

## Project Profile: Bottled Drinking Water Manufacturing Plant



## Project Profile 2: Bottled Drinking Water Manufacturing Plant

### 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 flavoured 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.

### Products & Its Application

After BISLERI introduced its packaged drinking water in India in the late 1990s, the country's bottled water market experienced a surge. The industry's major players increased their advertising, claiming that "bottled water was pure and healthful," which contributed to this substantial expansion. People who are concerned about their health choose bottled water from well-known brands because it is thought to be healthier than tap water or other sources of water. Additionally, it is simple to purchase and carry with you when you travel or for other occasions. These are the main factors driving the growth of the bottled water market in India and other countries.

### **Desired Qualification for Promoter**

The promoter must be familiar with the bottled water industry in the region where he plans to build the facility, as well as the sort of water source treatment necessary and the FSSAI.

### **Industry Outlook and Trends**

In many areas of the country, getting access to clean drinking water from the regular supply is getting more and more challenging. People are therefore looking for treated water that has low TDS and is bacteria-free. In India, this industry is expanding at a 20% annual rate. This twenty-liter jar of water is becoming more and more important for use in homes, workplaces, factories, and social gatherings. Although this sector has a very bright future, location is crucial to having less competition.

### **Market Potential and Market Issues, If Any:**

The top five companies now control the packaged bottled water market in India: PARLE (BISLERI, BAILLERY), PEPSICO (AQUAFINA), COCA COLA (KINLEY), DHARIWAL (OXYRICH), AND NOURISH CO (HIMALYAN). Other popular brands of bottled water in India include: KINGFISHER, TATA WATER PLUS, QUA, BLUEFIN, OVIVO, etc. Due to their inability to reach these smaller non-tier cities and towns, these businesses present a chance for smaller regional firms to establish a foothold in local marketplaces. Even though the industry is expanding, disorganised businesses and smaller local competitors are eroding the market share of the big firms, frequently by copying their trademarks. The retail industry accounts for the majority of bottled water sales, while demand from suitable for bulk water or bottled water cups, social gatherings and professional meetings. Players have begun experimenting with packaged water pouches at low price points in an effort to appeal to all social groups, although this is still in the experimental stage.

## Raw Material Requirements

Water resources of sufficient and adequate quality, such as wells, bores, rivers, etc., as well as some additions.

## Manufacturing Process

Tanks are used to collect raw water that will be processed. Pumped into the above-ground tank in a specified quantity, alum is added to the water to cause coagulation with heavy metals or other insoluble substances. After coagulation, the water is given an hour to settle. Reverse osmosis procedures can be used to eliminate the contaminants as well. The supernatant water is then transferred to the chlorination tank, where bubbling chlorine gas performs the initial disinfection. After that, the water is run through sand filters to catch any remaining contaminants. After sand filtering, the water is sent through carbon filters to remove colour, odour, and chlorine. Following that, it is run through a succession of micro fillers made up of 5 micron, 1 micron, and 0.4 micron filters then a terminal disinfection system using UV rays. PET bottles with a 1 litre volume are packaged using an automatic rinsing, filling, and capping process that has an Ozone generator. After capping, the bottles are placed in corrugated boxes of 12 and shrink-wrapped (optional).

## Manpower Requirement

For the production of peanut butter following category of manpower will be required for day to day production.

Sr.No.	Designation	No. of employees required	Amount (Per Person)	Total
1	Technical Staff	2	18,000	36,000
2	Marketing	1	20,000	20,000
3	Skilled Labour	2	12,000	24,000
5	Office Assistant	1	7,000	7,000
<b>Total</b>				<b>87,000</b>

## Implementation Schedule

The project can be commissioned within six months of tying up of finance. There is no complicated machinery and equipment required and space required is also small. Therefore, implementation time is six months.

## List of Machinery

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

All the machines and equipments are available from local manufacturers. The entrepreneur needs to ensure proper selection of product mix and proper type of machines and tooling to have modern and flexible designs. It may be worthwhile to look at reconditioned imported machines, dies and tooling. Some of the machinery and dies and tooling suppliers are listed here below:

<p>1. Raj Water Technology Survey No. 47, Jivraj Industrial Area, Opp. Falcon Pump, 27, Gondal Road, Vavdi, Rajkot, Gujarat</p>	<p>2. Nishu Enterprise Rughani Palace 1, B-103, S M Road, Next To Bhurabhai Hall, Kandiwali West, Mumbai, Maharashtra</p>
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### Cost of Project

The cost of project as per market rate of factory building, machinery, and miscellaneous items, preliminary and pre-operative expenses works out as under:

Sr. No.	Particulars	Amount
1	Land(rent)	30,000
2	Plant & Machinery	6,50,000
3	Furniture & Electrical Installations	90,000
4	Miscellaneous	40,000
<b>Total</b>		<b>8,10,000</b>

## Means of Finance

Based on the present norms of bank, means of finance is worked out as under:

Sr. No.	Particulars	Amount
1	Promoter's contribution	2,67,700
2	Bank Finance	6,29,300
<b>Total</b>		<b>8,97,000</b>

## Break-Even Analysis

Sr. No.	Particulars	Details
1	Fixed Investment (A)	650000
2	Loan	622300
3	Interest Rate @7.5% on Loan (B)	46672.5
4	Capital Investment	266700
5	Depreciation @10% on Capital investment (C)	26670
6	<b>Total Fixed cost (D = A+B+C)</b>	<b>723343</b>
7	Variable Cost (E)	10000
8	Manpower cost (F)	87000
9	Total Variable cost (G = E+F)	89000
10	Number of Units Sold/Month (H)	10000
11	Average Variable cost (I = G/H)	8.90
12	Selling price per unit (J)	20
13	<b>Contribution margin (K = J-I)</b>	<b>11.10</b>
14	<b>Beak Even Point in Units (D/K)</b>	<b>65166</b>

## **Assumptions**

- Interest rate is assumed at the rate of 7.5% p.a.
- Depreciation on capital investment i.e. machinery would be 10% p.a.
- Unit sells 10000 units of gel p.m. then it would be at breakeven when they will sell **65166** units of drinking bottled water.
- If he sells 65166 units, his revenue will be Rs1303320 and his investment will be recovered.

## **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.

## **Backward & Forward Integration**

The Promoter may consider backward integration once the market is well-established by creating PET bottles to fill with water.

## **Training Centers/Courses**

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

Entrepreneurship development programs help to run businesses successfully and are available from Institutes like Entrepreneurship Development Institute of India (EDII) and its affiliates all over India.