month				42,000.00
Total Salary for the year (In Rs. Lakhs)		3		5.04

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		10.00%	15.00%	10.00%	
Opening Balance	Leased		-	-	-
Addition	-	3.00	16.00	1.00	20.00
	-	3.00	16.00	1.00	20.00
		-	-	-	
TOTAL		3.00	16.00	1.00	20.00
Less : Depreciation	-	0.30	2.40	0.10	2.80
WDV at end of Ist year	-	2.70	13.60	0.90	17.20
Additions During The Year	-	-	-	-	-
	-	2.70	13.60	0.90	17.20
Less : Depreciation	-	0.27	2.04	0.09	2.40
WDV at end of IIInd Year	-	2.43	11.56	0.81	14.80
Additions During The Year	-	-	-	-	-
	-	2.43	11.56	0.81	14.80
Less : Depreciation	-	0.24	1.73	0.08	2.06
WDV at end of IIIrd year	-	2.19	9.83	0.73	12.74
Additions During The Year	-	-	-	-	-
	-	2.19	9.83	0.73	12.74
Less : Depreciation	-	0.22	1.47	0.07	1.77
WDV at end of IV year	-	1.97	8.35	0.66	10.98
Additions During The Year	-	-	-	-	-
	-	1.97	8.35	0.66	10.98
Less : Depreciation	-	0.20	1.25	0.07	1.52
WDV at end of Vth year	-	1.77	7.10	0.59	9.46

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	18.00	18.00	0.50	-	18.00
	IInd Quarter	18.00	-	18.00	0.50	-	18.00
	IIIRD Quarter	18.00	-	18.00	0.50	1.00	17.00
	Ivth Quarter	17.00	-	17.00	0.47	1.00	16.00
					1.95	2.00	
II	Opening Balance						
	Ist Quarter	16.00	-	16.00	0.44	1.00	15.00
	IInd Quarter	15.00	-	15.00	0.41	1.00	14.00
	IIIRD Quarter	14.00	-	14.00	0.39	1.00	13.00
	Ivth Quarter	13.00		13.00	0.36	1.00	12.00
					1.60	4.00	
III	Opening Balance						
	Ist Quarter	12.00	-	12.00	0.33	1.00	11.00
	IInd Quarter	11.00	-	11.00	0.30	1.00	10.00
	IIIRD Quarter	10.00	-	10.00	0.28	1.00	9.00
	Ivth Quarter	9.00		9.00	0.25	1.00	8.00
					1.16	4.00	
IV	Opening Balance						
	Ist Quarter	8.00	-	8.00	0.22	1.00	7.00
	IInd Quarter	7.00	-	7.00	0.19	1.00	6.00
	IIIRD Quarter	6.00	-	6.00	0.17	1.00	5.00
	Ivth Quarter	5.00		5.00	0.14	1.00	4.00
					0.72	4.00	
V	Opening Balance						
	Ist Quarter	4.00	-	4.00	0.11	1.00	3.00
	IInd Quarter	3.00	-	3.00	0.08	1.00	2.00
	IIIRD Quarter	2.00	-	2.00	0.06	1.00	1.00
	Ivth Quarter	1.00		1.00	0.03	1.00	-
					0.28	4.00	

Door to Door Period 60 Months
Moratorium Period 6 Months
Repayment Period 54 Months

CALCULATION OF D.S.C.R					
PARTICULARS	I	II	III	IV	V
CASH ACCRUALS	7.01	7.19	7.63	9.30	10.72
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	8.97	8.78	8.79	10.02	11.00
REPAYMENT					
Repayment of Term Loan	2.00	4.00	4.00	4.00	4.00
Interest on Term Loan	1.95	1.60	1.16	0.72	0.28
Total	3.95	5.60	5.16	4.72	4.28
DEBT SERVICE COVERAGE RATIO	2.27	1.57	1.70	2.12	2.57
AVERAGE D.S.C.R.			2.01		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	20	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				2,68,560.00
Add : Minimim Charges (@ 10%)				
(B) DG set				
No. of Working Days			300	days
No of Working Hours			0.3	Hour per day
Total no of Hour			90	
Diesel Consumption per Hour			8	
Total Consumption of Diesel			720	
Cost of Diesel			65.00	Rs. /Ltr
Total cost of Diesel			0.47	
Add : Lube Cost @15%			0.07	
Total			0.54	
Total cost of Power & Fuel at 100%				3.22
Year		Capacity		Amount
				(in Lacs)
I		60%		1.93
II		65%		2.10
III		70%		2.26
IV		75%		2.42
V		80%		2.58

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