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# Pre-Feasibility Study

## ROSE WATER EXTRACTION UNIT



**Small and Medium Enterprises Development Authority**

**Ministry of Industries & Production**

**Government of Pakistan**

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## 1 DISCLAIMER

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 has been taken to compile this document, the contained information may vary due to any change in any of the concerned factors, 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. The prospective user of this memorandum is encouraged to carry out additional diligence and gather any information which is necessary for making an informed decision, including taking professional advice from a qualified consultant / technical expert before taking any decision to act upon the information.

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## **2 EXECUTIVE SUMMARY**

Cultivation of ornamental flowers including rose flower is concentrated around big cities such as Rawalpindi, Faisalabad, Lahore, Multan, Hyderabad and Karachi. Accordingly, these cities present an opportunity for establishment of Rose Water Processing Unit due to easy sourcing of rose petals.

The proposed project is a small sized simple steam distillation unit which would take approximately 8 hours to complete a production cycle, from rose petal input to rose water extraction. The project will be producing rose water packed in pet bottles of 750 ml and 250 ml with a ratio of 60% and 40% respectively. Total installed production capacity of rose water is 300,000 liters whereas its operational capacity will be 60% or 180,000 liters of rose water in year 1. Maximum capacity utilization is assumed at 95% (i.e. 285,000 liters). Entrepreneur's background and technical know-how of the business is extremely important for the success of proposed venture.

The total project cost for setting up a Rose Water Processing Unit is estimated at Rs. 4.02 million out of which Rs. 2.54 million is capital cost and Rs. 1.47 million is working capital. The project is proposed to be financed through 50% debt and 50% equity. The NPV is projected around Rs. 12.47 million, with an IRR of 66% and a payback period of 2.16 years. The project will provide employment opportunities to 14 people directly including owner as CEO. The legal business status of this project is proposed as a '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 **Rose Water Extraction Unit** 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.

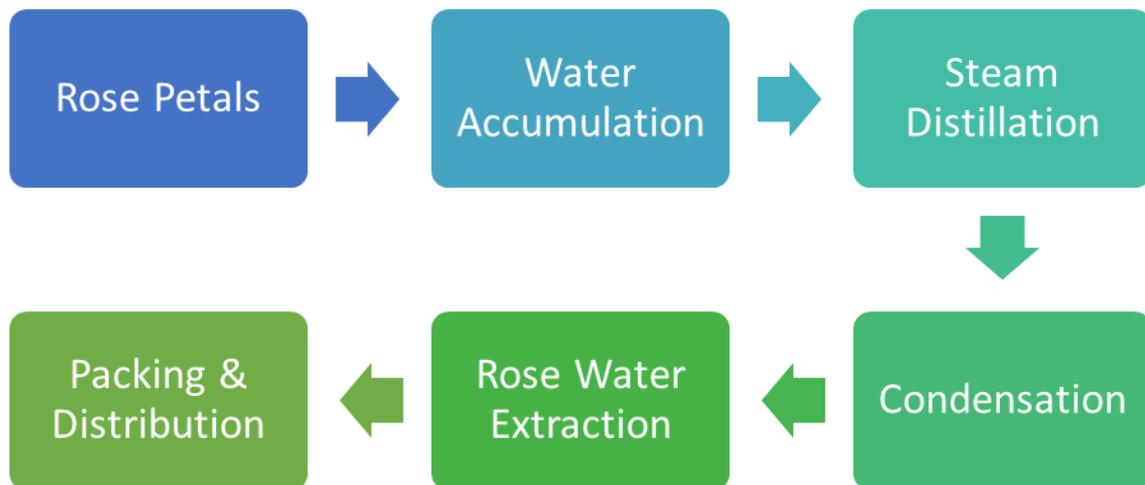
Apart from carefully studying the whole document one must consider critical aspects provided later on, which form basis of any Investment Decision.

## 5 BRIEF DESCRIPTION OF PROJECT & PRODUCT

This project is about processing rose petals to extract rose water and its packing in pet bottles of 750 ml and 250 ml. The processing unit will have a capacity to process 60 tons of rose petals, extracting 300,000 liters of rose water annually. Rose water will be extracted through Steam Distillation method in which rose petals will immediately prepared to go through a very meticulous steam-distillation process. The rose petals are kept in chamber with water. The steam heats up the chamber and the water starts to boil and thus evaporates while extracting all the soluble elements. The evaporated water passes through a condenser and cools down to become pure rose water.

To keep the investment required for setting-up the facility low, rose petals will be purchased from the market instead of self-cultivation / harvesting. All the necessary expenditures required to set-up this rose water processing unit have been incorporated in the project's cost of capital.

### 5.1 Production Process Flow



### 5.2 Installed And Operational Capacities

The installed capacity of proposed unit is to produce 300,000 liters of rose water based on 300 operational days (i.e. 1,000 liter per shift). However, in year 1 the unit will operate on 60% of its installed capacity and will produce 180,000 liters. The rose water will be packed in 2 different pickings (i.e. 750 ml and 250 ml) and

will be sold with the brand name. Installed and operational capacity of the unit in packing (no. of bottles) is given in table below:

**Table 1: Installed and Operational Capacity**

Product Description	Product Mix	Installed Capacity*	Operational Capacity Year 1
750 ml Packing	60%	240,000	144,000
250 ml Packing	40%	480,000	288,000
<b>Total</b>	<b>100%</b>	<b>720,000</b>	<b>432,000</b>

\* 60% of 300,000 liters rose water will be packed in 750 ml packing and remaining 40% will be packed in 250 ml packing.

## 6 CRITICAL FACTORS

Following factors play a critical role in the successful execution of the business operations and impact profitability:

- Contract sourcing of good quality rose-petals on reasonable prices.
- Ensure the quality of the finished product.
- Effective marketing and distribution of the product particularly to the wholesale buyers.

## 7 GEOGRAPHICAL POTENTIAL FOR INVESTMENT

The industry of growing flowers and other ornamental crops is mainly concentrated around big cities like Karachi, Hyderabad, Lahore, Rawalpindi, Islamabad, Multan, Faisalabad, and Quetta along with Pattoki, Sahiwal and Hyderabad.

## 8 POTENTIAL TARGET CUSTOMERS / MARKETS

Rose water is used in many medical, cosmetic and culinary products. Large herbal medicine companies and pharmaceutical businesses are major buyers of rose water. Additionally, due to traditional consumption of rose water for household use, there is also a significant consumer market all across Pakistan.

## 9 PROJECT COST SUMMARY

A detailed financial model has been developed to analyze the commercial viability of Rose Water Extraction Unit. Various cost 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. 18.36 million in the year one. The capacity utilization during year one is worked out at 60% with 5% increase in subsequent years up to the maximum capacity utilization of 95%.

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)	66%
Payback Period (Years)	2.16
Net Present Value (Rs.)	12,470,485

### 9.2 Project Financing

Following table provides details of the equity required and variables related to bank loan:

**Table 3: Project Financing**

Description	Details
Total Equity (50%)	Rs. 2,009,201
Bank Loan (50%)	Rs. 2,009,201
Markup to the Borrower (%age / annum)	12%
Tenure of the Loan (Years)	5

### 9.3 Project Cost

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

**Table 4: Project Cost**

<b>Description</b>	<b>Amount (Rs.)</b>
Machinery & Equipment	833,000
Furniture & Fixtures	542,000
Office Vehicles	656,500
Office Equipment	97,000
Pre-operating Costs	365,000
Training Costs	50,000
<b>Total Capital Costs</b>	<b>2,543,500</b>
<b>Working Capital</b>	
Equipment Spare Part Inventory	20,825
Raw Material Inventory	266,221
Upfront Building Rent	300,000
Cash	887,857
<b>Total Working Capital</b>	<b>1,474,903</b>
<b>Total Investment</b>	<b>4,018,403</b>

#### 9.4 Space Requirement

A total of 2,300 square feet area is required to start this business. Space for the processing unit has been calculated on the basis of space required for production area, management building, storage area and parking area. However, the units operating in the industry do not follow any set pattern. Following table shows calculations for project space requirement.

**Table 5: Space Requirement**

<b>Description</b>	<b>Area Required (Sq. ft.)</b>
Management Building	500
Production Area	1,000
Finished Good Storage Area	300
Parking & Open Area	500
<b>Total Infrastructure</b>	<b>2,300</b>

It is proposed to use a rental building in order to avoid high capital cost and risk. The proposed monthly rent for the building is taken at Rs. 100,000/- month. A total

amount of Rs. 500,000 estimated as renovation cost of Management building and factory as per the above mentioned area required.

## 9.5 Machinery & Equipment Requirement

Machinery and equipment for the proposed project are stated below;

**Table 6: Machinery & Equipment Requirement**

Description	Quantity	Cost Per Unit (Rs.)	Total (Rs.)
Plant & Machinery Set Included: Material loading vessel capacity 1000 Liters Cooling Coil and water tank of Condenser Hydrosol & Essential Oil Separator Steam Generator (Gas)	1	700,000	700,000
Water Pump	1	18,000	18,000
Pull Chain (For Rose Loading)	1	15,000	15,000
Generator 5.5 KVA	1	100,000	100,000
<b>Total Machinery &amp; Equipment</b>			<b>833,000</b>

## 9.6 Furniture & Fixtures Requirement

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

**Table 7: Furniture & Fixture Requirement**

Description	Quantity	Cost Per Unit (Rs.)	Total (Rs.)
UPS (1500 Watt)	1	50,000	50,000
Chairs for Plant Workers	4	3,000	12,000
Furniture Set for CEO	1	40,000	40,000
Furniture Set for Accounts Office and Sales Officer	2	25,000	50,000
Water Cooler	1	40,000	40,000
Air conditioners (1.5 ton Split)	1	70,000	70,000
Total Energy Savers, Fans etc.			30,000
Renovation			250,000
<b>Total Furniture &amp; Fixtures</b>			<b>542,000</b>

## 9.7 Office Equipment Requirement

Following office equipment will be required for the proposed Rose Water Extraction Unit.

**Table 8: Office Equipment Requirement**

Description	Quantity	Cost Per Unit (Rs.)	Total (Rs.)
Laptop (Used/New)	2	40,000	80,000
Computer printer (s)	1	15,000	15,000
Telephone + Connection	1	2,000	2,000
<b>Total Office Equipment</b>			<b>97,000</b>

### 9.8 Office Vehicle Requirement

A Suzuki pick-up (used) will be purchased for business operations. Its cost is estimated as Rs. 656,500.

### 9.9 Raw Material Requirements

Following raw material is required for the production of rose water;

- Rose Petals
- Pet Bottles (250 ml & 750 ml)

Cost and consumptions of raw material are given in annexure.

### 9.10 Human Resource Requirement

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

**Table 9: Human Resource Requirement**

Description	No. of Employees	Salary per Employee per month
CEO / Marketing Manager	1	70,000
Accounts Officer	1	30,000
Sales Officer	1	25,000
Plant Workers	4	18,000
Plant Helper	4	15,000
Security Guard	1	18,000
Office Boy	2	15,000
<b>Total</b>	<b>14</b>	

### 9.11 Utilities and Other Costs

An essential cost to be borne by the project is the cost of electricity. The electricity, gas and water expenses are estimated to be around Rs. 2.05 million in year 1. Furthermore, promotional expense, being essential for marketing of Rose Water, is estimated as Rs. 1.84 million in year 1.

### 9.12 Revenue Generation

Based on the capacity utilization of 60%, sales revenue during the first year of operations is estimated in below table.

**Table 10: Revenue Generation – Year 1**

Product	First Year Production @ 60% capacity excl. Finished Goods inventory	Sale Price (Rs. / Bottle)	Revenue (Rs.)
750 ml Packing	141,200	70	9,884,000
250 ml Packing	282,400	30	8,472,000
<b>Total</b>	<b>423,600</b>		<b>18,356,000</b>

## 10 CONTACT DETAILS

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

### 10.1 Machinery Suppliers

PAMICo technologies,  
P-124, Street No.2, Shahad Colony, Jhang Road Faisalabad.  
Tel: 041-2551911  
Mobile : 0321-6615711  
Web : [www.pamicotechnologies.com](http://www.pamicotechnologies.com)

## USEFUL WEB LINKS

Small & Medium Enterprises Development Authority (SMEDA)	<a href="http://www.smeda.org.pk">www.smeda.org.pk</a>
Government of Pakistan	<a href="http://www.pakistan.gov.pk">www.pakistan.gov.pk</a>
Ministry of Industries & Production	<a href="http://www.moip.gov.pk">www.moip.gov.pk</a>
Ministry of Federal Education and Professional Training	<a href="http://moent.gov.pk">http://moent.gov.pk</a>
Government of Punjab	<a href="http://www.punjab.gov.pk">www.punjab.gov.pk</a>
Government of Sindh	<a href="http://www.sindh.gov.pk">www.sindh.gov.pk</a>
Government of Khyber Pakhtunkhwa	<a href="http://www.khyberpakhtunkhwa.gov.pk">www.khyberpakhtunkhwa.gov.pk</a>
Government of Baluchistan	<a href="http://www.balochistan.gov.pk">www.balochistan.gov.pk</a>
Government of Gilgit Baltistan	<a href="http://www.gilgitbaltistan.gov.pk">www.gilgitbaltistan.gov.pk</a>
Government of Azad Jamu Kashmir	<a href="http://www.ajk.gov.pk">www.ajk.gov.pk</a>
Trade Development Authority of Pakistan (TDAP)	<a href="http://www.tdap.gov.pk">www.tdap.gov.pk</a>
Security Commission of Pakistan (SECP)	<a href="http://www.secp.gov.pk">www.secp.gov.pk</a>
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	<a href="http://www.fpcci.com.pk">www.fpcci.com.pk</a>
State Bank of Pakistan (SBP)	<a href="http://www.sbp.org.pk">www.sbp.org.pk</a>
University of Agriculture Faisalabad	<a href="http://www.uaf.edu.pk">www.uaf.edu.pk</a>
Barani Agriculture Research Institute, Chakwal,	<a href="http://www.barichakwal.org">www.barichakwal.org</a>
Pakistan Agricultural Research Council (PARC)	<a href="http://www.parc.gov.pk">www.parc.gov.pk</a>

## 11 ANNEXURES

### 11.1 Income Statement

Income Statement										
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Revenue	18,356,000	21,667,143	24,969,887	28,628,847	32,677,708	37,153,128	42,094,986	47,546,654	50,927,038	54,491,931
<i>Cost of sales</i>										
Cost of goods Sold	6,389,300	7,753,286	9,185,644	10,826,942	12,704,642	14,849,614	17,296,532	20,084,339	22,115,406	24,326,946
Operation costs 1 (direct labor)	1,584,000	1,742,400	1,452,000	1,597,200	1,756,920	1,932,612	2,125,873	2,338,461	2,572,307	2,829,537
Operating costs 2 (machinery maintenance)	83,300	91,630	100,793	110,872	121,960	134,155	147,571	162,328	178,561	196,417
Operating costs 3 (Electricity, Gas and Water Expense)	2,052,000	2,445,300	2,896,740	3,414,015	4,005,778	4,681,753	5,452,865	6,331,382	6,964,520	7,660,972
<b>Total cost of sales</b>	<b>10,108,600</b>	<b>12,032,616</b>	<b>13,635,177</b>	<b>15,949,029</b>	<b>18,589,299</b>	<b>21,598,134</b>	<b>25,022,841</b>	<b>28,916,510</b>	<b>31,830,793</b>	<b>35,013,873</b>
<b>Gross Profit</b>	<b>8,247,400</b>	<b>9,634,528</b>	<b>11,334,710</b>	<b>12,679,817</b>	<b>14,088,408</b>	<b>15,554,994</b>	<b>17,072,145</b>	<b>18,630,145</b>	<b>19,096,245</b>	<b>19,478,058</b>
<i>General administration &amp; selling expenses</i>										
Administration expense	2,076,000	2,283,600	2,163,480	2,379,828	2,617,811	2,879,592	3,167,551	3,484,306	3,832,737	4,216,010
Building rental expense	1,200,000	1,320,000	1,452,000	1,597,200	1,756,920	1,932,612	2,125,873	2,338,461	2,572,307	2,829,537
Office Vehicle Running Expenses	917,800	1,083,357	1,248,494	1,431,442	1,633,885	1,857,656	2,104,749	2,377,333	2,546,352	2,724,597
Communications expense (phone, fax, mail, internet, etc.)	103,800	114,180	108,174	118,991	130,891	143,980	158,378	174,215	191,637	210,801
Legal & Professional Charges	50,000	55,000	60,500	66,550	73,205	80,526	88,578	97,436	107,179	117,897
Office expenses (stationary, entertainment, janitorial services, etc.)	660,000	726,000	798,600	878,460	966,306	1,062,937	1,169,230	1,286,153	1,414,769	1,556,245
Marketing Expenses	1,835,600	1,652,040	1,486,836	1,338,152	1,204,337	1,083,903	975,513	877,962	790,166	711,149
Depreciation expense	222,550	222,550	222,550	222,550	222,550	227,910	227,910	227,910	227,910	227,910
Amortization of pre-operating costs	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500
Amortization of legal, licensing, and training costs	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Bad debt expense	91,780	108,336	124,849	143,144	163,389	185,766	210,475	237,733	254,635	272,460
<b>Subtotal</b>	<b>7,199,030</b>	<b>7,606,563</b>	<b>7,706,984</b>	<b>8,217,818</b>	<b>8,810,793</b>	<b>9,496,381</b>	<b>10,269,757</b>	<b>11,143,009</b>	<b>11,979,191</b>	<b>12,908,106</b>
<b>Operating Income</b>	<b>1,048,370</b>	<b>2,027,965</b>	<b>3,627,726</b>	<b>4,461,999</b>	<b>5,277,615</b>	<b>6,058,613</b>	<b>6,802,387</b>	<b>7,487,136</b>	<b>7,117,054</b>	<b>6,569,952</b>
Gain / (loss) on sale of office equipment	-	-	-	-	38,800	-	-	-	-	-
<b>Earnings Before Interest &amp; Taxes</b>	<b>1,048,370</b>	<b>2,027,965</b>	<b>3,627,726</b>	<b>4,461,999</b>	<b>5,316,415</b>	<b>6,058,613</b>	<b>6,802,387</b>	<b>7,487,136</b>	<b>7,117,054</b>	<b>6,569,952</b>
Interest expense on long term debt (Project Loan)	141,982	116,935	88,712	56,909	21,073	-	-	-	-	-
<b>Subtotal</b>	<b>199,094</b>	<b>116,935</b>	<b>88,712</b>	<b>56,909</b>	<b>21,073</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Earnings Before Tax</b>	<b>849,276</b>	<b>1,911,029</b>	<b>3,539,014</b>	<b>4,405,090</b>	<b>5,295,341</b>	<b>6,058,613</b>	<b>6,802,387</b>	<b>7,487,136</b>	<b>7,117,054</b>	<b>6,569,952</b>
Tax	49,891	229,706	607,253	844,027	1,111,102	1,343,014	1,603,335	1,842,997	1,713,468	1,521,983
<b>NET PROFIT/(LOSS) AFTER TAX</b>	<b>799,384</b>	<b>1,681,324</b>	<b>2,931,761</b>	<b>3,561,063</b>	<b>4,184,239</b>	<b>4,715,599</b>	<b>5,199,052</b>	<b>5,644,139</b>	<b>5,403,586</b>	<b>5,047,970</b>

## 11.2 Balance Sheet

<b>Balance Sheet</b>											
	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
<b>Assets</b>											
<i>Current assets</i>											
Cash & Bank	887,857	954,567	2,818,971	6,228,857	10,434,645	15,329,359	21,382,761	28,114,722	35,543,435	42,502,987	52,368,021
Accounts receivable		352,033	383,784	447,204	513,960	587,871	669,611	759,913	859,577	944,268	1,010,867
Finished goods inventory		200,454	234,318	265,497	310,523	361,898	420,445	487,081	562,841	618,932	680,825
Equipment spare part inventory	20,825	24,053	27,781	32,087	37,061	42,805	49,440	57,103	65,954	76,177	-
Raw material inventory	266,221	355,359	463,110	600,444	775,036	996,477	1,276,744	1,630,779	1,975,264	2,390,069	-
Pre-paid building rent	300,000	330,000	363,000	399,300	439,230	483,153	531,468	584,615	643,077	707,384	-
<b>Total Current Assets</b>	<b>1,474,903</b>	<b>2,216,466</b>	<b>4,290,963</b>	<b>7,973,390</b>	<b>12,510,455</b>	<b>17,801,563</b>	<b>24,330,469</b>	<b>31,634,214</b>	<b>39,650,149</b>	<b>47,239,818</b>	<b>54,059,713</b>
<i>Fixed assets</i>											
Machinery & equipment	833,000	749,700	666,400	583,100	499,800	416,500	333,200	249,900	166,600	83,300	-
Furniture & fixtures	542,000	487,800	433,600	379,400	325,200	271,000	216,800	162,600	108,400	54,200	-
Office vehicles	656,500	590,850	525,200	459,550	393,900	328,250	262,600	196,950	131,300	65,650	-
Office equipment	97,000	77,600	58,200	38,800	19,400	123,799	99,039	74,280	49,520	24,760	-
<b>Total Fixed Assets</b>	<b>2,128,500</b>	<b>1,905,950</b>	<b>1,683,400</b>	<b>1,460,850</b>	<b>1,238,300</b>	<b>1,139,549</b>	<b>911,639</b>	<b>683,730</b>	<b>455,820</b>	<b>227,910</b>	<b>-</b>
<i>Intangible assets</i>											
Pre-operation costs	365,000	328,500	292,000	255,500	219,000	182,500	146,000	109,500	73,000	36,500	-
Legal, licensing, & training costs	50,000	45,000	40,000	35,000	30,000	25,000	20,000	15,000	10,000	5,000	-
<b>Total Intangible Assets</b>	<b>415,000</b>	<b>373,500</b>	<b>332,000</b>	<b>290,500</b>	<b>249,000</b>	<b>207,500</b>	<b>166,000</b>	<b>124,500</b>	<b>83,000</b>	<b>41,500</b>	<b>-</b>
<b>TOTAL ASSETS</b>	<b>4,018,403</b>	<b>4,495,916</b>	<b>6,306,363</b>	<b>9,724,740</b>	<b>13,997,755</b>	<b>19,148,613</b>	<b>25,408,108</b>	<b>32,442,444</b>	<b>40,188,968</b>	<b>47,509,228</b>	<b>54,059,713</b>
<b>Liabilities &amp; Shareholders' Equity</b>											
<i>Current liabilities</i>											
Accounts payable		563,179	685,135	815,258	965,746	1,139,662	1,340,544	1,572,492	1,831,881	2,035,086	2,015,619
<b>Total Current Liabilities</b>	<b>-</b>	<b>563,179</b>	<b>685,135</b>	<b>815,258</b>	<b>965,746</b>	<b>1,139,662</b>	<b>1,340,544</b>	<b>1,572,492</b>	<b>1,831,881</b>	<b>2,035,086</b>	<b>2,015,619</b>
<i>Other liabilities</i>											
Deferred tax		49,891	279,597	886,850	1,730,877	2,841,979	4,184,993	5,788,328	7,631,324	9,344,793	10,866,775
Long term debt (Project Loan)	1,271,750	1,074,260	851,723	600,962	318,399	-	-	-	-	-	-
<b>Total Long Term Liabilities</b>	<b>2,009,201</b>	<b>1,124,151</b>	<b>1,131,319</b>	<b>1,487,812</b>	<b>2,049,276</b>	<b>2,841,979</b>	<b>4,184,993</b>	<b>5,788,328</b>	<b>7,631,324</b>	<b>9,344,793</b>	<b>10,866,775</b>
<i>Shareholders' equity</i>											
Paid-up capital	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201	2,009,201
Retained earnings		799,384	2,480,708	5,412,469	8,973,532	13,157,771	17,873,370	23,072,423	28,716,562	34,120,148	39,168,117
<b>Total Equity</b>	<b>2,009,201</b>	<b>2,808,586</b>	<b>4,489,909</b>	<b>7,421,670</b>	<b>10,982,733</b>	<b>15,166,972</b>	<b>19,882,572</b>	<b>25,081,624</b>	<b>30,725,763</b>	<b>36,129,349</b>	<b>41,177,319</b>
<b>TOTAL CAPITAL AND LIABILITIES</b>	<b>4,018,403</b>	<b>4,495,916</b>	<b>6,306,363</b>	<b>9,724,740</b>	<b>13,997,755</b>	<b>19,148,613</b>	<b>25,408,108</b>	<b>32,442,444</b>	<b>40,188,968</b>	<b>47,509,228</b>	<b>54,059,713</b>

### 11.3 Cash Flow Statement

<b>Cash Flow Statement</b>											
	<b>Year 0</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>	<b>Year 6</b>	<b>Year 7</b>	<b>Year 8</b>	<b>Year 9</b>	<b>Year 10</b>
<i>Operating activities</i>											
Net profit		799,384	1,681,324	2,931,761	3,561,063	4,184,239	4,715,599	5,199,052	5,644,139	5,403,586	5,047,970
Add: depreciation expense		222,550	222,550	222,550	222,550	222,550	227,910	227,910	227,910	227,910	227,910
amortization of pre-operating costs		36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500	36,500
amortization of training costs		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000
Deferred income tax		49,891	229,706	607,253	844,027	1,111,102	1,343,014	1,603,335	1,842,997	1,713,468	1,521,983
Accounts receivable		(352,033)	(31,751)	(63,421)	(66,756)	(73,911)	(81,740)	(90,303)	(99,664)	(84,691)	(66,599)
Finished goods inventory		(200,454)	(33,864)	(31,179)	(45,025)	(51,376)	(58,546)	(66,637)	(75,760)	(56,091)	(61,893)
Equipment inventory	(20,825)	(3,228)	(3,728)	(4,306)	(4,974)	(5,744)	(6,635)	(7,663)	(8,851)	(10,223)	76,177
Raw material inventory	(266,221)	(89,138)	(107,751)	(137,335)	(174,592)	(221,441)	(280,267)	(354,035)	(344,485)	(414,805)	2,390,069
Pre-paid building rent	(300,000)	(30,000)	(33,000)	(36,300)	(39,930)	(43,923)	(48,315)	(53,147)	(58,462)	(64,308)	707,384
Accounts payable		563,179	121,956	130,123	150,488	173,916	200,882	231,948	259,389	203,205	(19,467)
Cash provided by operations	(587,046)	1,001,652	2,086,941	3,660,646	4,488,351	5,336,912	6,053,403	6,731,961	7,428,713	6,959,552	9,865,034
<i>Financing activities</i>											
Project Loan - principal repayment		(197,490)	(222,537)	(250,760)	(282,563)	(318,399)	-	-	-	-	-
Additions to Project Loan	1,271,750	-	-	-	-	-	-	-	-	-	-
Issuance of shares	2,009,201	-	-	-	-	-	-	-	-	-	-
Cash provided by / (used for) financing activities	4,018,403	(934,942)	(222,537)	(250,760)	(282,563)	(318,399)	-	-	-	-	-
<i>Investing activities</i>											
Capital expenditure	(2,543,500)	-	-	-	-	(123,799)	-	-	-	-	-
Acquisitions											
Cash (used for) / provided by investing activities	(2,543,500)	-	-	-	-	(123,799)	-	-	-	-	-
<b>NET CASH</b>	<b>887,857</b>	<b>66,710</b>	<b>1,864,404</b>	<b>3,409,886</b>	<b>4,205,788</b>	<b>4,894,714</b>	<b>6,053,403</b>	<b>6,731,961</b>	<b>7,428,713</b>	<b>6,959,552</b>	<b>9,865,034</b>

## 12 KEY ASSUMPTIONS

### 12.1 Operating Cost Assumptions

Description	Details
Office Expenses (Stationery, Entertainment etc)	Rs. 55,000 per month
Professional Fee	50,000 per year
Depreciation Method	Straight Line depreciation
Depreciation Rate	10% on Machinery 20% on Office Equipment 10% on Furniture & Fixture
Inflation Growth Rate	10%
Electricity Price Growth Rate	10%
Salaries Growth Rate	10%

### 12.2 Production Cost Assumptions

#### Cost per Bottle

Description	Unit	Unit Cost (Rs.)	Qty. Required	Cost (Rs.)
<b>750 ml Bottle</b>				
Rose Petals	Kg	65	0.15	9.75
Pet Bottle	No.	12	1	12.00
<b>Total</b>				<b>21.75</b>
<b>250 ml Bottle</b>				
Rose Petals	Kg	65	0.05	3.25
Pet Bottle	No.	8.50	1	8.50
<b>Total</b>				<b>11.75</b>

### 12.3 Revenue Assumptions

Description	Details
Growth in Sales Price	7%
Days Operational / Year	300
Maximum Operational Capacity (Per Year)	300,000 liters
Production Capacity in First Year	60%
Percentage Increase in Production Capacity every Year	5%

Maximum Production Capacity	95%
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#### 12.4 Financial Assumptions

Description	Details
Debt	50%
Equity	50%
Interest Rate on Debt	12%
Debt Tenure	5 Years
Debt Payment / Year	12