

BOTTLED DRINKING WATER

1. INTRODUCTION

Bottled water is drinking water (e.g., well water, distilled water, mineral water, or spring water) packaged in plastic or glass water bottles. Bottled water may be carbonated or not. Sizes range from small single serving bottles to large carboys for water coolers. As well now; new concept of flavored bottled water also penetrating good market share. Such waters are classified as: 1) Artesian Water: water contained within an artesian basin; 2) Fluoridated: contains added fluorine, 3) Ground Water: from underground sources, 4) Mineral Water: either from mineral spring or fortified with minerals Barium, Iron, Manganese etc. in quantity absorbed by human body; 5) Purified Water: produced by distillation, deionization, reverse osmosis, or other suitable processes. Purified water may also be referred to as "de-mineralized water"; 6) Sparkling Water: contains some amount of carbon dioxide, 7) Spring Water: water flows on earth from underground natural water source; 8) Sterile Water: Water totally sterilized for specific uses.

2. PRODUCTS AND ITS APPLICATION:

The bottled water industry in India witnessed a boom in the late 1990s soon after BISLERI launched its packaged drinking water in the country. This significant growth was fueled by a surge in advertising by the industry players that "bottled water was pure and healthy" As it is being considered as healthy compare to tap water or other water sources, the people conscious about health are opt for bottled water of known brand. Besides that it is easy and convenient to buy and keep during travelling or other occasions. These are the key reasons for boost of bottled water market in India and elsewhere.

3. DESIRED QUALIFICATION FOR PROMOTER:

The promoter must aware of bottled water market in that area in which he wishes to set-up the plant besides that must aware of type of treatment required for water source to be used as well having exposure of FSSAI.

4. INDUSTRY OUTLOOK/TREND

It is increasingly becoming difficult to have safe drinking water from normal supply in many parts of the country. Therefor people are searching for processed water with less TDS and bacteria free. This industry in India is growing at the rate of 20% per annum. Within this water packed in twenty liters jar is gaining importance for use in households, offices, factories and social events. The future of this industry is very bright, however location is very important to have less competition.

5. MARKET POTENTIAL AND MARKETING ISSUES, IF ANY:

With a rise in health awareness, increase in tourism and the easy availability of bottled water, the per capita consumption of bottled water in India is on the increase. It is observed that bottled water market is increasing against carbonates or soda with respect to liter volume, percentage increase in volume and sales percentage as reflect in the following table:

MARKET VOLUME IN BILLION LITERS		
Category	Year 2015	Year 2016
Bottled Water	5.6	6.8
Carbonates	4.6.	5.0
GROWTH IN VOLUME PERCENTAGE		
Category	Yr. 2014-15	Yr. 2015-16
Bottled Water	23.0%	21.7%
Carbonates	08.6%	08.2%
GROWTH IN TOTAL SALES %		
Category	Yr. 2014-15	Yr. 2015-16
Bottled	24.9%	23.5%

Water		
Carbonates	10.9%	10.8%
Juice	25.1%	25.3%

This market is expected to grow at a CAGR of 20 percent, to reach Rs.160 billion in 2018.

The bottled water industry in India witnessed a boom in the late 1990s soon after Bisleri launched its packaged drinking water in the country. This significant growth was fueled by a surge in advertising by the industry players that "bottled water was pure and healthy". Today, with a rise in health awareness, poor quality of tap water, and the ease of availability of bottled water, the per capita consumption of bottled water in India is on the increase.

India's packaged bottled water industry is currently dominated by the top five players, including PARLE (BISLERI, BAILLERY), PEPSICO (AQUAFINA), COCA COLA (KINLEY), DHARIWAL (OXYRICH) AND NOURISH CO. (HIMALYAN). Apart from these other leading bottled water brands in India are: KINGFISHER, TATA WATER PLUS, QUA, BLUEFIN, OVIVO, etc. These companies struggle to penetrate the small non-tier cities and towns due to poor infrastructure, thus providing an opportunity for small regional players to build a presence in regional markets. Even as the industry is on a growth path, smaller local players and the unorganized sector are eating into the market of the established players, often by imitating their trademarks. Maximum sale of bottled water comes from the retail sector; but this is changing with demand coming from social functions and corporate events, especially for bulk water or bottled water cups. With the aim to capture all the segments of society, players have started foraying into packaged water pouches at low price points, but this is still in the experimental stage.

6. RAW MATERIAL REQUIREMENTS:

Adequate and proper quality water resources like well, bore, river, etc. and some additives.

7. MANUFACTURING PROCESS:

Raw water to be processed is collected in tanks. A known quantity is pumped into the above tank where the water is dozed with alum for coagulation with heavy metals or insoluble matters. The water after coagulation is allowed to settle for an hour. The impurities may be removed by Reverse Osmosis techniques also. The supernatant water is taken to the chlorination tank where primary disinfection is brought about by bubbling chlorine gas. The water is then passed through sand filters for trapping of un-dissolved impurities. The water after sand filtration is passed through Carbon filters for removal of odour, colour and also for de-chlorination. It is then passed through series of micro fillers comprising 5 micron, 1 micron and 0.4 micron filter followed by ultraviolet disinfection system for terminal disinfection. Packing is done in PET bottles of 1 litre capacity through an automatic rinsing, filling, and capping machine fitted with an Ozone generator. The bottles after capping are shrink wrapped (Optional) and packed in corrugated boxes of one dozen each

8. MANPOWER REQUIREMENT:

Manpower Requirements	Persons
Technical Staff	6
Adm. Staff	4
Marketing Staff	15
Labour	20
Total	45

9. IMPLEMENTATION SCHEDULE:

Project Stages	Months									
	1	2	3	4	5	6	7	8	9	10
Purchase of Land	Yellow	Yellow								
Completion of Building	Green	Green								
Ordering of Machinery	Green	Green								
Delivery of Machinery		Red	Red							
Term/Wkg Loan Sanction		Blue	Blue							
Installation of Machinery				Orange	Orange					

Commissioning of Plant									
RM/Inputs Procurement									
Manpower Appointments									
Commercial Production									

10. COST OF PROJECT:

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No	Costing Heads	Qty.	Rate/Unit	Rs. Lakh
1	Land in Sq. M. + Expenses	1,00 0	1,000.00	10.00
2	Building	500	9,000.00	45.00
3	Plant & Machinery			54.25
4	Contingency			1.00
	Total Cost of Project			110.25

11. MEANS OF FINANCE:

MEANS OF FINANCE

Means Heads	Rs. Lakhs
Promoters Capital	27.56
Term Loan	57.88
MFPI Subsidy	24.81
Total Means of Finance	110.25

12. WORKING CAPITAL CALCULATION:

Particulars	Total Amount	Stock Period Days	Value of Stock Period	Promoter Margin	Promoter Share	Bank Borrowings
Raw Material	360.00	15	18.00	0.60	10.80	7.20
Packing Material	2,574.00	30	257.40	0.75	193.05	64.35
Work in Process	3,168.80	3	31.69	0.40	12.68	19.01
FP Stock	3,240.00	15	162.00	0.40	64.80	97.20
Bills Receivable	3,240.00	15	162.00	0.40	64.80	97.20
Working	25.00	30	2.50	1.00	2.50	0.00

Expense						
Total:	12,607.80		633.59		348.63	284.96

13. LIST OF MACHINERY REQUIRED:

Sr. No.	Type of Machinery	Qty.
1	Raw Water Tank	2.00
2	Raw Water Pump	2.00
3	Multi Media Filter	3.00
4	Dosing System	1.00
5	Micron Cent ridge Filter	2.00
6	High Pressure Pump	1.00
7	Reverse Osmosis Plant	1.00
8	Product Water Tank	1.00
9	Ultra Violet System	1.00
10	Transfer Pump	1.00
11	Ozone Generator	1.00
12	Ozone Circulation Pump	1.00
13	Ozone Water Transfer Pump	1.00
14	Pouch Packing Machine	1.00
15	Bottle Filing & Washing Mc	2.00
16	Jar Filling Machine	1.00
17	Jar Washing Machine	1.00
18	Chilling Machine	1.00
19	Blow Moulding M/c	1.00
20	Utility Equipments	1.00
21	Misc. Equipments + Lab Equipments	1.00

- Raj Water Technology
Survey No. 47,
Jivraj Industrial Area,
Opp. Falcon Pump, 27,
Gondal Road, Vavdi,
Rajkot, Gujarat
- Nishu Enterprise
Rughani Palace 1,
B-103, S M Road,
Next To Bhurabhai Hall,

Kandiwali West,
Mumbai, Maharashtra

14. PROFITABILITY CALCULATIONS:

Sr. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
A	Gross Sales	2268	2592	2916	2916	2916
	Less:					
1	Raw Materials, Rs. 1/lit	252	288	324	324	324
2	Packing Material	1801.8	2059.2	2316.6	2316.6	2316.6
3	Fuel	0	0	0	0	0
4	Power	28.224	32.256	36.288	36.288	36.288
5	Manpower	71.5572	80.7312	89.9052	89.9052	89.9052
6	Depreciation	12.971	14.824	16.677	16.677	16.677
7	Sundry Expenses	17.5	20	22.5	22.5	22.5
8	Interest on Term Loan	4.865	5.56	6.255	6.255	6.255
9	Interest on WC Loan	29.589	33.816	38.043	38.043	38.043
9	Repairs & Maintenance	7	8	9	9	9
B	Production Cost	2225.506	2542.387	2859.268	2859.268	2859.268
C	Gross Profit (A-B):	42.4938	49.6128	56.7318	56.7318	56.7318
	Taxes @ 30%	12.74814	14.88384	17.01954	17.01954	17.01954
	Net Profit	29.74566	34.72896	39.71226	39.71226	39.71226

The proposed unit will have the production capacity of 360 lakhs bottles per year. The unit cost of power is taken at Rs. 8. The depreciation on building is taken at the rate of 5% whereas for plant and machinery it is at 10%.

The average sales price of drinking water bottle is taken at the rate of Rs.9 per bottle for proposed project.

15. BREAKEVEN ANALYSIS:

Particulars	Rs in Lakhs
Break Even Point	
Annual Fixed Cost x100/	72.82

Annual Fixed Cost + Profit	
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16. STATUTORY/ GOVERNMENT APPROVALS

There is statutory requirement of ISI and FSSAI license for setting up of bottled drinking water production facility. Moreover, MSME & GST registration, IEC Code for Export of end products and local authority clearance may be required for Shops and Establishment, for Fire and Safety requirement and registration for ESI, PF and Labour laws may be required if applicable. Entrepreneur may contact State Pollution Control Board where ever it is applicable.

17. BACKWARD AND FORWARD INTEGRATION

Once the market is well established, promoter may think of backward integration by way of producing PET bottles for filling water. Similarly for forward integration, it is possible to introduce water in 200ml pouches and 20ltr jar.

18. TRAINING CENTERS/COURSES

For drinking water industry training and short term courses are available at Indian Institute of Food Processing Technology, Thanjavur, Tamil Nadu and Central Food Technological Institute, Mysore.

Udyamimitra portal (link : www.udyamimitra.in) can also be accessed for handholding services viz. application filling / project report preparation, EDP, financial Training, Skill Development, mentoring etc.

Entrepreneurship program helps to run business successfully is also available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.

Disclaimer:

Only few machine manufacturers are mentioned in the profile, although many machine manufacturers are available in the market. The addresses given for machinery manufacturers have been taken from reliable sources, to the best of knowledge and contacts. However, no responsibility is admitted, in case any

inadvertent error or incorrectness is noticed therein. Further the same have been given by way of information only and do not carry any recommendation.

Source:- Udyami Mitra/Sidbi