

# PORTFOLIO

FOOD RESEARCH LAB

## EGGLESS CAKE PREMIX



Food Research Lab  
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# PORTFOLIO

The eggless cake premix made using the Indian specified ingredients standard feature and food adulteration preservation act. The premix of the eggless cake should be pure, homogenous without lumps, and should have a good colour nice taste. The premix to be sold in translucent polyter pouches and up to 3 months if kept at room temperature. The structure of bakery product is a highly important parameter to consider for consumers. Proteins are an essential ingredient as a foaming agent. So, egg protein plays a vital role that has a great influence on the structure, appearance and texture. Some of the alternative protein sources for bakery product is Whey protein concentration, Soy milk, Bovine plasma, Cowpea protein, Kidney bean.

## EGGLESS CAKE



### PROTEIN SOURCE:

**Whey protein:** It is the main source of globular protein for its function as an emulsifying and foaming agent. The formulating ability of whey protein because of the presence of  $\beta$ -lactoglobulin and its degree of denaturation.

**Monoglycerides:** They are manufactured only for bakery application which consists of powdered and hydrated monoglycerides—the alpha crystal monoglycerides used for cake premix production.

### RAW MATERIAL:

Commercial wheat flour (Protein content of 9%), Three different types of emulsifiers include PEG (Polyglycerol ester), DMG (Distilled monoglyceride) and lecithin. Whey protein concentration with a protein content of 80% and Sugar, sunflower oil, salt.

#### **Preparing emulsifier gel:**

The emulsifier gel prepared using the dispersion of emulsifier at a ratio of 1:4:3 (Emulsifier, Water, Glycerol). The gel prepared by continuous agitation at 65-80°C. It is stored and used after cooling.

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## ***The formulation used is as follows:***

Wheat flour 100g, Liquid sunflower oil, Powdered sugar 80g, Salt 1g, Baking powder 3g, Milk powder 12g, Whey protein concentration 8g, Glycerol 4g, water 82mL, Emulsifiers: PEG, DMG 0.25G AND 0.5G and lecithin 1g

## **PROCESS:**

- Wheat flour, baking powder and vanilla sifted thrice,
- whereas sugar powder and liquid sunflower oil were creamed at a speed level of 3 for 3mins in the mixer.
- Add 40mL of Water, Emulsifier gel, Salt, WPC and milk powder were added at the speed of 1 for 1 min and a speed of 3 for 4mins
- Finally, the flour and remaining water added and mixed at a speed of 1 for 1min and 3 for 2mins
- Mix all the ingredient and store it in an airtight container
- The mixture stored in the pantry shelf for quick usage and longer storage stored in the freezer
- Then the cake batter is then transferred into a 5cm- diameter cake mould and baked for 23mins at 180 °C using an electric oven
- After baking the cakes left at room temperature for 60mins.

Cleaning of Ingredients → Weighing → Sieving → Creaming → Blending → Premix → Packing

## **EQUIPMENT:**

The major equipment required to set up this plant is Blender, Balance, sealing machine, laboratory equipment's, working tables etc.

**Blender** is not essential for cake-making, but it does save time and minimise effort. Plus, they come with different attachments.

**Laboratory equipment** like measuring spoon, jug, bowl, the knife is also as important to get a quality outcome. Most of the people do not understand the purpose of measuring things that used. So, it is better to measure and use things to avoid tricky conversion and product wastage.



## ABOUT FOOD RESEARCH LAB

Food Research Lab R&D is the unit of Guires. With years of experience in research especially in medical device and pharmaceutical regulations, scientific publications and clinical trials, the company has now ventured into food research and formed a separate unit, under the brand name of 'Food Research Lab' that will drive food forward. Food Research Lab brings together the latest in food processing equipment, expert food scientists, chefs, nutritionists and partners from across the globe to help food companies and entrepreneurs get their products to market quickly and effectively.

Food Research Lab makes your dream concept into a commercial product as we have strong knowledge of ingredients, processing techniques, and we can bring them all together to help you make the right decisions. Our Services includes New Product Development, Pilot R&D Full scale manufacturing. Our Lab & our manufacturing unitis registered under FSSAI & FDA licensed.

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