



Pre-feasibility Study

SAUSAGE PRODUCTION PLANT

February 2021

“The figures and financial projections are approximate due to fluctuations in exchange rates, energy costs, and fuel prices etc. Users are advised to focus on understanding essential elements such as production processes and capacities, space, machinery, human resources, and raw material etc. requirements. Project investment, operating costs, and revenues can change daily. For accurate financial calculations, utilize financial calculators on SMEDA’s website and consult financial experts to stay current with market conditions.”

Small and Medium Enterprises Development Authority
Ministry of Industries and Production
Government of Pakistan

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1 DISCLAIMER

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2 EXECUTIVE SUMMARY

Sausages are a meat product usually made from ground meat, along with salt, spices and other flavorings. Typically, a sausage is formed in a casing traditionally made from intestine but sometimes from synthetic materials. Sausages that are sold raw are cooked in many ways, including pan-frying, broiling and barbecuing.

This particular pre-feasibility study is for setting up a 'Sausage Production Unit'. The focus of the business would be to provide quality chicken sausages and to be sold to wholesalers, retailers and restaurants. The unit is proposed to be located in the adjoining areas of major cities like Islamabad, Multan, Quetta, Lahore, Peshawar and Karachi etc.

The proposed unit has capacity to produce 798,226 packs (i.e. 410 grams of weight for each pack) of chicken sausages annually. However, starting operational capacity is assumed at 70% with gradual increase of 5% in subsequent years up to maximum capacity utilization of 90%. This production capacity is estimated to be economically viable and justifies the capital as well as operational cost of the project. Complete adherence to food compliance practices and efficient supply chain management is critical to the success of this project. Therefore, technical knowledge & experience of the entrepreneur is absolutely necessary.

The total project cost for setting up the proposed chicken Sausage Production Unit is estimated at Rs. 6.890 million out of which Rs. 5.309 million is capital cost and Rs. 1.581 million is working capital. The project is based on 100% equity model. The project NPV is around Rs. 11.689 million, with an IRR of 41% and Payback Period of 3.42 years. The project will provide employment opportunities to 21 people including the Owner. The legal business status of this project is assumed to be 'Sole Proprietorship'.

3 INTRODUCTION TO SMEDA

The Small and Medium Enterprises Development Authority (SMEDA) was established in October 1998 with an objective to provide fresh impetus to the economy through development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through development of the SME sector, by helping increase the number, scale and competitiveness of SMEs", SMEDA has carried out 'sectoral research' to identify policy, access to finance, business development services, strategic initiatives and institutional collaboration and networking initiatives.

Preparation and dissemination of prefeasibility studies in key areas of investment has been a successful hallmark of SME facilitation by SMEDA.

Concurrent to the prefeasibility studies, a broad spectrum of business development services is also offered to the SMEs by SMEDA. These services include identification of experts and consultants and delivery of need based capacity building programs of different types in addition to business guidance through help desk services.

4 PURPOSE OF THE DOCUMENT

The objective of the pre-feasibility study is primarily to facilitate potential entrepreneurs in project identification for investment. The project pre-feasibility may form the basis of an important investment decision and in order to serve this objective, the document/study covers various aspects of project concept development, start-up, and production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in “**Sausage Production Plant**” by providing them with a general understanding of the business with the intention of supporting potential investors in crucial investment decisions.

The need to come up with pre-feasibility reports for undocumented or minimally documented sectors attains greater imminence as the research that precedes such reports reveal certain thumb rules; best practices developed by existing enterprises by trial and error, and certain industrial norms that become a guiding source regarding various aspects of business set-up and its successful management.

Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

The word "sausage" can refer to the loose sausage meat, which can be formed into patties or stuffed into a skin. When referred to as "a sausage," the product is usually cylindrical and encased in a skin. It is basically made from ground meat, often beef, or poultry, along with salt, spices and other flavorings. Some sausages include other ingredients for flavor. Normally, sausages are formed in a covering typically made from intestine but sometimes from artificial ingredients. Sausages are widely used in Burgers, Pizza's, Sandwiches and Stakes as well as in Breakfast Items.

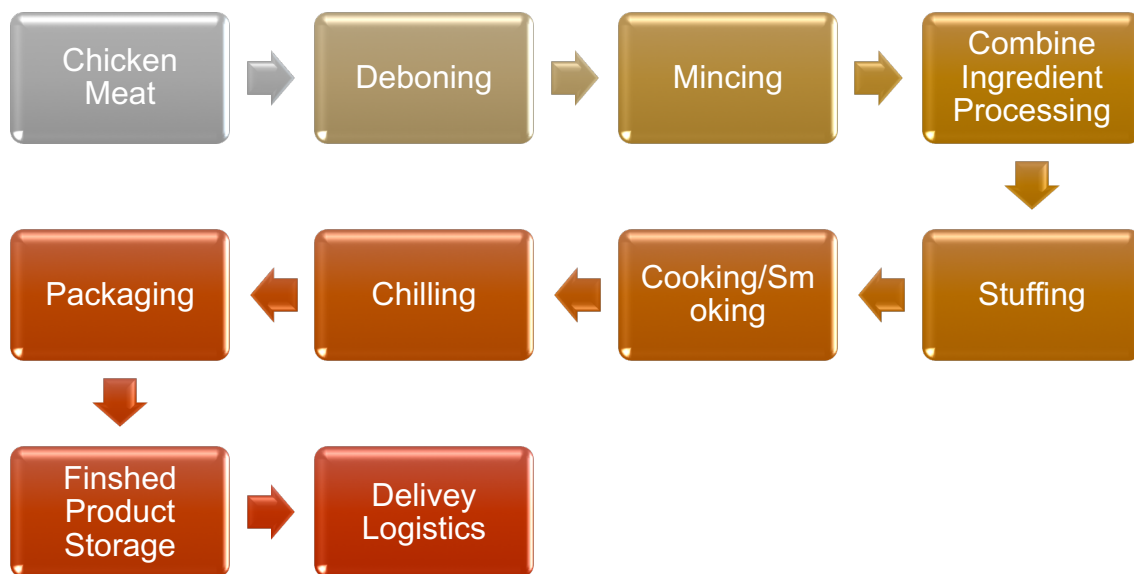
Sausage making is a traditional food preservation technique. Although, sausages are made of different type of meats, however, in Pakistan chicken sausages are more popular and are in higher demands. This particular pre-feasibility study is for

setting up Sausage Production Unit, primarily chicken sausages. The boneless minced meat is spiced by filling in eatable casing which is then smoked in smoke house in an oven shelf. Finally, the sausage is boiled in water before it is used for eat. The proposed sausage production unit will be equipped with latest and semi-automated machinery, mainly including, Mincing Machine, Sausage Filling Machine, Smoke House (i.e. Oven Shelf), Cold Store etc. The produced sausages will be packed in packs of 410 grams of weight and will be sold to restaurants, food chains, wholesalers and retailers as well as through distributors network.

The ideal location for this kind of project is any major urban center, however it can also established in other areas with availability of required infrastructural support and easy access to consumer markets, especially restaurants, cafe and food outlet. The site of the plant should be selected on the basis of certain factors. The sausage plant should be located in an area free from objectionable odors, smoke, dust etc. Attention should be given to an adequate clean water supply, also including adequate arrangement of electric power sources. The produced sausages will be 100% Halal and have huge potential to attract Muslim customers across globe. The legal business status of this project is assumed to be 'Sole Proprietorship'.

5.1 Production Process Flow

Figure 1: Production Process Flow



5.2 Installed and Operational Capacities

The proposed unit will have an installed capacity of producing 798,226 packs (410 grams of weight for each pack) of chicken sausages annually. However, the initial

operational capacity of the project will be 70% with an annual growth of 5%. Maximum capacity utilization of the project is assumed at 90%.

Table 1: Installed and Operational Capacity

Description	Total Installed Capacity	Operational Capacity 70 % (Year 1)	Maximum Capacity 90% (Year 10)
Sausage Packs	798,226	558,758	718,404

6 CRITICAL FACTORS

Following are the factors critical for the success of this business venture;

- ⇒ Selection of appropriate location with easy accessibility of Chicken Meat, transportation and availability of necessary infrastructures. Similarly, close proximity to food chains, restaurants and distributors network will be an added advantage.
- ⇒ Technical knowledge and expertise of the entrepreneur to ensure the complete adherence to food compliance practices and efficient supply chain management.
- ⇒ The hygienic maintenance of equipment and the plant as a whole is a fundamental factor for production efficiency and keeping quality of finished products.
- ⇒ Selection of good recipe and maintaining a standardized taste and quality is strongly recommended.
- ⇒ Strong networking and linkages with food restaurant buyers and distributors for repeat orders.
- ⇒ Availability of raw material at low prices would be another key success factor.
- ⇒ Availability of skilled labour and efficient production operation supervision is direly needed.
- ⇒ Effective marketing and promotion through Social Media and other channels.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The proposed location for the project could be in any of the adjoining areas of major cities in Pakistan such as Lahore, Karachi, Peshawar, Quetta, Faisalabad,

and Rawalpindi, Islamabad and Hyderabad etc. However, such a project could also be established in other areas with high livestock potential after careful analysis of market demand and project viability. In choosing location, preferences should be given to site with adequate availability of infrastructure, raw material and comparatively high traffic rate.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential target market for the ready to eat sausages will be the general public of middle and upper middle income group as well as restaurants, food chains and cafes. Considering to that, major cities for instance Karachi, Lahore, Peshawar, Quetta, Rawalpindi, Islamabad, Multan, Sialkot, Faisalabad, Hyderabad and etc. with large urban population base would be the potential target markets for the proposed business.

Moreover, designated wholesalers may sell to smaller retail shops in big cities whereas, in smaller cities, the designated wholesaler acts as a de facto distribution agent.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Sausage Production Plant. Various costs and revenue related assumptions along with results of the analysis are outlined in this section.

The projected Income Statement, Cash Flow Statement and Balance Sheet are also attached as annexure.

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs. 141.276 million in the year one. The capacity utilization during year one is worked out at 70% with 5% increase in subsequent years up to the maximum capacity utilization of 90%.

The following table shows internal rate of return, payback period and net present value of the proposed venture.

Table 2: Project Economics

Description	Details
Internal Rate of Return (IRR)	41%
Payback Period (Yrs.)	3.42

Net Present Value (Rs.)	11,689,412
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Calculation of break-even analysis is as follows:

Table 3: Breakeven (100% Equity Based)

Break-Even Analysis	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Break-Even Revenue	135,902,561	145,376,439	157,823,809	172,069,369	187,994,064	205,032,156	224,337,419	245,379,250	268,483,098	294,014,334
Break-Even Units	954,742	928,452	916,316	908,205	902,052	894,369	889,619	884,601	879,901	875,977
Margin of Safety	4%	14%	21%	26%	31%	31%	32%	32%	32%	33%

However, for the purposes of further explanation the Project Economics based on Debt:Equity (i.e. 50:50) Model has also been computed. On the basis of Debt:Equity model the Internal Rate of Return, Payback Period and Net Present Value of the proposed project are provide in the table below.

Table 4: Project Economics Based on Debt (50%) : Equity (50%)

Description	Details
Internal Rate of Return (IRR)	40%
Payback Period (Yrs.)	3.51
Net Present Value (Rs.)	14,132,193

The financial assumptions for Debt:Equity are as follows:

Table 5: Financial Assumptions for Debt:Equity Model

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	15%
Debt Tenure	Annual
Debt Payment / Year	1

The projected Income Statement, Cash Flow Statement and Balance Sheet enclosed as annexures are based on 100% Equity Based Business Model

9.2 Project Cost

Following fixed and working capital requirements have been identified for operations of the proposed business.

Table 6: Project Cost

Description	Amount Rs.
Capital Cost	
Plant and Machinery	2,594,500
Motor Vehicles	1,818,000
Furniture & Fixture	485,020
Building Security	150,000
Office Equipment	136,000
Pre-operating Cost	125,000
Total Capital Cost	5,308,520
Working Capital	
Cash	1,057,084
Raw Material Inventory	351,771
Up-front Building Rent	150,000
Equipment spare part inventory	22,341
Total Working Capital	1,581,196
Total Project Cost	6,889,716

9.3 Space Requirement

An estimated covered area of 3,000 sq. ft. will be required for the proposed “**Sausage Product Plant**”. The space requirement for the proposed Sausage Production Plant is estimated considering various facilities including, production, storage and office space. Details of space requirement is given below.

Table 7: Space Requirement

Description	Estimated Area (Sq. ft.)
Management Office	500

Wearhouse and Cold Storage	152
Processing Area	1,700
Ground	512
Wash Room	72
Smoke House	64
Total	3,000

In order to reduce the initial capital cost, the proposed unit will be established in a rental premises. The estimated rent of the required space is assumed at Rs. 50,000 per month with a security deposit of Rs. 150,000.

9.4 Machinery & Equipment Requirement

Plant, machinery and equipment for the proposed project are stated below.

Table 8: Machinery & Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Cold storage Capacity (120"x 84"x 84") -20 C to -25 C	1	1,080,000	1,080,000
Generator	1	550,000	550,000
Sausage Cooker	1	325,000	325,000
Meat Mincing and Sausage Filling Machine	2	140,000	280,000
Smoke House	1	280,000	280,000
Smoking Trolley	4	14,000	56,000
Weigh Scale Large	1	18,000	18,000
Smoking Stick	6	500	3,000
Weigh Scale Small	1	2,500	2,500
Total			2,594,500

9.5 Furniture & Fixtures Requirement

Details of the furniture and fixture required for the project are given below.

Table 9: Furniture & Fixture

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Air Conditioners (1.5 ton split)	2	84,000	168,000
Miscellaneous Furniture	1	85,000	85,000
Stool	8	6,000	48,000
Ceiling Fans	9	4,500	40,500
Work Station	3	12,000	36,000
Visitor Chairs	10	3,500	35,000
Steel Table	4	8,200	32,800
Industrial Fan	2	7,000	14,000
Tables	2	6,000	12,000
Executive Chairs	2	5,000	10,000
Cutting Board	4	930	3,720
Total			485,020

9.6 Office Vehicles Requirement

Details of the office vehicles required for the project are given below.

Table 10: Office Vehicles

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Chiller Van (Used)	1	1,818,000	1,818,000
Total	1		1,818,000

9.7 Office Equipment Requirement

Following office equipment will be required for the project are given below.

Table 11: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Computers	3	25,000	75,000
Electric Water cooler	1	33,500	33,500
Computer Printer (s)	1	20,000	20,000

Telephones	3	2,500	7,500
Total	8		136,000

9.8 Raw Material Requirements

Fresh chicken meat is the main raw material for the proposed business, which will be procured directly from local market. Following table provides the details for the raw material requirements for first year production of chicken sausages:

Table 12: Raw Material Requirements

Description	Quantity	Cost (Rs.)
Average Rate of Chicken Meat (Per Kg. without Head and Giblets)		252
Per Kg. Deboned Meat From 1 Kg. of Whole Chicken Meat	0.55	
Average Rate of Deboned Chicken Meat per Kg.		462
Spices, Casings and Other Ingredients per Kg. of Meat		70
Total Raw Material Cost per Kg. of Product		532
Weight per Pack (Kgs)	0.41	
Raw Material Cost per Pack		218.12
Add: Packing Cost per Pack		18
Total Raw Material and Packing Cost (Per Pack)		236.12

9.9 Human Resource Requirement

In order to run operations of Sausage Production Plant smoothly, details of human resources required along with number of employees and monthly salaries are recommended as under.

Table 13: Human Resource Requirement

Description	No. of Employees	Monthly Salary per person (Rs.)
Owner / Manager (Technical Manager)	1	50,000

Warehouse In-Charge	1	35,000
Marketing Manager	1	40,000
Marketing Executive	1	25,000
Accountant	1	22,000
Production Manager	1	35,000
Workers for Deboning / Mixing	6	22,000
Supporting Staff	4	18,000
Security Guards	2	18,000
Sweeper / Office Boys	3	18,000
Total	21	

9.10 Utilities and other costs

An essential cost to be borne by the project is the cost of electricity and gas. The electricity expenses are estimated to be around Rs. 93,247 per month, whereas gas expenses are estimated to be Rs. 75,600 / year (including both natural gas and LPG). Furthermore, promotional expense being essential for marketing of Sausages Production Plant is estimated as 0.5% of revenue.

9.11 Revenue Generation

Based on the capacity utilization of 70%, sales revenue during the first year of operations is provided in the table below.

Table 14: Revenue Generation – Year 1

Description	No. of Units Produced (No.)	Finished Goods Inventory (No.)	Units available for Sale (No.)	Sale Price / unit (Rs.)	Sales Revenue (Rs.)
Sausage (Packs)	547,583*	11,408	536,175	260	139,405,543
Soup Bones (By Product) Kgs	187,091	-	187,091	10	1,870,909
Total					141,276,452

*After 2% wastage

10 Contact Details

In order to facilitate potential investors, contact details of private sector Service Providers relevant to the proposed project be given.

Table 15: Machinery Suppliers

Name of Supplier	Address	Phone	E-mail
Cool Tech Engineering Services	Chaudhry Afzal Khan Road Near Raza Plaza Rehmatabed Kabirwala Near City Gate Jhang Road	+92 300 0027 634	samarsial@gmail.com
Chef Point	Plot # SD-1 Mujahid Colony B-Block North Nazimabad Karachi	+92 315 8121 053	chefpoint@gmail.com

11 USEFUL WEB L INKS

Small & Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries & Production	www.moip.gov.pk
Government of Punjab	www.punjab.gov.pk
Government of Sindh	www.sindh.gov.pk
Government of Khyber Pakhtunkhwa	www.khyberpakhtunkhwa.gov.pk
Government of Balochistan	www.balochistan.gov.pk
Government of Gilgit Baltistan	www.gilgitbaltistan.gov.pk
Government of Azad Jamu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security Commission of Pakistan (SECP)	www.secp.gov.pk
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	www.fpcci.com.pk
State Bank of Pakistan (SBP)	www.sbp.org.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sindh Small Industries Corporation	www.ssic.gos.pk
Punjab Industrial Estates (PIE)	www.pie.com.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Ministry of National Food Security & Research	www.mnfsr.gov.pk/
Punjab Food Authority	www.pfa.gop.pk/

12 ANNEXURES

12.1 Income Statement

Calculations										SMEDA
Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	141,276,452	169,767,073	199,210,456	232,844,845	271,214,007	298,676,614	328,544,276	361,398,703	397,538,574	437,292,431
<i>Cost of sales</i>										
Cost of goods sold	126,601,680	152,172,141	178,564,166	208,712,875	243,105,684	267,726,120	294,498,732	323,948,605	356,343,466	391,977,813
Coal cost	36,000	39,600	43,560	47,916	52,708	57,978	63,776	70,154	77,169	84,886
Operation costs (direct labor)	2,808,250	3,142,861	3,449,155	3,785,259	4,154,081	4,563,810	5,008,149	5,495,750	6,030,824	6,617,993
Operating costs (machinery maintenance)	536,175	644,470	756,243	883,927	1,029,585	1,133,856	1,247,242	1,371,966	1,509,163	1,660,079
Operating costs (direct electricity)	940,383	1,108,309	1,300,416	1,519,861	1,770,191	1,947,210	2,141,931	2,356,124	2,591,737	2,850,910
Operating costs (direct water)	96,000	105,600	116,160	127,776	140,554	154,609	170,070	187,077	205,785	226,363
Operating costs (LPG)	75,600	89,100	104,544	122,186	142,311	156,542	172,196	189,415	208,357	229,193
Production wastage	2,638,680	3,109,873	3,648,918	4,264,673	4,967,089	5,463,798	6,010,178	6,611,196	7,272,316	7,999,547
Total cost of sales	133,732,769	160,411,954	187,983,162	219,464,473	255,362,202	281,203,924	309,312,274	340,230,287	374,238,815	411,646,784
Gross Profit	7,543,683	9,355,119	11,227,294	13,380,372	15,851,805	17,472,690	19,232,001	21,168,416	23,299,758	25,645,647
	5%	6%	6%	6%	6%	6%	6%	6%	6%	6%
<i>General administration & selling expenses</i>										
Administration expense	3,144,000	3,450,104	3,786,011	4,154,623	4,559,123	5,003,005	5,490,105	6,024,629	6,611,196	7,254,871
Building rental expense	600,000	660,000	726,000	798,600	878,460	966,306	1,062,936	1,169,230	1,286,153	1,414,768
Electricity expense	178,575	196,432	216,075	237,683	261,451	287,596	316,356	347,992	382,791	421,070
Water expense	62,880	69,002	75,720	83,092	91,182	100,060	109,802	120,493	132,224	145,097
Travelling expense	314,400	345,010	378,601	415,462	455,912	500,301	549,010	602,463	661,120	725,487
Communications expense (phone, fax, mail, internet, etc.)	125,760	138,004	151,440	166,185	182,365	200,120	219,604	240,985	264,448	290,195
Office vehicles running expense	363,600	399,960	439,956	483,952	532,347	585,581	644,140	708,554	779,409	857,350
Office expenses (stationary, entertainment, janitorial services, etc)	94,320	103,503	113,580	124,639	136,774	150,090	164,703	180,739	198,336	217,646
Promotional expense	706,382	763,952	896,447	1,047,802	1,220,463	1,344,045	1,478,449	1,626,294	1,788,924	1,967,816
Professional fees (legal, audit, consultants, etc.)	353,191	424,418	498,026	582,112	678,035	746,692	821,361	903,497	993,846	1,093,231
Depreciation expense	535,085	535,085	535,085	542,231	542,231	542,231	550,503	550,503	550,503	560,079
Amortization of pre-operating costs	25,000	25,000	25,000	25,000	25,000	-	-	-	-	-
Bad debt expense	706,382	848,835	996,052	1,164,224	1,356,070	1,493,383	1,642,721	1,806,994	1,987,693	2,186,462
Miscellaneous expense 1	47,160	51,752	56,790	62,319	68,387	75,045	82,352	90,369	99,168	108,823
Subtotal	7,256,736	8,011,058	8,894,786	9,887,924	10,987,800	11,994,456	13,132,043	14,372,741	15,735,810	17,242,896
Operating Income	286,948	1,344,061	2,332,508	3,492,448	4,864,005	5,478,235	6,099,958	6,795,675	7,563,949	8,402,751
Other income (interest on cash)	31,079	57,721	103,720	160,488	234,751	313,798	390,010	467,006	542,858	662,928
Other income 2	-	-	-	-	-	-	-	-	-	-
Gain / (loss) on sale of office equipment	-	-	81,600	-	-	135,262	-	-	176,983	-
Earnings Before Interest & Taxes	318,026	1,401,782	2,517,829	3,652,935	5,098,756	5,927,295	6,489,969	7,262,681	8,283,790	9,065,679
Earnings Before Tax	318,026	1,401,782	2,517,829	3,652,935	5,098,756	5,927,295	6,489,969	7,262,681	8,283,790	9,065,679
NET PROFIT/(LOSS) AFTER TAX	318,026	1,401,782	2,517,829	3,652,935	5,098,756	5,927,295	6,489,969	7,262,681	8,283,790	9,065,679

12.2 Balance Sheet

Calculations											SMEDA
Balance Sheet											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Assets											
<i>Current assets</i>											
Cash & Bank	1,057,084	1,429,221	3,188,456	5,109,158	7,729,846	11,050,207	14,053,620	17,147,219	20,213,284	23,215,374	29,818,853
Accounts receivable		2,709,411	2,982,609	3,538,141	4,142,996	4,833,441	5,464,705	6,014,447	6,615,892	7,277,481	8,005,229
Finished goods inventory		2,845,378	3,346,564	3,921,422	4,577,787	5,326,210	5,858,415	6,444,006	7,088,131	7,796,642	8,575,975
Equipment spare part inventory	22,341	28,196	34,740	42,636	52,144	60,297	69,643	80,437	92,905	107,305	-
Raw material inventory	351,771	465,091	600,320	771,835	988,912	1,197,969	1,449,543	1,753,947	2,122,276	2,567,954	-
Pre-paid building rent	150,000	165,000	181,500	199,650	219,615	241,576	265,734	292,308	321,538	353,692	-
Total Current Assets	1,581,196	7,642,297	10,334,189	13,582,841	17,711,300	22,709,701	27,161,659	31,732,363	36,454,026	41,318,448	46,400,056
<i>Fixed assets</i>											
Building security	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Machinery & equipment	2,594,500	2,335,050	2,075,600	1,816,150	1,556,700	1,297,250	1,037,800	778,350	518,900	259,450	-
Furniture & fixtures	485,020	436,518	388,016	339,514	291,012	242,510	194,008	145,506	97,004	48,502	-
Office vehicles	1,818,000	1,636,200	1,454,400	1,272,600	1,090,800	909,000	727,200	545,400	363,600	181,800	-
Office equipment	136,000	90,667	45,333	157,437	104,958	52,479	182,253	121,502	60,751	210,981	140,654
Total Fixed Assets	5,183,520	4,648,435	4,113,349	3,735,701	3,193,470	2,651,239	2,291,261	1,740,758	1,190,255	850,733	290,654
<i>Intangible assets</i>											
Pre-operation costs	125,000	100,000	75,000	50,000	25,000	-	-	-	-	-	-
Total Intangible Assets	125,000	100,000	75,000	50,000	25,000	-	-	-	-	-	-
TOTAL ASSETS	6,889,716	12,390,732	14,522,539	17,368,542	20,929,770	25,360,940	29,452,920	33,473,121	37,644,281	42,169,180	46,690,710
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		5,246,595	6,307,860	7,404,593	8,658,319	10,086,832	11,113,855	12,231,951	13,463,256	14,819,386	16,180,388
Total Current Liabilities	-	5,246,595	6,307,860	7,404,593	8,658,319	10,086,832	11,113,855	12,231,951	13,463,256	14,819,386	16,180,388
<i>Shareholders' equity</i>											
Paid-up capital	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716	6,889,716
Retained earnings		254,421	1,324,962	3,074,233	5,381,734	8,384,392	11,449,350	14,351,455	17,291,309	20,460,079	23,620,606
Total Equity	6,889,716	7,144,137	8,214,678	9,963,949	12,271,450	15,274,108	18,339,065	21,241,170	24,181,024	27,349,795	30,510,322
TOTAL CAPITAL AND LIABILITIES	6,889,716	12,390,732	14,522,539	17,368,542	20,929,770	25,360,940	29,452,920	33,473,121	37,644,281	42,169,180	46,690,710

12.3 Cash Flow Statement

Calculations	SMEDA										
Cash Flow Statement											
	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>Operating activities</i>											
Net profit		318,026	1,401,782	2,517,829	3,652,935	5,098,756	5,927,295	6,489,969	7,262,681	8,283,790	9,065,679
Add: depreciation expense		535,085	535,085	535,085	542,231	542,231	542,231	550,503	550,503	550,503	560,079
amortization of pre-operating costs		25,000	25,000	25,000	25,000	25,000	-	-	-	-	-
Accounts receivable		(2,709,411)	(273,198)	(555,532)	(604,855)	(690,445)	(631,264)	(549,742)	(601,445)	(661,589)	(727,748)
Finished goods inventory		(2,845,378)	(501,186)	(574,858)	(656,365)	(748,424)	(532,205)	(585,591)	(644,125)	(708,511)	(779,333)
Equipment inventory	(22,341)	(5,855)	(6,544)	(7,896)	(9,509)	(8,152)	(9,346)	(10,795)	(12,468)	(14,400)	107,305
Raw material inventory	(351,771)	(113,320)	(135,229)	(171,515)	(217,077)	(209,058)	(251,574)	(304,404)	(368,329)	(445,678)	2,567,954
Pre-paid building rent	(150,000)	(15,000)	(16,500)	(18,150)	(19,965)	(21,961)	(24,158)	(26,573)	(29,231)	(32,154)	353,692
Accounts payable		5,246,595	1,061,266	1,096,733	1,253,726	1,428,512	1,027,023	1,118,096	1,231,306	1,356,129	1,361,002
Cash provided by operations	(524,112)	435,742	2,090,476	2,846,697	3,966,122	5,416,459	6,048,004	6,681,463	7,388,892	8,328,090	12,508,631
Issuance of shares	6,889,716	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	6,889,716	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(5,308,520)	-	-	(157,437)	-	-	(182,253)	-	-	(210,981)	-
Cash (used for) / provided by investing activities	(5,308,520)	-	-	(157,437)	-	-	(182,253)	-	-	(210,981)	-
NET CASH	1,057,084	435,742	2,090,476	2,689,260	3,966,122	5,416,459	5,865,751	6,681,463	7,388,892	8,117,110	12,508,631

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Water Expense	
Direct	Rs. 8,000 per month
In-direct	2% of Administration expenses
Communication Expenses	4% of Administration expenses
Promotional Expenses	0.5% of Revenue
Depreciation Method	Accelerated depreciation
Depreciation Rate	10% on Machinery 33% on Office Equipment 10% on Furniture & Fixture 20% on vehicles
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%
Growth Rate	10%

13.2 Capacity Utilization Assumptions

Description	Details
Maximum Operational Capacity	798,226
Production Capacity in First Year	70%
Maximum Capacity Utilization	90%

13.3 Revenue Assumptions

Description	Details
Sale Price Per Pack (410 grams) Rs.	260

Production Capacity Year 1 (No. of Packs)	558,758
Sale Price Growth Rate	10%
Hours Operational / Day	8
Shift Length (Hours)	8
Days Operational / Year	300

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