PROJECT REPORT

Of

TOOTHPICK

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Toothpick**.

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 Entreprenuer		xxxxxxxxxx	
2	Constitution (legal Status)		xxxxxxxxxx	
3	Father / Spouse Name		xxxxxxxxxxxx	
4	Unit Address	:	xxxxxxxxxxxxxxxxxxxxxxx	
			District : xxxxxxx	
			Pin: xxxxxxx	State: xxxxxxxxxx
			Mobile xxxxxxx	
5	Product and By Product	:	**PLASTIC TOOTHPICK**	
6	Name of the project / business activity proposed :		**PLASTIC TOOTHPICK UNIT**	
7	Cost of Project	:	Rs.24.36 Lakhs	
8	Means of Finance			
	Term Loan		Rs.16.92 Lakhs	
	Own Capital		Rs.2.44 Lakhs	
	Toothpick		Rs.5 Lakhs	
9	Debt Service Coverage Ratio	:	2.81	
10	Pay Back Period	:	5	Years
11	Project Implementation Period	:	5-6	Months
12	Break Even Point	:	24%	
13	Employment	:	9	Persons
14	Power Requirement	:	30.00	HP
15	Major Raw materials	:	PVC Granules, Plasticizers, PVC Stabilizer, Packing material	
16	Estimated Annual Sales Turnover (Max Capacity)	:	95.65	Lakhs
17	Detailed Cost of Project & Means of Finance			

COST OF PROJECT

(Rs. In Lakhs)

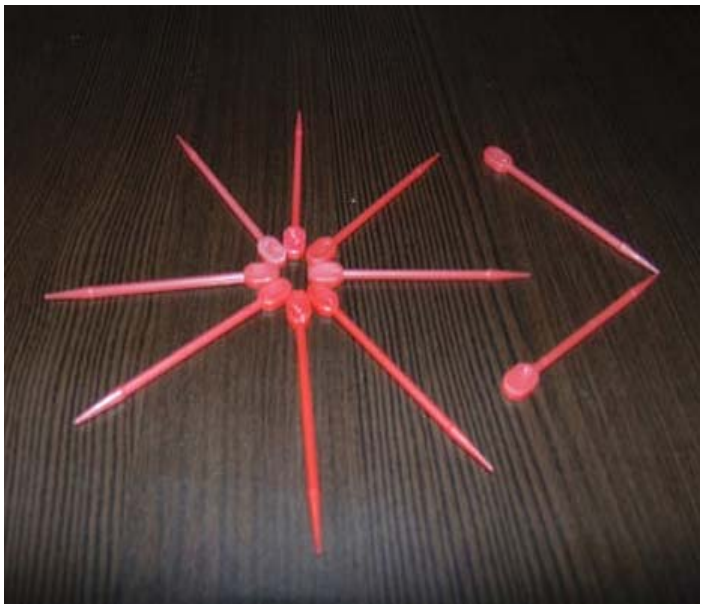
Particulars	Amount
Land	Own/Rented
Building /Shed 1000 Sq ft	5.00
Plant & Machinery	12.30
Furniture & Fixtures	1.50
Working Capital	5.56
Total	**24.36**

MEANS OF FINANCE

Particulars	Amount
Own Contribution	2.44
Working Capital(Finance)	5.00
Term Loan	16.92
Total	**24.36**

PLASTIC TOOTHPICK

Introduction: Oral care products are defined as products used for care of the teeth and the mouth.A plastic toothpick is a small thin stick of plastic with at least one and sometimes two pointed ends to insert between teeth to remove detritus, usually after a meal. Plastic toothpicks are also used for festive occasions to hold or spear small appetizers (like cheese cubes or olives) or as a cocktail stick, and can be decorated with plastic frills or small paper umbrellas or flags.The toothpick is a commonly used tool to help dislodge food from between your teeth.Toothpicks are handy, convenient and readily available. While they are helpful in dislodging food from your teeth, toothpicks are not designed for dental cleaning and should not be substituted for flossing or brushing. Flossing is the preferred method for removing food and plaque from between your teeth.



USES & MARKET POTENTIAL: Increasing dental problems among children and adults, due to poor eating habits, and the rise in popularity for

oral care and cleaning products are the factors primarily driving the toothpicks market. Moreover, rising premiumization and consumers seeking more targeted solutions are accelerating the growth of the market studied.The rise in consciousness of oral health has helped vendors introduce oral hygiene product categories, like teeth-flossing products. One of the popular products used for teeth whitening is toothpicks.

Product:

Plastic Toothpicks

Raw Material:

1. PVC Granules (Medical Grade)
2. Plasticizers
3. PVC Stabilizers
4. Packing Material

Raw Material Requirement:

SrNo.	Raw Material	Quantity	Rate	Value
1.	PVC Granules	98000 kg	40	3920000
2.	Plasticizers	7000 kg	120	840000
3.	PVC Stabilizers	2500 kg	115	287500
4.	Packing material			120000

Manufacturing Process:

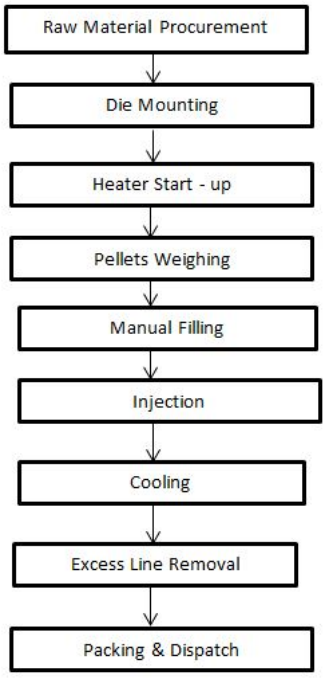


Fig.1 – Flow Chart

In the first step, the raw material is procured from the local authorized vendor and stored in the inventory. In the first step, the profile dies are mounted precisely in the injection moulding machine as per product dimension. The die can have the arrangement of moulding a number of pieces in a single cycle as required. After this, barrel heaters of the injection moulding machine of screw barrel are started and brought up to desired melting temperature of the PVC.

In the next step, the pellets are added into the hopper of the injection moulding machine manually after weighing over scale. The pellets from the hopper are fed into the barrel section of the machine where the screw mounted in the machine rotates about horizontal axis. The pellets are fed into heating zone as the screw rotates. In the heating zone, plastic pellets melt to a semi-solid state and are ready to be injected into the mold of the machine.

From the extruded of the machine this molten plastic pellets are injected into the die at desired pressure and temperature. The molten plastic will acquire

the shape of the die and cooling cycle of the machine begins. Water is used as a cooling medium which transfers heating through a suitable cooling arrangement.

The molten plastic gets solidified and acquires the shape of the die. After this, when the cooling cycle completes, the mold gets opened and the ejector pin will ejects the toothpicks outside. After this, the common runner has been removed and toothpick gets separated out.

After this, the uneven excess lines, burrs are removed. The non-uniform or deformed products are crushed using grinder into small pieces. After this, the toothpicks are packed and dispatched as per the requirement.

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 - 1500Sqft.

Machines:

1. **Injection Moulding Machine**– Injection molding is a method to obtain molded products by injecting plastic materials molten by heat into a mold, and then cooling and solidifying them. The method is suitable for the mass production of products with complicated shapes, and takes a large part in the area of plastic processing.

2. **Grinder** – This machine is used to crush the waste or non-uniform products into small pieces.

3. **Water Chiller –** This is used to cool down the heated water required during the cooling cycle of the blow moulding machine.

Equipments:

Profile Dies – A die is a specialized tool used in manufacturing industries to cut or shape material mostly using a press.

Pump–Pumps are used to transfer the oil from crude oil tank to filter cloth.

Bins –Bins are used to store finished aluminium foil containers.

Cost of Machines:

S No.	Machine	Unit	Price
1.	Injection Moulding machine	1	850000
2.	Grinder	1	65000
3.	Water Chiller	1	25000
4.	Other machineries & equipments		100000
A	Total		1040000
B	GST@18%		187200
C	Net Amount		1227200
D	Net Amount(Round off)		1230000

Power Requirement– The power consumption required to run all the machinery could be approximated as 30 hp.

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 9 including 1 Supervisor, 2 Plant operator, 1 Unskilled worker, security guard and helper each. 3 Skilled workers including each 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	2.44	-			
Reserve & Surplus	6.15	9.21	12.42	16.80	20.83
Depriciation & Exp. W/off	2.50	2.15	1.86	1.61	1.39
Increase In Cash Credit	5.00				
Increase In Term Loan	16.92	-	-	-	-
Increase in Creditors	0.72	0.11	0.08	0.08	0.08
TOTAL :	**33.71**	**11.47**	**14.35**	**18.49**	**22.29**
APPLICATION OF FUND					
Increase in Fixed Assets	18.80	-	-	-	-
Increase in Stock	1.29	0.21	0.18	0.21	0.22
Increase in Debtors	5.43	1.03	0.88	1.08	1.15
Repayment of Term Loan	1.88	3.76	3.76	3.76	3.76
Taxation	-	2.76	3.72	5.04	6.25
Drawings	3.00	3.50	5.50	6.50	7.50
TOTAL :	**30.40**	**11.27**	**14.04**	**16.59**	**18.88**
Opening Cash & Bank Balance	-	3.31	3.52	3.83	5.73
Add : Surplus	3.31	0.21	0.31	1.90	3.42
Closing Cash & Bank Balance	**3.31**	**3.52**	**3.83**	**5.73**	**9.15**

PROJECTED BALANCE SHEET

PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	5.58	8.53	11.72	16.98
Add: Additions	2.44	-	-	-	-
Add: Net Profit	6.15	6.45	8.69	11.76	14.58
Less: Drawings	3.00	3.50	5.50	6.50	7.50
Closing Balance	5.58	8.53	11.72	16.98	24.06
CC Limit	5.00	5.00	5.00	5.00	5.00
Term Loan	15.04	11.28	7.52	3.76	-
Sundry Creditors	0.72	0.83	0.90	0.98	1.05
TOTAL :	**26.34**	**25.64**	**25.14**	**26.72**	**30.12**
APPLICATION OF FUND					
Fixed Assets (Gross)	18.80	18.80	18.80	18.80	18.80
Gross Dep.	2.50	4.65	6.51	8.11	9.50
Net Fixed Assets	16.31	14.15	12.29	10.69	9.30
Current Assets					
Sundry Debtors	5.43	6.46	7.33	8.41	9.56
Stock in Hand	1.29	1.51	1.69	1.89	2.11
Cash and Bank	3.31	3.52	3.83	5.73	9.15
TOTAL :	**26.34**	**25.64**	**25.14**	**26.72**	**30.12**

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PROJECTED PROFITABILITY STATEMENT

PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	54.28	64.58	73.34	84.13	95.65
Total (A)	**54.28**	**64.58**	**73.34**	**84.13**	**95.65**
B) COST OF SALES					
Raw Material Consumed	30.74	35.50	38.73	41.96	45.18
Elecricity Expenses	2.28	2.51	2.74	2.97	3.20
Repair & Maintenance	0.81	1.94	2.93	4.21	5.74
Labour & Wages	5.67	6.01	6.49	7.08	7.78
Depreciation	2.50	2.15	1.86	1.61	1.39
Cost of Production	42.00	48.11	52.75	57.81	63.29
Add: Opening Stock /WIP	-	0.78	0.92	1.04	1.19
Less: Closing Stock /WIP	0.78	0.92	1.04	1.19	1.36
Cost of Sales (B)	41.22	47.98	52.63	57.66	63.13
C) GROSS PROFIT (A-B)	13.06	16.60	20.71	26.47	32.52
	24.06%	**25.71%**	**28.24%**	**31.46%**	**34.00%**
D) Bank Interest (Term Loan)	1.84	1.50	1.09	0.67	0.26
ii) Interest On Working Capital	0.55	0.55	0.55	0.55	0.55
E) Salary to Staff	3.72	4.05	4.46	5.08	6.10
F) Selling & Adm Expenses Exp.	0.81	1.29	2.20	3.37	4.78
TOTAL (D+E)	**6.92**	**7.39**	**8.29**	**9.67**	**11.69**
H) NET PROFIT	6.15	9.21	12.42	16.80	20.83
	11.3%	**14.3%**	**16.9%**	**20.0%**	**21.8%**
I) Taxation	-	2.76	3.72	5.04	6.25
J) PROFIT (After Tax)	6.15	6.45	8.69	11.76	14.58

Raw Material Consumed	Capacity Utilisation		Amount (Rs.)		
I	50%		30.74		
II	55%		35.50	5% Increase in Cost	
III	60%		38.73	5% Increase in Cost	
IV	65%		41.96	5% Increase in Cost	
V	70%		45.18	5% Increase in Cost	

COMPUTATION OF SALE					
Particulars	**I**	**II**	**III**	**IV**	**V**
Op Stock	-	2,000.00	2,200.00	2,400.00	2,600.00
Production	1,20,000.00	1,32,000.00	1,44,000.00	1,56,000.00	1,68,000.00
	1,20,000.00	1,34,000.00	1,46,200.00	1,58,400.00	1,70,600.00
Less : Closing Stock(5 Days)	2,000.00	2,200.00	2,400.00	2,600.00	2,800.00
Net Sale	1,18,000.00	1,31,800.00	1,43,800.00	1,55,800.00	1,67,800.00
Sale Price per packet	46.00	49.00	51.00	54.00	57.00
Sale (in Lacs)	**54.28**	**64.58**	**73.34**	**84.13**	**95.65**

COMPUTATION OF MAKING OF PLASTIC TOOTHPICK			
Item to be Manufactured Plastic Toothpick			
Manufacturing Capacity per day		800	Packets
No. of Working Hour		8	
No of Working Days per month		25	
No. of Working Day per annum		300	
Total Production per Annum		2,40,000	Packets
Total Production per Annum		2,40,000	100 sticks in each packet
Year		Capacity	PLASTIC TOOTHPICK
		Utilisation	
I		50%	1,20,000.00
II		55%	1,32,000.00
III		60%	1,44,000.00
IV		65%	1,56,000.00
V		70%	1,68,000.00

COMPUTATION OF RAW MATERIAL					
Item Name		Quantity of Raw Material	Unit	Unit Rate of	Total CostPer Annum (100%)
PVC Granules		98,000.00	Kg	50.00	49,00,000.00
Plasticizers		7,000.00	Kg	120.00	8,40,000.00
PVC Stabilizers		2,500.00	pcs	115.00	2,87,500.00
Packing material					1,20,000.00
Total					**61,47,500.00**
Total Raw material in Rs lacs					61.48

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	**I**	**II**	**III**	**IV**	**V**
Finished Goods					
(5 Days requirement)	0.78	0.92	1.04	1.19	1.36
Raw Material					
(5 Days requirement)	0.51	0.59	0.65	0.70	0.75
Closing Stock	**1.29**	**1.51**	**1.69**	**1.89**	**2.11**

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	**Amount**	**Margin(10%)**	**Net Amount**
Stock in Hand	1.29		
Less:			
Sundry Creditors	0.72		
Paid Stock	**0.58**	**0.06**	**0.52**
Sundry Debtors	5.43	0.54	4.89
Working Capital Requirement			**5.40**
Margin			0.60
MPBF			**5.40**
Working Capital Demand			**5.00**

BREAK UP OF LABOUR				
Particulars		Wages	No of	Total
		Per Month	Employees	Salary
Supervisor		12,000.00	1	12,000.00
Plant Operator		10,000.00	2	20,000.00
Unskilled Worker		5,000.00	1	5,000.00
Helper		2,000.00	1	2,000.00
Security Guard		6,000.00	1	6,000.00
				45,000.00
Add: 5% Fringe Benefit				2,250.00
Total Labour Cost Per Month				47,250.00
Total Labour Cost for the year (In Rs. Lakhs)			6	5.67

BREAK UP OF SALARY				
Particulars		Salary	No of	Total
		Per Month	Employees	Salary
Manager		12,000.00	1	12,000.00
Accountant cum store keeper		10,000.00	1	10,000.00
Sales		7,500.00	1	7,500.00
Total Salary Per Month				29,500.00
Add: 5% Fringe Benefit				1,475.00
Total Salary for the month				30,975.00
Total Salary for the year (In Rs. Lakhs)			3	3.72

COMPUTATION OF DEPRECIATION					
Description	Land	Building/shed	Plant & Machinery	Furniture	**TOTAL**
Rate of Depreciation		**10.00%**	**15.00%**	**10.00%**	
Opening Balance	Leased		-	-	-
Addition	-	5.00	12.30	1.50	18.80
	-	5.00	12.30	1.50	18.80
		-	-	-	
TOTAL		5.00	12.30	1.50	18.80
Less : Depreciation	-	0.50	1.85	0.15	2.50
WDV at end of Ist year	-	4.50	10.46	1.35	16.31
Additions During The Year	-	-	-	-	-
	-	4.50	10.46	1.35	16.31
Less : Depreciation	-	0.45	1.57	0.14	2.15
WDV at end of IInd Year	-	4.05	8.89	1.22	14.15
Additions During The Year	-	-	-	-	-
	-	4.05	8.89	1.22	14.15
Less : Depreciation	-	0.41	1.33	0.12	1.86
WDV at end of IIIrd year	-	3.65	7.55	1.09	12.29
Additions During The Year	-	-	-	-	-
	-	3.65	7.55	1.09	12.29
Less : Depreciation	-	0.36	1.13	0.11	1.61
WDV at end of IV year	-	3.28	6.42	0.98	10.69
Additions During The Year	-	-	-	-	-
	-	3.28	6.42	0.98	10.69
Less : Depreciation	-	0.33	0.96	0.10	1.39
WDV at end of Vth year	-	2.95	5.46	0.89	9.30

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	**Particulars**	**Amount**	**Addition**	**Total**	**Interest**	**Repayment**	**Cl Balance**
I	Opening Balance						
	Ist Quarter	16.92	-	16.92	0.47	-	16.92
	Iind Quarter	16.92	-	16.92	0.47	-	16.92
	IIIrd Quarter	16.92	-	16.92	0.47	0.94	15.98
	Ivth Quarter	15.98	-	15.98	0.44	0.94	15.04
					1.84	1.88	
II	Opening Balance						
	Ist Quarter	15.04	-	15.04	0.41	0.94	14.10
	Iind Quarter	14.10	-	14.10	0.39	0.94	13.16
	IIIrd Quarter	13.16	-	13.16	0.36	0.94	12.22
	Ivth Quarter	12.22		12.22	0.34	0.94	11.28
					1.50	3.76	
III	Opening Balance						
	Ist Quarter	11.28	-	11.28	0.31	0.94	10.34
	Iind Quarter	10.34	-	10.34	0.28	0.94	9.40
	IIIrd Quarter	9.40	-	9.40	0.26	0.94	8.46
	Ivth Quarter	8.46		8.46	0.23	0.94	7.52
					1.09	3.76	
IV	Opening Balance						
	Ist Quarter	7.52	-	7.52	0.21	0.94	6.58
	Iind Quarter	6.58	-	6.58	0.18	0.94	5.64
	IIIrd Quarter	5.64	-	5.64	0.16	0.94	4.70
	Ivth Quarter	4.70		4.70	0.13	0.94	3.76
					0.67	3.76	
V	Opening Balance						
	Ist Quarter	3.76	-	3.76	0.10	0.94	2.82
	Iind Quarter	2.82	-	2.82	0.08	0.94	1.88
	IIIrd Quarter	1.88	-	1.88	0.05	0.94	0.94
	Ivth Quarter	0.94		0.94	0.03	0.94	0.00
					0.26	3.76	

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	8.64	8.60	10.55	13.37	15.97
Interest on Term Loan	1.84	1.50	1.09	0.67	0.26
Total	10.48	10.10	11.64	14.04	16.23
REPAYMENT					
Repayment of Term Loan	1.88	3.76	3.76	3.76	3.76
Interest on Term Loan	1.84	1.50	1.09	0.67	0.26
Total	3.72	5.26	4.85	4.43	4.02
DEBT SERVICE COVERAGE RATIO	**2.82**	**1.92**	**2.40**	**3.17**	**4.04**
AVERAGE D.S.C.R.			**2.81**		

COMPUTATION OF ELECTRICITY				
(A) POWER CONNECTION				
Total Working Hour per day		Hours	8	
Electric Load Required		HP	30	
Load Factor			0.7460	
Electricity Charges		per unit	7.50	
Total Working Days			300	
Electricity Charges				4,02,840.00
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%				4.57
Year		**Capacity**		**Amount**
				(in Lacs)
I		50%		2.28
II		55%		2.51
III		60%		2.74
IV		65%		2.97
V		70%		3.20

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