

PROJECT REPORT

Of

TOOTHBRUSH

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding Toothbrush.

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 : xxxxxxxxxxxx
- 4 Unit Address : xxxxxxxxxxxxxxxxxxxxxxxx
- District : xxxxxx
Pin: xxxxxx State: xxxxxxxxx
Mobile xxxxxx
- 5 Product and By Product : **TOOTHBRUSH**
- 6 Name of the project / business activity proposed : **TOOTHBRUSH MANUFACTURING UNIT**
- 7 Cost of Project : Rs.39.22 Lakhs
- 8 Means of Finance
Term Loan Rs.28.8 Lakhs
Own Capital Rs.3.92 Lakhs
Working capital Rs.6.5 Lakhs
- 9 Debt Service Coverage Ratio : 2.00
- 10 Pay Back Period : 5 Years
- 11 Project Implementation Period : 5-6 Months
- 12 Break Even Point : 41%
- 13 Employment : 10 Persons
- 14 Power Requirement : 30.00 HP
- 15 Major Raw materials : Plastic, Nylon Bristle, Rubber Grip, Packing Material
- 16 Estimated Annual Sales Turnover (Max Capacity) : 100.49 Lakhs
- 17 Detailed Cost of Project & Means of Finance

COST OF PROJECT

(Rs. In Lakhs)

Particulars	Amount
Land	Own/Rented
Plant & Machinery	30.00
Furniture & Fixtures	2.00
Working Capital	7.22
Total	39.22

MEANS OF FINANCE

Particulars	Amount
Own Contribution	3.92
Working Capital(Finance)	6.50
Term Loan	28.80
Total	39.22

TOOTHBRUSH

Introduction: Tooth brush occupies a prominent and very important place among the dental health tools available today. Tooth brushing has become a universally accepted first line of defense against illness. A tooth brush is a dental instrument used for cleaning teeth, ideally in conjunction with toothpaste or tooth powder. A tooth brush consists of a plastic body and nylon bristles attached to the head of the brush.. Tooth brush are of various sizes depending upon the need of the human being.



Uses & Market Potential: Tooth brush is one of the essential step for keeping teeth clean. Due to increasing awareness and importance of dental hygiene in the up keeping of human health, the use of tooth brush which was confined to the upper and upper middle class of urban society, has now become well established even in rural house hold. Tooth brush being consumer product, thus its market is quite competitive and also accepting. The global manual toothbrush market size was valued at USD 4.4 billion in 2018 and is expected to expand at a CAGR of 6.9% by 2026. Rising awareness among consumers is projected to drive the market. The demand of tooth brush is never ending, therefore a small entrepreneur can think of investing in this project.

Raw Material: Major raw materials are as follows:

1. Plastic(Polypropylene or Polyethylene)
2. Nylon Bristle
3. Rubber Grip
4. Packing Material

Machinery Requirement: Major machines & equipments are as follows:

S No.	Machine	Unit	Price
1.	Injection Moulding Machine(Capacity 125 kg)	1set	1250000
2.	Tooth Brush Tufting Machine	1 set	1000000
3.	Tooth Brush Trimming Machine	1 set	700000
4.	Other equipments & hand tools		50000
	Total Amount		3000000

Manufacturing Process: The process is defined as below:

1. **Body Molding:** The plastic pellets are placed in an injection molding machine, which heat the plastic until it transforms to its semi-solid state. A rotating screw or plunger forces the semi-solid plastic into the mold of the brush body. The molds from the entire body, including the small holes, called cores, into which the bristles are inserted. The molds are securely clamped, and pressure is applied to the molds while the plastic cools. Once the molds have adequately cooled, the clamps are removed, and ejector pins push the handles out of the molds.
2. **Tufting:** The bristles which are usually made of nylon, which are positioned into the core of the handle automatically utilizing a tooth brush tufting machine.

3. **Trimming Bristles:** Next, the toothbrush passes through a trimming machine which slices the bristles to the correct length and shape for the particular design.
4. **Packaging Toothbrushes:** The toothbrushes are packaged into cardboard or plastic containers.

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 1800 to 2000Sqft.

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 10 including 1 Supervisor, 2 Plant operator, 2 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 BALANCE SHEET					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Capital Account					
Opening Balance	-	7.23	11.20	16.30	21.96
Add: Additions	3.92	-	-	-	-
Add: Net Profit	6.81	7.96	10.10	11.66	12.63
Less: Drawings	3.50	4.00	5.00	6.00	7.00
Closing Balance	7.23	11.20	16.30	21.96	27.59
CC Limit	6.50	6.50	6.50	6.50	6.50
Term Loan	25.60	19.20	12.80	6.40	-
Sundry Creditors	0.44	0.50	0.54	0.57	0.61
TOTAL :	39.77	37.39	36.13	35.44	34.70
APPLICATION OF FUND					
Fixed Assets (Gross)	32.00	32.00	32.00	32.00	32.00
Gross Dep.	4.70	8.71	12.12	15.03	17.51
Net Fixed Assets	27.30	23.30	19.88	16.97	14.49
Current Assets					
Sundry Debtors	4.10	4.86	5.44	6.05	6.70
Stock in Hand	3.69	4.17	4.63	5.10	5.59
Cash and Bank	4.68	5.07	6.18	7.31	7.92
TOTAL :	39.77	37.39	36.13	35.44	34.70

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PROJECTED PROFITABILITY STATEMENT					
PARTICULARS	I	II	III	IV	V
A) SALES					
Gross Sale	61.56	72.84	81.61	90.82	100.49
Total (A)	61.56	72.84	81.61	90.82	100.49
B) COST OF SALES					
Raw Material Consumed	18.72	21.29	22.93	24.57	26.21
Electricity Expenses	2.74	2.97	3.20	3.42	3.65
Repair & Maintenance	6.16	7.28	8.16	9.08	10.05
Labour & Wages	11.09	12.75	14.66	16.86	19.39
Depreciation	4.70	4.01	3.41	2.91	2.48
Cost of Production	43.40	48.30	52.37	56.85	61.78
Add: Opening Stock /WIP	-	2.75	3.11	3.48	3.87
Less: Closing Stock /WIP	2.75	3.11	3.48	3.87	4.28
Cost of Sales (B)	40.65	47.95	51.99	56.46	61.37
C) GROSS PROFIT (A-B)	20.91	24.89	29.61	34.36	39.11
	33.97%	34.18%	36.29%	37.84%	38.92%
D) Bank Interest (Term Loan)	3.12	2.55	1.85	1.14	0.44
ii) Interest On Working Capital	0.72	0.72	0.72	0.72	0.72
E) Salary to Staff	7.18	8.62	10.34	12.41	14.89
F) Selling & Adm Expenses Exp.	3.08	3.64	4.08	4.54	5.02
TOTAL (D+E)	14.10	15.53	16.99	18.81	21.07
H) NET PROFIT	6.81	9.37	12.63	15.55	18.04
I) Taxation	-	1.41	2.53	3.89	5.41
J) PROFIT (After Tax)	6.81	7.96	10.10	11.66	12.63

PROJECTED CASH FLOW STATEMENT					
PARTICULARS	I	II	III	IV	V
SOURCES OF FUND					
Own Contribution	3.92	-			
Reserve & Surplus	6.81	9.37	12.63	15.55	18.04
Depriciation & Exp. W/off	4.70	4.01	3.41	2.91	2.48
Increase In Cash Credit	6.50				
Increase In Term Loan	28.80	-	-	-	-
Increase in Creditors	0.44	0.06	0.04	0.04	0.04
TOTAL :	51.17	13.43	16.08	18.50	20.56
APPLICATION OF FUND					
Increase in Fixed Assets	32.00	-	-	-	-
Increase in Stock	3.69	0.48	0.45	0.47	0.49
Increase in Debtors	4.10	0.75	0.58	0.61	0.64
Repayment of Term Loan	3.20	6.40	6.40	6.40	6.40
Taxation	-	1.41	2.53	3.89	5.41
Drawings	3.50	4.00	5.00	6.00	7.00
TOTAL :	46.49	13.04	14.96	17.38	19.95
Opening Cash & Bank Balance	-	4.68	5.07	6.18	7.31
Add : Surplus	4.68	0.39	1.12	1.12	0.61
Closing Cash & Bank Balance	4.68	5.07	6.18	7.31	7.92

COMPUTATION OF MAKING OF TOOTHBRUSH			
Item to be Manufactured Toothbrush			
Manufacturing Capacity per day		1,500	Pcs
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	Pcs
Total Production per Annum		4,50,000	Pcs
Year		Capacity	TOOTHBRUSH
		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	Total CostPer Annum (100%)	
Plastic(Polypropylene or Polyethylene)	12,000.00	Kg	60.00	7,20,000.00	
Rubber Grip	18,00,000.00	No.s	1.00	18,00,000.00	
Nylon Bristle and packing material	Lumsum			6,00,000.00	
				-	
				-	
				-	
Total				31,20,000.00	
Total Raw material in Rs lacs				31.20	

Raw Material Consumed	Capacity Utilisation	Amount (Rs.)	
I	60%	18.72	
II	65%	21.29	5% Increase in Cost
III	70%	22.93	5% Increase in Cost
IV	75%	24.57	5% Increase in Cost
V	80%	26.21	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
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 Toothbrush	24.00	25.00	26.00	27.00	28.00
Sale (in Lacs)	61.56	72.84	81.61	90.82	100.49

COMPUTATION OF CLOSING STOCK & WORKING CAPITAL					
PARTICULARS	I	II	III	IV	V
Finished Goods					
(15 Days requirement)	2.75	3.11	3.48	3.87	4.28
Raw Material					
(15 Days requirement)	0.94	1.06	1.15	1.23	1.31
Closing Stock	3.69	4.17	4.63	5.10	5.59

COMPUTATION OF WORKING CAPITAL REQUIREMENT			
Particulars	Amount	Margin(10%)	Net Amount
Stock in Hand	3.69		
Less:			
Sundry Creditors	0.44		
Paid Stock	3.25	0.33	2.93
Sundry Debtors	4.10	0.41	3.69
Working Capital Requirement			6.62
Margin			0.74
MPBF			6.62
Working Capital Demand			6.50

<u>BREAK UP OF LABOUR</u>				
Particulars	Wages		No of	Total
	Per Month	Employees	Salary	
Supervisor	22,000.00	1	22,000.00	
Plant Operator	16,000.00	2	32,000.00	
Unskilled Worker	10,000.00	2	20,000.00	
Helper	8,000.00	1	8,000.00	
Security Guard	6,000.00	1	6,000.00	
				88,000.00
Add: 5% Fringe Benefit				4,400.00
Total Labour Cost Per Month				92,400.00
Total Labour Cost for the year (In Rs. Lakhs)		7		11.09

<u>BREAK UP OF SALARY</u>				
Particulars	Salary		No of	Total
	Per Month	Employees	Salary	
Manager	25,000.00	1	25,000.00	
Accountant cum store keeper	18,000.00	1	18,000.00	
Sales	14,000.00	1	14,000.00	
Total Salary Per Month				57,000.00
Add: 5% Fringe Benefit				2,850.00
Total Salary for the month				59,850.00
Total Salary for the year (In Rs. Lakhs)		3		7.18

COMPUTATION OF DEPRECIATION				
Description	Land	Plant & Machinery	Furniture	TOTAL
Rate of Depreciation		15.00%	10.00%	
Opening Balance	Leased	-	-	-
Addition	-	30.00	2.00	32.00
	-	30.00	2.00	32.00
		-	-	
TOTAL		30.00	2.00	32.00
Less : Depreciation	-	4.50	0.20	4.70
WDV at end of Ist year	-	25.50	1.80	27.30
Additions During The Year	-	-	-	-
	-	25.50	1.80	27.30
Less : Depreciation	-	3.83	0.18	4.01
WDV at end of IInd Year	-	21.68	1.62	23.30
Additions During The Year	-	-	-	-
	-	21.68	1.62	23.30
Less : Depreciation	-	3.25	0.16	3.41
WDV at end of IIIrd year	-	18.42	1.46	19.88
Additions During The Year	-	-	-	-
	-	18.42	1.46	19.88
Less : Depreciation	-	2.76	0.15	2.91
WDV at end of IV year	-	15.66	1.31	16.97
Additions During The Year	-	-	-	-
	-	15.66	1.31	16.97
Less : Depreciation	-	2.35	0.13	2.48
WDV at end of Vth year	-	13.31	1.18	14.49

REPAYMENT SCHEDULE OF TERM LOAN						11.0%	
Year	Particulars	Amount	Addition	Total	Interest	Repayment	CI Balance
I	Opening Balance						
	Ist Quarter	-	28.80	28.80	0.79	-	28.80
	Iind Quarter	28.80	-	28.80	0.79	-	28.80
	IIIrd Quarter	28.80	-	28.80	0.79	1.60	27.20
	Ivth Quarter	27.20	-	27.20	0.75	1.60	25.60
					3.12	3.20	
II	Opening Balance						
	Ist Quarter	25.60	-	25.60	0.70	1.60	24.00
	Iind Quarter	24.00	-	24.00	0.66	1.60	22.40
	IIIrd Quarter	22.40	-	22.40	0.62	1.60	20.80
	Ivth Quarter	20.80		20.80	0.57	1.60	19.20
					2.55	6.40	
III	Opening Balance						
	Ist Quarter	19.20	-	19.20	0.53	1.60	17.60
	Iind Quarter	17.60	-	17.60	0.48	1.60	16.00
	IIIrd Quarter	16.00	-	16.00	0.44	1.60	14.40
	Ivth Quarter	14.40		14.40	0.40	1.60	12.80
					1.85	6.40	
IV	Opening Balance						
	Ist Quarter	12.80	-	12.80	0.35	1.60	11.20
	Iind Quarter	11.20	-	11.20	0.31	1.60	9.60
	IIIrd Quarter	9.60	-	9.60	0.26	1.60	8.00
	Ivth Quarter	8.00		8.00	0.22	1.60	6.40
					1.14	6.40	
V	Opening Balance						
	Ist Quarter	6.40	-	6.40	0.18	1.60	4.80
	Iind Quarter	4.80	-	4.80	0.13	1.60	3.20
	IIIrd Quarter	3.20	-	3.20	0.09	1.60	1.60
	Ivth Quarter	1.60		1.60	0.04	1.60	-
					0.44	6.40	

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	11.51	11.97	13.52	14.57	15.11
Interest on Term Loan	3.12	2.55	1.85	1.14	0.44
Total	14.64	14.52	15.36	15.72	15.55
REPAYMENT					
Repayment of Term Loan	3.20	6.40	6.40	6.40	6.40
Interest on Term Loan	3.12	2.55	1.85	1.14	0.44
Total	6.32	8.95	8.25	7.54	6.84
DEBT SERVICE COVERAGE RATIO	2.31	1.62	1.86	2.08	2.27
AVERAGE D.S.C.R.			2.00		

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	60%		2.74
	II	65%		2.97
	III	70%		3.20
	IV	75%		3.42
	V	80%		3.65

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