



Pre-feasibility Study

DISH WASH LIQUID & SOAP BAR MANUFACTURING UNIT

May 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

The objective of this information memorandum is to introduce the subject matter and provide a general idea and information on the said matter. Although the material included in this document is based on data/information gathered from various reliable sources; however, it is based upon certain assumptions, which may differ from case to case. The information has been provided on as is where is basis without any warranties or assertions as to the correctness or soundness thereof. Although due care and diligence have been taken to compile this document, the contained information may vary due to any of the concerned factors. The future is uncertain, and the actual results may differ substantially from the presented information. SMEDA, its employees or agents do not assume any liability for any financial or other loss resulting from this memorandum in consequence of undertaking this activity. The contained information does not preclude any further professional advice to be obtained by the user. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information necessary for making an informed decision, including taking professional advice from a qualified consultant/technical expert before making any decision to act upon the information.

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2 EXECUTIVE SUMMARY

Dish wash liquid or dish wash soap is a kind of detergent used to clean the dishes and utensils. It is highly effective to remove tough grease food stains and bad smells. This particular pre-feasibility study is for setting up a Dish Wash Liquid and Soap Manufacturing Unit. The focus of the business would be to provide quality Dish Wash Liquid in five different sized bottles (i.e. 100 ml., 275 ml., 500 ml., 750 ml., & 1,000 ml.) and Soap Bar in three different sizes (i.e. 100 g, 300 g & 500 g). The produced liquid and soap bars will be sold to wholesalers and retailers in major cities of Pakistan.

The proposed unit has an installed capacity to produce 3.86 million bottles of Dish Wash Liquid and 1.92 million Soap Bar Packs per annum, based on a single shift of 10 hours and 300 operational days. However, starting operational capacity is assumed at 65% (i.e. 2.51 million bottles and 1.24 million soap packs) with gradual increase of 5% in subsequent years up to maximum capacity utilization of 95% in year 7. This production capacity is estimated to be economically viable and justifies the capital and operational cost of the project. However, the entrepreneur's knowledge of the industry, competitive pricing, and strong linkage with suppliers and wholesalers' network are vital factors for the success of this business.

The total cost of the proposed 'Dish wash Liquid & Soap Bar Manufacturing Unit' is estimated at Rs. 43.17 million out of which Rs. 32.87 million is the capital cost and Rs. 10.29 million is for working capital. The project is to be financed through 100% equity. The project NPV is around Rs. 64.32 million, with an IRR of 38% and a Payback Period of 3.57 years. The project will provide employment opportunities to 21 individuals, including the owner. The legal business status of this project is proposed as '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 the development of Small and Medium Enterprises (SMEs).

With a mission "to assist in employment generation and value addition to the national income, through the 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 investment areas have 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 the 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, production, marketing, finance and business management.

The purpose of this document is to facilitate potential investors in the **Dish Wash Liquid & Soap Bar Manufacturing Unit** business 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 the basis of an informed Investment Decision.

5 BRIEF DESCRIPTION OF PROJECT AND PRODUCT

The Dish wash Liquid & Soap Bar helps to clean dishes, cups, and utensils. The detergent ingredients help cut the grease of dishes and remove food stuck in the dishes. The gelling agents help get rid of stuck-on food particles and anti-foaming agents assist in washing activity. Besides ensuring that utensils are clean, it will also make them smell fresh and just as good as new.

The manufacturing process of Dish Wash Liquid & Soap Bar is not complicated. However, chemical formulation and production method for liquid and soap bars are slightly different.

Dish wash liquid is to be made from liquid ingredients including Water, Sulphonic Acid, Shampoo Base, Caustic Flakes etc., whereas soap bar will be made from Dolomite, Soda Ash, Caustic Soda Lye, Sodium Silicate and Sulphonic Acid along with Color and Fragrance.

This particular prefeasibility study is based on a fully automatic mixing machine that can produce 4,000 liters of Dish Wash Liquid and 1,500 Kg Soap Bars per day, on 10 hours shift basis. The unit will provide dish was liquid in five different sized bottles of 100 ml., 275 ml., 500 ml., 750 ml., and 1,000 ml. and soap bar in three different sized lengths having weights of 100 gm, 300 gm and 500 gm. The unit will have an in-house bottle filling, capping and labelling and packing facility.

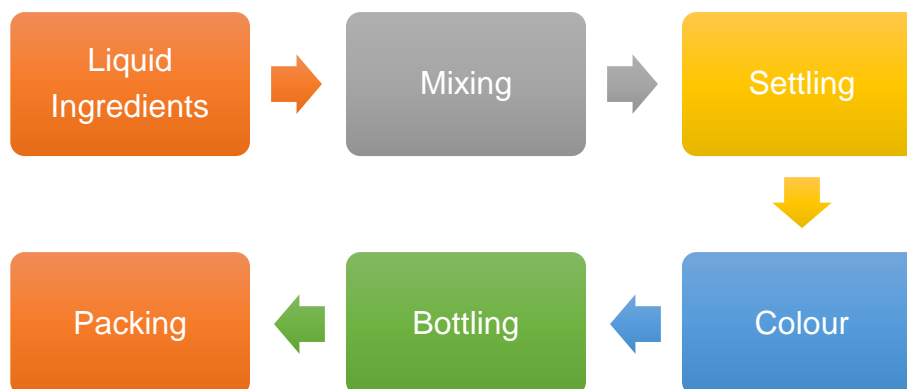
The proposed unit will procure chemicals from the local market to produce the dish wash liquid and soaps. About 2.5% of the total production is considered wastage and typical in the dish wash and soap bar manufacturing process. Accordingly, to proposed business model the produced Dish wash Liquid and Soap Bars will be sold through wholesalers and retailers in the local market.

5.1 Production Process Flow

Production Process for Dish wash Liquid

The production process of dish wash liquid starts with the purchasing of chemicals from the market. All the ingredients are mixed according to the above stated standard formulation. After mixing, it is left for settling and later on color and fragrance is added. The said liquid is then filled in the bottles by using an automatic filling machine. The bottles are finally capped and labelled by automated machines.

Figure 1: Production Process Flow (Dish wash Liquid)

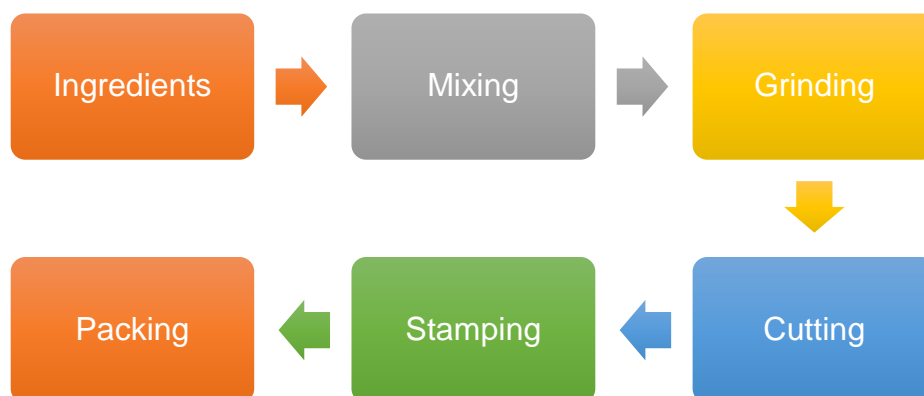


Production Process for Soap Bar

All the ingredients are mixed in the mixing machine, then the fragrance is added. After mixing, the mixture is put into the miller for grinding before the soaps are cut

into the required size and stamped. In the final step, the soaps are packed into the desired wrapping.

Figure: 2 Production Process Flow (Soap Bar)



5.2 Proposed Product Mix

The product mix would include Dish wash liquid bottles of different volumes and soap bars of various sizes. Detailed production mix is given in the table below:

Table 1: Product Mix

Description of Sizes	Production Percentage
Dish Wash Liquid	
100 ml	42%
275 ml	27%
500 ml	19%
750 ml	8%
1000 ml	4%
Total	100%
Soap Bars	
100 Gram	47%
300 Gram	39%
500 Gram	14%
Total	100%

5.3 Installed and Operational Capacity

The installed and operational capacity of the Dish Wash Liquid & Soap Bar Manufacturing Unit mainly depends upon the installed machinery. As per the installed machinery, the proposed business can produce 1.2 million liters of Dish Wash Liquid, filled in 3.86 million bottles of five different sizes and 0.45 million kg of Soap Bars, packed in 1.92 million packs of three different lengths per annum, based on 10 hours single shift basis. The maximum capacity utilization is assumed at 95%. However, during the 1st year of operation unit will operate at 65% capacity.

The details of operational and installed capacity according to product mix are provided in the table below:

Table 2: Installed and Operational Capacity

Product Mix	Total Installed Capacity	Operational Capacity 65% (Year 1)	Maximum Operational Capacity 95% (Year 7)
Dish Wash Liquid			
100 ml bottles	1,612,500	1,048,125	1,531,875
275 ml bottles	1,050,000	682,500	997,500
500 ml bottles	750,000	487,500	712,500
750 ml bottles	300,000	195,000	285,000
1000 ml bottles	150,000	97,500	142,500
Total	3,862,500	2,510,625	3,669,375
Soap Bars			
100 gm packs	900,000	585,000	855,000
300 gm packs	750,000	487,500	712,500
500 gm packs	270,000	175,500	256,500
Total	1,920,000	1,248,000	1,824,000

6 CRITICAL SUCCESS FACTORS

Following are critical success factors associated with this business:

- ⇒ Prior knowledge and information about the chemical industry, especially liquid detergents and soap bars manufacturing.

- ⇒ Selection of appropriate plant and machinery.
- ⇒ Strong linkages with raw material suppliers for sourcing quality material on time at economical prices.
- ⇒ Efficient management of stock to keep inventory cost at the minimum.
- ⇒ Induction of trained human resource for the handling of business operations, especially in production and sales.
- ⇒ Stringent supervision of the production process at every level.
- ⇒ Effective marketing and distribution of the product, particularly to the retailers.

7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

Due to the existence of potential target customers in metropolitan cities, it is recommended to establish the proposed unit in any major city. Therefore, cities like Lahore, Islamabad, Karachi, Rawalpindi, Peshawar, Quetta etc., are the most suitable locations for erecting the proposed Dish wash Liquid & Soap Bar Manufacturing Unit.

8 POTENTIAL TARGET CUSTOMERS / MARKETS

The potential target customers of Dish wash Liquid & Soap Bars will be households, restaurants, hotels, cafes and canteens etc. The product will be sold through distributors, wholesalers, and retailers for the potential customer segments.

9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of the Dish wash manufacturing unit. Various cost and revenue related assumptions along with results of the analysis are outlined in this section.

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

9.1 Project Economics

All the figures in this financial model have been calculated for estimated sales of Rs 213.56 million in year one.

To financially appraise the project, a 100% Equity-Based Business Model has been assumed. The following table shows the Internal Rate of Return, Payback Period and Net Present Value of the proposed venture:

Table 3: Project Economics (Equity Financed)

Description	Details
Internal Rate of Return (IRR)	38%
Payback Period (Yrs.)	3.57
Net Present Value (Rs.)	64,327,469

Calculation of break-even analysis is as follows:

Table 4: Breakeven (100% Equity-Based)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Breakeven revenue (Rs in '000')	124,816	120,725	117,985	116,476	115,815	117,820	117,353	118,185	119,708	122,018
Breakeven units (in '000')	2,151	1,963	1,810	1,685	1,581	1,517	1,426	1,355	1,294	1,245
Margin of Safety	42%	51%	58%	64%	68%	71%	74%	75%	76%	77%

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

Table 5: Project Economics Based on Debt (50%):Equity (50%)

Description	Details
Internal Rate of Return (IRR)	36%
Payback Period (Yrs.)	3.77
Net Present Value (Rs.)	77,549,794

The financial assumptions for Debt: Equity is as follows:

Table 5.1: Financial Assumptions for Debt:Equity Model

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	12%
Debt Tenure	5 years

Debt Payment / Year	1
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The projected Income Statement, Balance Sheet and Cash Flow Statement enclosed as annexures are based on a 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	
Machinery and Equipment	26,848,310
Office Vehicles	2,655,237
Pre-Operating Costs	1,070,000
Furniture and Fixtures	920,900
Office Equipment	776,730
Security Deposit for Rental Building	450,000
Legal, Licensing and Training Costs	150,000
Total Capital Cost	32,871,177
Working Capital	
Raw Material Inventory	7,314,779
Cash	1,668,235
Up-Front Insurance Payment	764,141
Up-Front Building Rental	450,000
Equipment Spare Parts Inventory	102,430
Total Working Capital	10,299,585
Total Project Cost	43,170,762

9.3 Space Requirement

In order to reduce the initial capital expenditure, the proposed manufacturing unit will be established on rental premises. Therefore, the building may be acquired in the industrial state or the outskirts of big cities. The rent of the building will depend on the area and geographical location of the unit. An estimated area of 6,155 sq. ft. will be required for the proposed venture.

The area requirement has been calculated based on space requirement for production, management and storage. However, the unit's operating in the industry do not follow any set pattern. The following table shows calculations for project space requirement:

Table 7: Space Requirement

Description	Area Required Sq. Ft.
Raw Material, Finished Goods and Stores Spares Warehouse	2,500
Production Facility	1,200
Packing Area	1,200
Management Building	500
Lab and Quality Test	450
Pavement/Driveway	225
Electric Room	80
Total	6,155

For this particular pre-feasibility, the rent amount has been determined at Rs. 150,000 per month, to be paid every quarter in advance.

9.4 Machinery and Equipment Requirement

Machinery and equipment for the proposed project are stated below:

Table 8: Machinery and Equipment

Description	Qty.	Unit Cost (Rs.)	Total Cost (Rs.)
Machinery-Dish wash Liquid*			20,239,171
Machinery- Soap Bar*			3,520,139
Generator (Hyundai-Korea Diesel 100 KVA / 80 KW, 3 Phase)	1	1,989,000	1,989,000
Installation Cost (Fabrication Cost)	1	400,000	500,000
Turbine (Water Pump)	1	250,000	250,000
Experts Cost	1	200,000	200,000

Lab Equipment	1	150,000	150,000
Total			26,848,310

*Details of plant and machinery are given in Annex 12.4

9.5 Furniture and Fixtures Requirement

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

Table 9: Furniture and Fixtures

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Electric Wiring and Lighting		750,000	750,000
Chairs	14	6,300	88,200
Table	7	8,500	59,500
Guest Chairs	4	5,800	23,200
Total			920,900

9.6 Office Equipment Requirement

Following office equipment will be required for the Dish wash Manufacturing Unit:

Table 10: Office Equipment

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
AC	2	83,000	166,000
Desktop Computers	5	30,000	150,000
Laptops	2	65,000	130,000
Industrial Exhaust Fans	3	38,610	115,830
Fridge	1	51,500	51,500
Water Cooler	1	45,500	45,500
Fans	12	2,900	34,800
Computer Printer (S)	2	16,000	32,000
Water Dispenser	1	16,000	16,000
Tube Lights	18	800	14,400
Microwave Oven	1	7,500	7,500

Telephones	6	1,200	7,200
Exhaust Fans	2	3,000	6,000
Total			776,730

9.7 Vehicles Requirement

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

Table 11: Vehicles

Description	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
Mini Truck	1	2,500,000	2,500,000
Honda CD-70	1	77,900	77,900
Registration Fee			77,337
Total			2,655,237

9.8 Raw Material Requirement

Following are the details of raw material required for the proposed venture:

Table 12: Raw Material (Year 1)

Description	Percentage	Cost (Rs)
Dish Wash Liquid (2 Litre)		
Water	64%	-
Sulphonic Acid	16%	152.5
Shampoo Base	16%	134.2
Caustic Flakes	2%	6.5
Salt	2%	0.4
Color	0.2%	10.0
Total	100%	303.6
Soap Bar (5 KG)		
Dolomite	64%	50.0
Soda Ash	15%	219.8
Caustic Soda	7%	42.5
Sodium Silicate	7%	40.6
Sulphonic Acid (Labsa)	7%	31.2

Color	0.03%	10.0
Perfume	0.06%	15.0
Total	100%	409.1

9.9 Human Resource Requirement

To run the operations of Dish Wash Manufacturing Unit smoothly, details of human resources required along with a number of employees and monthly salary are recommended as under:

Table 13: Human Resource

Description	No. of Employees	Monthly Salary per Person (Rs.)
CEO	1	100,000
Production Supervisor	2	40,000
Machine Operator	3	25,000
Labour	6	18,000
Warehouse In charge	1	30,000
Finance Manager	1	40,000
Sales and Purchase Manager	1	40,000
Admin Manager	1	30,000
Office Boy	1	20,000
Electrician	1	20,000
Lab Assistant	1	30,000
HSE Officer	1	35,000
Security Guard	1	20,000
	21	

It is assumed that the owner would have prior experience or knowledge about the Dish wash manufacturing business. Salaries of all employees are estimated to increase by 10% annually.

9.10 Utilities and Other Costs

An essential cost to be borne by the business is the cost of electricity; the annual electricity expenses is estimated as Rs. 3.47 million. This project also requires

marketing and promotional activities for which Rs. 1.06 million will be spent in year 1. The cost of maintenance of machinery is assumed as Rs. 4.91 million in year 1.

9.11 Revenue Generation

Based on the operational capacity utilization of 65%, sales revenue during the first year of operations is provided in the table below.

Table 14: Revenue Generation (Year 1)

Description	Rate Per Unit (Rs.)	Quantity Sold	Total Revenue (Rs.)
Dish Wash Liquid			
100 ml.	24	1,026,289	24,630,938
275 ml.	62	668,281	41,433,438
500 ml.	112	477,344	53,462,500
750 ml.	160	190,938	30,550,000
1000 ml.	215	95,469	20,525,781
Dish Wash Liquid Revenue		2,458,321	170,602,657
Soap Bar			
100 gm	15	572,813	8,592,188
300 gm	45	477,344	21,480,469
500 gm	75	171,844	12,888,281
Soap Bar Revenue		1,222,001	42,960,938
Total Revenue			213,563,595

10 CONTACT DETAILS

In order to facilitate potential investors, contact details of private-sector vendors relevant to the proposed project are given below.

Table 15: Suppliers Contact

Name of Supplier	Type of supplies	Web Address / Phone
Guangzhou Yuxiang Light Industry	Machinery-Liquid Dish Wash	yx010@chinayxix.com +86 20 8608 4368

Machinery Equipment Co. Ltd		
Guangzhou Topcnmachinery Co.,LTD	Machinery-Soap and Soap Packing	cara@topcnpackage.com +86 18 5651 83517
Ary Sahulat Bazar	Hyundai-Korea Diesel Generator 100 Kva / 80 Kw, 3 Phase	shopsy.pk/generators +92 321 1244 440
Woodpecker	Office Furniture	www.apnafurniture.pk/product/ace-office-table-or-workstation/ +92 331 8999 222 +92 331 7151 566

11 USEFUL WEB LINKS

Small and Medium Enterprises Development Authority (SMEDA)	www.smeda.org.pk
Government of Pakistan	www.pakistan.gov.pk
Ministry of Industries and Production	www.moip.gov.pk
Ministry of Education, Training and Standards in Higher Education	http://moptt.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 Jammu Kashmir	www.ajk.gov.pk
Trade Development Authority of Pakistan (TDAP)	www.tdap.gov.pk
Security and Exchange 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 Vocational Training Council (PVTTC)	www.pvtc.gop.pk
Technical Education and Vocational Training Authority (TEVTA)	www.tevta.org
Pakistan Soap Manufacturers Association	https://psma.com.pk
Pakistan Chemicals Manufacturing Association	https://www.pcma.org.pk
Faisalabad Industrial Estate Development and Management Company (FIEDMC)	www.fiedmc.com.pk
Punjab Industrial Estate Development and Management Company (PIEDMC)	www.pie.com.pk
Punjab Small Industries Corporation	www.psic.gop.pk
Sundar Industrial Estate	www.sie.com.pk
Quaid-e-Azam Industrial Estate	www.qie.com.pk
Sindh Small Industries Corporation	www.ssic.gos.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	213,563,594	248,607,597	282,375,252	319,300,038	359,639,247	403,669,682	451,689,067	479,315,977	508,074,935	538,559,431
<i>Cost of sales</i>										
Dishwash Liquid 100 ML- RM	15,962,797	18,406,856	20,709,770	23,196,959	25,881,092	28,775,646	31,894,953	33,526,462	35,202,785	36,962,924
Dishwash Liquid 275 ML-RM	28,584,544	32,961,114	37,084,937	41,538,740	46,345,211	51,528,482	57,114,217	60,035,757	63,037,545	66,189,422
Dishwash Liquid 500 ML-RM	37,122,784	42,806,641	48,162,256	53,946,416	60,188,586	66,920,107	74,174,308	77,968,515	81,866,941	85,960,288
Dishwash Liquid 750 ML-RM	22,273,671	25,683,985	28,897,354	32,367,849	36,113,151	40,152,064	44,504,585	46,781,109	49,120,165	51,576,173
Dishwash Liquid 1000 ML- RM	14,849,114	17,122,656	19,264,902	21,578,566	24,075,434	26,768,043	29,669,723	31,187,406	32,746,776	34,384,115
Dishwash Liquid 100 ML- Packing	5,131,445	5,917,119	6,657,420	7,456,959	8,319,808	9,250,299	10,253,040	10,777,510	11,316,385	11,882,205
Dishwash Liquid 275 ML- Packing	4,677,969	5,394,211	6,069,090	6,797,972	7,584,569	8,432,831	9,346,958	9,825,079	10,316,333	10,832,149
Dishwash Liquid 500 ML- Packing	5,250,781	6,054,727	6,812,244	7,630,377	8,513,292	9,465,423	10,491,483	11,028,150	11,579,557	12,158,535
Dishwash Liquid 750 ML- Packing	3,055,000	3,522,750	3,963,488	4,439,492	4,953,188	5,507,155	6,104,136	6,416,378	6,737,197	7,074,057
Dishwash Liquid 1000 ML- Packing	1,813,906	2,091,633	2,353,321	2,635,948	2,940,955	3,269,873	3,624,331	3,809,724	4,000,211	4,200,221
Dishwash Liquid 100 ML- Packing	1,069,051	1,232,733	1,386,963	1,553,533	1,733,293	1,927,146	2,136,050	2,245,315	2,357,580	2,475,459
Dishwash Liquid 275 ML- Packing	1,392,253	1,605,420	1,806,277	2,023,206	2,257,312	2,509,771	2,781,833	2,924,131	3,070,337	3,223,854
Dishwash Liquid 500 ML- Packing	1,988,932	2,293,457	2,580,396	2,890,294	3,224,732	3,585,387	3,974,047	4,177,329	4,386,196	4,605,506
Dishwash Liquid 750 ML- Packing	1,193,359	1,376,074	1,548,237	1,734,177	1,934,839	2,151,232	2,384,428	2,506,398	2,631,718	2,763,303
Dishwash Liquid 1000 ML- Packing	1,193,359	1,376,074	1,548,237	1,734,177	1,934,839	2,151,232	2,384,428	2,506,398	2,631,718	2,763,303
Soap Bar 100 Gram RM	4,802,922	5,538,296	6,231,202	6,979,553	7,787,161	8,658,081	9,596,625	10,087,517	10,591,893	11,121,488
Soap Bar 300 Gram RM	12,007,306	13,845,740	15,578,006	17,448,883	19,467,903	21,645,203	23,991,563	25,218,793	26,479,733	27,803,719
Soap Bar 500 Gram RM	7,204,384	8,307,444	9,346,803	10,469,330	11,680,742	12,987,122	14,394,938	15,131,276	15,887,840	16,682,232
Soap Bar 100 Gram-Packing	1,718,438	1,981,547	2,229,462	2,497,214	2,786,168	3,097,775	3,433,576	3,609,213	3,789,673	3,979,157
Soap Bar 300 Gram-Packing	2,386,719	2,752,148	3,096,475	3,468,353	3,869,678	4,302,465	4,768,856	5,012,795	5,262,607	5,526,607
Soap Bar 500 Gram-Packing	1,374,750	1,585,238	1,783,569	1,997,771	2,228,935	2,478,220	2,746,861	2,887,370	3,031,739	3,183,325
Soap Bar 100 Gram-Box	119,336	137,607	154,824	173,418	193,484	215,123	238,443	250,640	263,172	276,330
Soap Bar 300 Gram-Box	238,672	275,215	309,647	346,835	386,968	430,246	476,886	501,280	526,344	552,661
Soap Bar 500 Gram-Box	143,203	165,129	185,788	208,101	232,181	258,148	286,131	300,768	315,806	331,596
Operation costs 1 (direct labor)	4,441,500	4,982,175	5,480,937	6,029,555	6,633,019	7,296,818	8,026,990	8,839,381	9,723,319	10,695,651
Operating costs 2 (machinery maintenance)	4,916,641	5,669,426	6,378,738	7,144,807	7,971,537	8,863,077	9,823,843	10,326,358	10,862,676	11,384,810
Operating costs 3 (direct electricity)	3,378,314	3,955,831	4,581,459	5,290,192	6,092,805	7,001,397	8,029,549	8,754,536	9,552,021	10,429,256
Total cost of sales	188,291,150	217,041,247	244,201,802	273,578,677	305,330,881	339,628,366	376,652,779	396,635,585	417,269,093	439,018,346
Cross Profit	25,272,444	31,566,350	38,173,450	45,721,361	54,308,366	64,041,315	75,036,288	82,680,391	90,805,843	99,541,085
<i>General administration & selling expenses</i>										
Administration expense	3,240,000	3,564,000	3,920,400	4,312,440	4,743,684	5,218,052	5,739,858	6,313,843	6,945,228	7,639,751
Administration benefits expense	97,200	106,920	117,612	129,373	142,311	156,542	172,196	189,415	208,357	229,193
Building rental expense	1,800,000	1,980,000	2,178,000	2,395,800	2,635,380	2,898,918	3,188,810	3,507,691	3,858,460	4,244,306
Electricity expense	95,292	104,821	115,303	126,834	139,517	153,469	168,816	185,697	204,267	224,694
Water expense	97,200	106,920	117,612	129,373	142,311	156,542	172,196	189,415	208,357	229,193
Gas expense	60,000	63,000	66,150	69,458	72,930	76,577	80,406	84,426	88,647	93,080
Travelling expense	324,000	356,400	392,040	431,244	474,368	521,805	573,986	631,384	694,523	763,975
Communications expense (phone, fax, mail, internet, etc.)	162,000	178,200	196,020	215,622	237,184	260,903	286,993	315,692	347,261	381,988
Office vehicles running expense	79,657	87,623	96,385	106,024	116,626	128,289	141,117	155,229	170,752	187,827
Office expenses (stationary, entertainment, janitorial services, etc.)	259,200	285,120	313,632	344,995	379,495	417,444	459,189	505,107	555,618	611,180
Promotional expense	1,067,818	1,243,038	1,411,876	1,596,500	1,798,196	2,018,348	2,020,367	2,024,407	2,030,481	2,038,603
Insurance expense	764,141	678,434	592,726	507,019	421,311	485,274	388,219	291,164	194,110	97,055
Professional fees (legal, audit, consultants, etc.)	854,254	811,542	770,965	732,416	695,796	661,006	627,955	596,558	566,730	538,393
Depreciation expense	3,504,914	3,504,914	3,504,914	3,521,307	3,521,307	3,871,196	3,890,173	3,890,173	3,890,173	3,912,142
Amortization of pre-operating costs	214,000	214,000	214,000	214,000	214,000	214,000	-	-	-	-
Amortization of legal, licensing, and training costs	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Bad debt expense	2,135,636	2,028,854	1,927,411	1,831,041	1,739,489	1,652,514	1,569,889	1,491,394	1,416,825	1,345,983
Subtotal	14,770,313	15,328,786	15,950,047	16,678,446	17,488,905	18,691,879	19,495,168	20,386,598	21,394,788	22,552,360
Operating Income	10,502,131	16,237,564	22,223,402	29,042,915	36,819,461	45,349,437	55,541,120	62,293,793	69,411,055	76,988,725
Other income (interest on cash)	45,977	178,618	430,480	699,804	954,956	1,243,058	1,640,729	2,077,253	2,521,143	3,333,625
Gain / (loss) on sale of office equipment (IT)	-	-	187,200	-	-	310,307	-	-	406,020	-
Gain / (loss) on sale of office equipment	-	-	-	-	185,892	-	-	-	-	-
Gain / (loss) on sale of office vehicles	-	-	-	-	1,062,095	-	-	-	-	-
Earnings Before Interest & Taxes	10,548,108	16,416,182	22,841,082	29,742,719	39,022,404	46,902,802	57,181,848	64,371,046	72,338,217	80,322,350
Tax	2,811,838	4,865,663	7,114,378	9,529,951	12,777,841	15,535,980	19,133,647	21,649,866	24,438,376	27,232,822
NET PROFIT/(LOSS) AFTER TAX	7,736,271	11,550,519	15,726,704	20,212,768	26,244,563	31,366,822	38,048,202	42,721,180	47,899,842	53,089,528

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	1,668,235	2,009,960	12,279,474	22,158,923	33,825,368	42,571,115	56,873,521	74,384,789	91,795,435	109,895,985	156,794,027
Accounts receivable		17,553,172	18,993,337	21,821,213	24,726,382	27,901,614	31,368,860	35,151,729	38,260,481	40,577,709	43,012,371
Finished goods inventory		4,006,195	4,528,431	5,094,613	5,706,987	6,368,865	7,083,790	7,855,546	8,263,241	8,693,106	9,146,216
Equipment spare part inventory	102,430	124,019	146,512	172,313	201,864	235,662	274,269	302,713	333,741	367,950	-
Raw material inventory	7,314,779	8,856,479	10,462,756	12,305,270	14,415,576	16,829,212	19,586,190	21,617,478	23,833,269	26,276,179	-
Pre-paid building rent	450,000	495,000	544,500	598,950	658,845	724,730	797,202	876,923	964,615	1,061,076	-
Pre-paid insurance	764,141	678,434	592,726	507,019	421,311	485,274	388,219	291,164	194,110	97,055	-
Total Current Assets	10,299,585	33,723,258	47,547,736	62,658,301	79,956,332	95,116,473	116,372,051	140,480,343	163,644,892	186,969,060	208,952,614
<i>Fixed assets</i>											
Security Deposit for Rental Building	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000	450,000
Machinery & equipment	26,848,310	24,163,479	21,478,648	18,793,817	16,108,986	13,424,155	10,739,324	8,054,493	5,369,662	2,684,831	-
Furniture & fixtures	920,900	828,810	736,720	644,630	552,540	460,450	368,360	276,270	184,180	92,090	-
Office vehicles	2,655,237	2,124,190	1,593,142	1,062,095	531,047	4,276,286	3,421,029	2,565,771	1,710,514	855,257	-
Office equipment	312,000	208,000	104,000	361,179	240,786	120,393	418,110	278,740	139,370	484,014	322,676
Office equipment	464,730	371,784	278,838	185,892	92,946	593,126	474,501	355,876	237,251	118,625	-
Total Fixed Assets	31,651,177	28,146,263	24,641,348	21,497,613	17,976,306	19,324,410	15,871,324	11,981,150	8,090,977	4,684,818	772,676
<i>Intangible assets</i>											
Pre-operation costs	1,070,000	856,000	642,000	428,000	214,000	-	-	-	-	-	-
Legal, licensing, & training costs	150,000	135,000	120,000	105,000	90,000	75,000	60,000	45,000	30,000	15,000	-
Total Intangible Assets	1,220,000	991,000	762,000	533,000	304,000	75,000	60,000	45,000	30,000	15,000	-
TOTAL ASSETS	43,170,762	62,860,521	72,951,084	84,688,914	98,236,638	114,515,883	132,303,374	152,506,493	171,765,869	191,668,878	209,725,291
Liabilities & Shareholders' Equity											
<i>Current liabilities</i>											
Accounts payable		13,500,742	15,588,694	17,583,486	19,747,929	22,095,113	24,639,149	27,302,398	28,791,497	30,335,354	29,552,697
<i>Shareholders' equity</i>											
Paid-up capital	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762	43,170,762
Retained earnings		6,189,017	14,191,628	23,934,666	35,317,947	49,250,007	64,493,463	82,033,332	99,803,610	118,162,761	137,001,831
Total Equity	43,170,762	49,359,779	57,362,391	67,105,428	78,488,709	92,420,770	107,664,226	125,204,095	142,974,372	161,333,524	180,172,594
TOTAL CAPITAL AND LIABILITIES	43,170,762	62,860,521	72,951,084	84,688,914	98,236,638	114,515,883	132,303,374	152,506,493	171,765,869	191,668,878	209,725,291

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		7,736,271	11,550,519	15,726,704	20,212,768	26,244,563	31,366,822	38,048,202	42,721,180	47,899,842	53,089,528
Add: depreciation expense		3,504,914	3,504,914	3,504,914	3,521,307	3,521,307	3,871,196	3,890,173	3,890,173	3,890,173	3,912,142
amortization of pre-operating costs		214,000	214,000	214,000	214,000	214,000	-	-	-	-	-
amortization of training costs		15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000
Accounts receivable		(17,553,172)	(1,440,165)	(2,827,876)	(2,905,169)	(3,175,233)	(3,467,246)	(3,782,869)	(3,108,752)	(2,317,227)	(2,434,663)
Finished goods inventory		(4,006,195)	(522,237)	(566,182)	(612,373)	(661,878)	(714,925)	(771,757)	(407,695)	(429,865)	(453,109)
Equipment inventory	(102,430)	(21,589)	(22,493)	(25,801)	(29,551)	(33,799)	(38,606)	(28,444)	(31,028)	(34,208)	367,950
Raw material inventory	(7,314,779)	(1,541,700)	(1,606,276)	(1,842,515)	(2,110,306)	(2,413,636)	(2,756,978)	(2,031,288)	(2,215,791)	(2,442,910)	26,276,179
Pre-paid building rent	(450,000)	(45,000)	(49,500)	(54,450)	(59,895)	(65,885)	(72,473)	(79,720)	(87,692)	(96,461)	1,061,076
Advance insurance premium	(764,141)	85,707	85,707	85,707	85,707	(63,963)	97,055	97,055	97,055	97,055	97,055
Accounts payable		13,500,742	2,087,952	1,994,793	2,164,442	2,347,184	2,544,036	2,663,250	1,489,099	1,543,857	(782,657)
Other liabilities		-	-	-	-	-	-	-	-	-	-
Cash provided by operations	(8,631,350)	1,888,979	13,817,422	16,224,294	20,495,931	25,927,662	30,843,881	38,019,601	42,361,548	48,125,255	81,148,501
<i>Financing activities</i>											
Issuance of shares	43,170,762	-	-	-	-	-	-	-	-	-	-
Purchase of (treasury) shares											
Cash provided by / (used for) financing activities	43,170,762	-	-	-	-	-	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(32,871,177)	-	-	(361,179)	-	(4,869,412)	(418,110)	-	-	(484,014)	-
Acquisitions											
Cash (used for) / provided by investing activities	(32,871,177)	-	-	(361,179)	-	(4,869,412)	(418,110)	-	-	(484,014)	-
NET CASH	1,668,235	1,888,979	13,817,422	15,863,115	20,495,931	21,058,250	30,425,771	38,019,601	42,361,548	47,641,240	81,148,501

12.4 Machinery Details

Dish wash Liquid			
Description	Quantity	Unit Price	Total Price
GZJ-ZL-4 Full Automatic self-stream type Liquid Filling machine (Servo motor)	1	2,767,500	2,767,500
Flat and round bottle labeling machine	1	2,767,500	2,767,500
GZJ-QZ-6 Nozzles Auto Filling Machine	1	2,736,750	2,736,750
JBj-1000L Multi-function Liquid Washing Mixer and homogenizer	1	1,614,375	1,614,375
XGJ Full Automatic type Screw Capping Machine	1	891,750	891,750
Inkjet printer	1	845,625	845,625
Automatic cap feeding machine	1	615,000	615,000
Automatic bottle feeding and collecting machine	1	399,750	399,750
YXRO-500L RO Water treatment machine (PVC type for city water)	1	353,625	353,625
GLF-2100 Automatic Electromagnetism Inductor Aluminum Foil Sealing Machine	1	353,625	353,625
CG-II-1000L Storage Tank	1	276,750	276,750

Custom Duty, Sale Tax, Clearance Charges			6,616,921
Total			20,239,171
Soap Bar			
Description	Quantity	Unit Price	Total Price
Single screw Plodder 300kg/H	1	953,250	953,250
Packing Machine	1	672,656	672,656
Miller 150	1	230,625	230,625
Mixer-50	1	199,875	199,875
Semi-Auto soap printing Machine	1	138,375	138,375
Custom Duty, Sale Tax, Clearance Charges			1,325,358
Total			3,520,139

13 KEY ASSUMPTIONS

13.1 Operating Cost Assumptions

Description	Details
Operating Costs Growth Rate	5.0%
Administration Benefits Expense	3.0% of Admin Expense
Travelling Expense	10.0% of Admin Expense
Communication Expense	5.0% of Admin Expense
Office Vehicles Running Expense	3.0% of Vehicles Cost
Office Expenses (Stationary, Entertainment, Janitorial Services, Etc.)	8.0% of Admin Expense
Promotional Expense	0.50% of Revenue
Bad Debt Expense	1.0% of Revenue
Machinery and Equipment Insurance Rate	2.5%
Office Vehicles Insurance Rate	3.5%
Security Deposit for Rental Building	Rs. 450,000 Refundable
Licenses Obtained	Rs. 150,000
Depreciation Method	Straight Line
Depreciation Rate	20%
Inflation Rate	10%
Electricity Price Growth Rate	10%
Water Price Growth Rate	5%
Gas Price Growth Rate	5%
Wage Growth Rate	10%

13.2 Production Cost Assumptions

Description	Details				
Dish Wash Liquid	100 ml	275 ml.	500 ml.	750 ml.	1000 ml.
Raw Material (Rs.)	16	43	78	117	156
Packing (Rs.)	5	7	11	16	19

Soap Bars	100 gm	300 gm	500 gm
Raw Material (Rs.)	8	25	42
Packing (Rs.)	3	5	8
Cost of Goods Sold Growth Rate	5.0%		

13.3 Revenue Assumptions

Description	Details
Sale Price Growth Rate	5%
Production Capacity Utilization Year 1	65%
Production Capacity Utilization Growth Rate	5%
Maximum Capacity Utilization	95%
Hours Operational / Day	10
No. of Shifts	1
Days Operational / Year	300

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