

## **CARBONATED FRUIT BEVERAGES FROM SELECTED FRUITS (MANGO, GRAPES, LIME, AND ORGANGE)**

### **1. INTRODUCTION**

Carbonated (aerated) soft drinks with synthetic flavors in a variety of flavors are produced and marketed under soft drinks category in the form of ready-to-serve (RTS) beverages in the country. The share of fruit juice based beverages is very small compared to synthetic carbonated drinks/soda waters. Fruits which are natural sources of a wide variety of nutrients such as vitamins, pigments, minerals etc., are attributed with several health benefits. Carbonated fruit juice beverages shall have better nutritional quality over the synthetic aerated waters. Technology for carbonated fruit juice beverages containing fruit juice/pulp will be advantageous to the consumers and farmers by increasing the consumption of fruits. Manufacture of fruit juice based carbonated RTS beverages is considered beneficial as it contains fruit pulp/juice.

### **2. INSTALLED CAPACITY**

Capacity of the unit	:	10000 bottles /shift
Working	:	300 days per annum

### **3. RAW MATERIAL**

Fruit juice/pulp extracted from mature ripe fruits is used for the production of carbonated fruit juice beverages. Almost all varieties of the pulpy fruits can be used for the extraction and preparation of fruit juice base. The fruits to be used for the production are processed and used for the production. The pulp/juice can either be extracted at the unit or purchased from other manufacturers, further processed, formulated and converted into a base suitable for carbonation plant. The fruit pulp/juice is pretreated and stabilized with selected pretreatments and process. The fruit juice beverage base is used for the production of carbonated fruit juice beverages. Carbonated soft drinks (CSD) bottles (200-300 ml) are to be obtained periodically depending upon the sales volume.

### **4. TECHNOLOGY**

The fruit juice base containing fruit pulp/juice is pretreated, blended and processed to achieve the desired quality. The fruit juice base is homogenized, carbonated and bottled under controlled conditions. The sealed bottles are labelled, coded, and bulk packed either in shrink wrap or in corrugated carton boxes. After inspection and quality check, the beverages are marketed. The unit has to be operated and maintained with good manufacturing practices and HACCP protocols.

### **5. PLANT AND MACHINERY**

#### **5.1 Principal equipments**

Fruit washer, Pulper, screw juice extractor, fruit mill, (optional), decanter, homogenizer, SS steam jacketed kettle, mixing tanks, multi tubular pasteurizer, RO plant, Chilling plant, Carbonated beverage bottling line with RFC - Rinse, fill, Cap system, labelling, barcode printing, hoist, and utilities etc.

#### **5.2 Auxiliary equipments**

Boiler, RO Water treatment plant, working tables, weighing scales, handling vessels, knives, trolleys, etc.

## 6. PROJECT COST (in Rs. 'lakhs)

a) Land & land development (1500 M <sup>2</sup> )	75.00
b) Building & civil construction (800 M <sup>2</sup> )	120.00
c) Plant and machinery	105.00
d) Other fixed assets	10.00
e) Pre-operative expenses	30.00
Total fixed capital	340.00
Working capital margin	10.00
Total Project cost	350.00

## 7. ANY OTHER SPECIAL FEATURE

The plant can be operated in full capacity in summer months. The idle capacity if any can be utilized for making any other healthy carbonated beverage formulation in lean period, so that the viability of the unit can be better achieved.

**For Technology and Technical assistance please contact:**

**THE HEAD**  
**Technology Transfer & Business Development Department**  
**CFTRI, Mysore - 570 020**  
**Phone: 0821 – 2514534 ; Fax: 0821 - 2515453;**  
**E-Mail: [ttbd@cftri.res.in](mailto:ttbd@cftri.res.in); Webpage: [www.cftri.com](http://www.cftri.com)**