

# PROJECT REPORT FOR SOAP MANUFACTURING UNIT

## 1. Introduction

In present age, all people want to appear smart and elegant in his personality. The history of soap industry in India is very old say since 1889. The use of soap or soap like cleaning agent has always been associated with man's inherent instinct to keep his body and other belonging clean. Soap help remove slag from skin to make skin a brilliant glow. The principal raw material of soap is oil and fats. According to these raw materials the quality of soap and category of soap is changed. The necessary raw materials are needed to be of high purity and the finished product should have the balanced pH as its froth may enter the eye. Toilet soaps are made by combining liquid fats (like vegetable oils or animal fat) with an alkali like sodium hydroxide (also called lye). The process is called "saponification"; the definition of "saponify" is literally "to turn fat or oil into soap by reaction with an alkali. During the curing process, the sodium hydroxide and water evaporate out of the product, leaving behind just awesome soap". "Superfatting," which refers to the process of adding liquid fats to soap after saponification, is popular for its rich, moisturizing effect. Clear soaps will add glycerin and sorbitol (a sugar alcohol with emollient properties), and products labeled "antibacterial" usually rely on triclosan, a substance that kills bacteria and helps prevent fungus growth. A simple production method with high return soaps are invariably used in every household. The antibacterial soap with a moisturizer added has huge market potential. The market is spread from remote village to the metro cities alike. The industry gives a good profit and high employment oriented.

Types of Soaps:

### 1. Non-toilet soaps

Soaps are key components of most lubricating greases and thickeners. Greases are usually emulsions of calcium soap or lithium soap and mineral oil. Many other metallic soaps are also useful, including those of aluminium, sodium, and mixtures thereof. Such soaps are also used as thickeners to increase the viscosity of oils. In ancient times, lubricating greases were made by the addition of lime to olive oil.

### 2. Toilet soaps

In a domestic setting, "soap" usually refers to what is technically called a toilet soap, used for household and personal cleaning. When used for cleaning, soap solubilizes particles and grime, which can then be separated from the article being cleaned. The insoluble oil/fat molecules become associated inside micelles, tiny spheres formed from soap molecules with polar hydrophilic (water-attracting) groups on the outside



and encasing a lipophilic (fat-attracting) pocket, which shields the oil/fat molecules from the water making it soluble. Anything that is soluble will be washed away with the water.

## **2. MARKET POTENTIAL**

There is a vast market available for Beauty Toilet Soap in Kerala and its around. It being soft in nature will act on skin giving soothing effect. This Beauty soap is nothing but a toilet soap of good and refined quality and balanced pH, so this soap have as good market as other toilet soap have. Because of its charming name this soap can be used by all male, female irrespective of caste, creed and sex. As the fashion grows up its market potential will also grow accordingly. Considering the population trend in the state, there is still an ample scope for growth of this industry. There are so many kind of toilet soap flooded in the market but because of its peculiar name and nature, quality and properties it will also grab good market in present scenario.

## **3. QUALITY CONTROL & STANDARD**

In order to maintain the best quality of the product it is very much necessary to manufacture this soap under some specific standards. This mean to say that some standard specification has got to be followed to maintain certain qualities such as pH, acid, No. total fatty matter(TFM) available and moisture etc. Taking into account its use the product should be skin-friendly in all respects and point of view. To manufacture this Beauty Soap a general standard for toilet soap i.e. IS: 2888-194 or revised can be followed. Some changes in the product specification can be taken into account to improve the quality soap to satisfy the customer's demand and requirement.



## **4. BASIS & PRESUMPTION**

- The unit will work 6 days a week. On single shift basis (8 hours)
- The calculations have been carried out on present data available.
- If necessary other type of soap like shower gel can also be manufactured by using the same machinery.
- The production capacity i.e. 80% have been taken into account.
- The wastage has been considered at a rate of 2%.

- Toilet Soap Quantity (Kg) 364560 Nos. Value (Rs) Rs. 47,39,280.

## 5. IMPLEMENTATION SCHEDULE:

- Registration of Unit (UAM) - Immediate.
- Loan Sanction - 2 Months
- NOC-Pollution Control Board – 15 Days
- Installation of machinery -1 Month
- Power connection -10 Days
- Testing operation -1 Month
- Production -5 Month onwards.

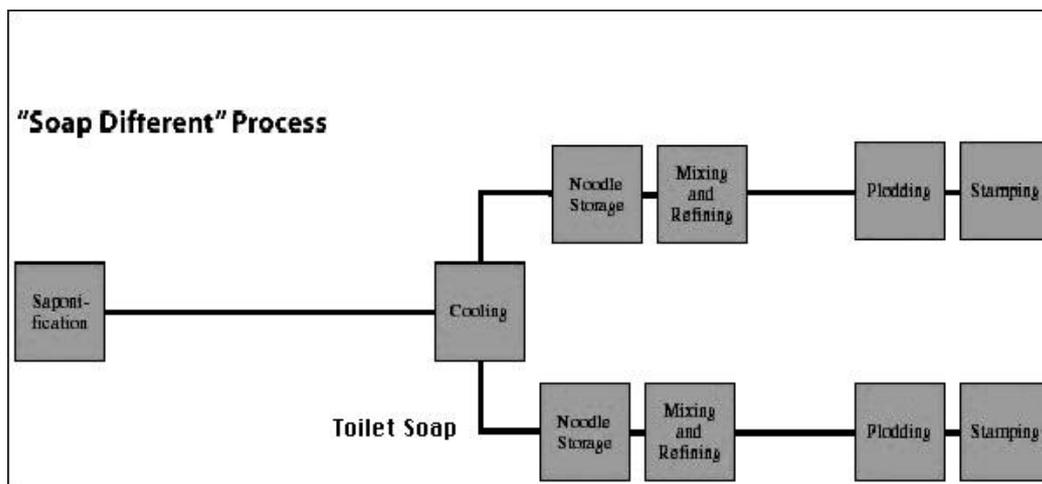
## 6. TECHNICAL ASPECT

This Beauty soap will be manufactured as per the set formulation, Stated as below, so as to have the skin friendly soap for daily use.

Sr. No.	Name of the raw material	Quantity (Kg)
1	Coconut oil	50
2	Tallow	50
3	Caustic soda	50
4	Colour (green, blue, rose, orange, yellow etc)	0.05
	Perfume mixtures for the soap	
1	Bergamot oil	5.5
2	Jasmine oil	3.0
3	Lavender oil	3.5
4	Palm rose oil	3.5
5	Lemon oil	2.5
6	Cedar wood oil	2.0
7	Cedar wood oil	0.5

## 7. MANUFACTURING PROCESS

The beauty toilet soap can be made or manufactured into 2 steps namely preparation of soap base and to obtain finished products soap base. For making the soap base the specifications is carried which is done by either remitting and perfuming and secondly by milling process. Fat should be used of high standard quality. Weigh fat oil & lye (sodium- hydroxide) accurately, if the lye is weighed more, the soap will be hard and harmful to skin and if the lye is low, the fat will not be saponified properly. Melt oil fat into a kettle and filter it to remove any impurity. Now add caustic soda lye into it slowly and stir continuously when the oil is saponified fully add perfume and colours and pour into moulds.



Soap is produced industrially in four basic steps. but in principle it could be done in the three steps outlined here.

**Step 1 - Saponification** A mixture of tallow (animal fat) and coconut oil is mixed with sodium hydroxide and heated. The soap produced is the salt of a long chain carboxylic acid.

**Step 2 - Glycerine removal** Glycerine is more valuable than soap, so most of it is removed. Some is left in the soap to help make it soft and smooth. Soap is not very soluble in salt water, whereas glycerine is, so salt is added to the wet soap causing it to separate out into soap and glycerine in salt water.

**Step 3 - Soap purification** Any remaining sodium hydroxide is neutralised with a weak acid such as citric acid and two thirds of the remaining water removed.

**Step 4 - Finishing Additives** such as preservatives, colour and perfume are added and mixed in with the soap and it is shaped into bars for sale.

## 8. FINANCIAL ASPECTS

### LAND & BUILDING:

1. Covered area Sq. Ft. 500
2. Uncovered area Sq. Sq. Ft. 250
3. Total area Sq. Ft. 750
4. Constructed Value Rs 10,00,000/-

### MACHINERY AND EQUIPMENT:

Sr. No.	Description	Qty.	Value
1	Saponifying Fans	4	7000
2	Melting Pans/Stirrer	1	8000
3	Lye Storage Tank SS – 50 Ltr	4	6000
4	Frames – 50 Kg Capacity	4	6000
5	Stamping Machine	1	4000
6	Cutting Machine	1	4000

7	Boiler	1	35000
8	Testing and other equipments	-	20000
9	Installation	-	10000

**RAW MATERIAL & PACKING Material (PER MONTH):**

Sr. No.	Description	Qty. (Kg)	Value
1	Coconut Oil	1000	170000
2	Tallow	1000	50000
3	Lye	1000	14000
4	Colour	1	1000
5	Perfumes	-	5000
6	Packaging Material	-	10000

**STAFF & LABOUR (PER MONTH):**

Sr. No.	Description	Nos.	Salary	Value
1	Manager	1	20000	20000
2	Chemist	1	15000	15000
3	Skilled Worker	2	10000	20000
4	Unskilled worker	4	10000	40000
5	Accountant/Peon	2	10000	20000

**OTHER EXPENSES (PER MONTH)**

Power / Electricity Charges, Water Charges, Maintenance & repair, Printing postage & stationery, Cartage/ transportation charges, Selling/ publicity, Telephone, Insurance etc  
: Rs. 1,00,000

**WORKING CAPITAL (FOR ONE MONTH):**

1. Raw material (Only 30 Days) : 250000
2. Salaries & Wages : 115000
3. Other Expenses : 100000

Working capital for 3 months  $465000 \times 3 = 13,95,000/-$

**TOTAL CAPITAL INVESTMENT:**

1. Building : 10,00,000
2. Machinery & Equipment : 2,00,000
3. Working capital for 3 month : 13,95,000
4. Self contribution 10% : 2,59,500
5. Govt. finance : 23,35,500/-

**SALES PROCEEDS (PER ANNUM):**

1. Total Sale : Rs. 50 Lac @ Capacity – 37200 Kg with 2% wastage and cost of each cake @ Rs. 15
2. Profit Range : 5,00,000 to 8,00,000
3. Rate of Return : 35-40 %
4. Break- even analysis – 39 – 45 %

## 9. Manufacturing Machine Specification :

### A. Toilet Soap Plant :

Machine Type	Semi-Automatic, Automatic
Automation Grade	Automatic



Other Details: Sigma mixer is placed on the platform to enable material flow by gravity. Soap Noodle is either lifted by bucket elevator or through electric hoist or manually as preferred. Entire mixed mass from sigma mixer is fed to Noodler / Refiner Refined soap mass is fed to the Triple roll mill where it is flaked out. Flaked material is lifted by conveyor to the Duplex Vacuum Plodder. Bar cutter cuts the bar to set repeat lengths. Soap cutter is used to cut the soap to billets matching to the final size. Billets are fed to automatic stamping machine or manual stamping machine. Stamped cakes are either carton packed or soap wrapped. **Production Capacity: UPTO 2000KGS.**

### B. Toilet Soap Plant :

Machine Type	Soap making equipment
Automation Grade	Semi-automatic
Driven Type	Electric



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