

PACKAGING OF RABRI



AATMANIRBHAR BHARAT

**PM Formalisation of Micro Food Processing
Enterprises Scheme (PM FME Scheme)**

INTRODUCTION

As per Food Safety and Standards Regulations (FSSR), 2011 Rabdi/Rabri is a sweetened concentrated whole milk product with thickened malai layer obtained by evaporation and concentration of milk.

- Buffalo milk is preferred for preparation of rabri.
- Pleasant caramelized flavor.
- Creamy consistency and viscous body containing several layers of clotted cream with a chewy texture.
- Creamy white to light caramel in color.

INTRODUCTION

- Rabri has slightly cooked aroma and pleasantly sweet and creamy taste.
- The colour varies from light yellow to white with slight tinge of browning depending on the type of milk used.
- Many additives such as cardamom, dry fruits (Kaju, Badaam, etc.) are also added to rabri to make it more delicious.



INTRODUCTION

- Rabri is very popular in the northern and eastern regions of India and consumed directly as a milk dessert on festivals and happy occasions like marriages, birthday celebrations, etc
- Also consumed with other sweets items like:



Jalebi with rabri



Gulab Jamun with rabri

PACKAGING

- Packaging is an important part of food manufacturing process. It protect the food products from physical ,chemical, biological damages.
- Without packaging, materials handling would be a messy, inefficient and costly exercise and modern consumer marketing would be virtually impossible.
- Packaging Institute International defined packaging as the enclosure of products, items or packages in a wrapped pouch, bag, box, cup, tray, can, tube, bottle or other container form to perform one or more of the following functions: containment, protection, preservation, communication, utility and performance. If the device or container performed one or more of these functions, it was considered a package.

NEED OF PACKAGING

- **CONTAINMENT** : protecting the environment from the myriad of products that are moved from one place to another.
- **PROTECTION** : to protect its contents from outside environmental influences such as water, water vapor, gases, odors, microorganisms, dust, shocks, vibrations and compressive forces.
- **CONVENIENCE** : Products designed to increase convenience include foods that are prepared and can be cooked or reheated in a very short time, preferably without removing them from their primary package.

- **COMMUNICATION**

Packaging contains a lot of information such as name of its manufacturer, product name, terms and uses, date of manufacturing, best before, nutritional information thus helping the consumer to be more informed.

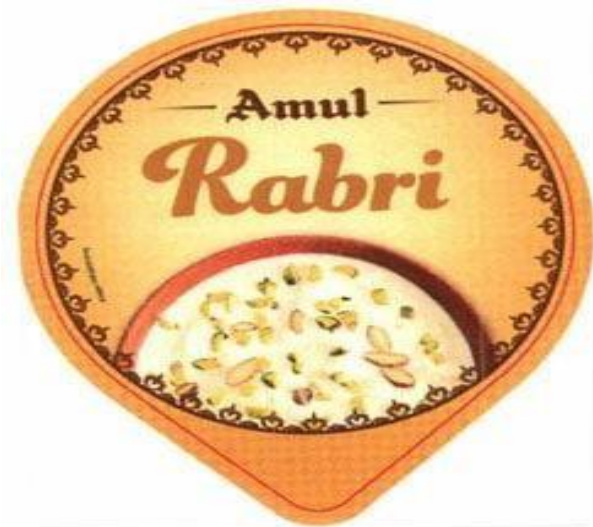


TYPES OF PACKAGING

- **PRIMARY PACKAGING** : Primary package are those package which directly came into contact with food products. It provides first or initial layer of protection to the food products. Examples of primary packaging includes parchment paper, greaseproof paper, paperboard cartons, and plastic pouches.
- **SECONDARY PACKAGE** : Secondary package are those package which surrounds or contains the primary package. Ex. Corrugated case, Boxes
- **TERTIARY PACKAGE** : It contains number of secondary package together. Mainly used for bulk handling of food products.

PACKAGING MATERIAL FOR RABRI

- Packaging of rabri is mainly done to protect the rabri from outside environment, especially after the completion of process so that rabri can retain moisture, flavor, freshness for a longer period of time.



1. LDPE :

- Low-density polyethylene is heat sealable, inert, odour free and shrinks when heated.
- It act as a barrier to moisture and has high gas permeability
- It is less expensive, therefore widely used.
- Has ability of fusion welded to itself to give good, tough, liquid-tight seals.



PACKAGING MATERIAL FOR RABRI

2. PET : PET can be made into film by blowing

or casting.

- ✓ Melting point of PET is higher than PP which is around 260°C and due to the manufacturing conditions does not shrink below 180°C.
- ✓ PET is ideal for high-temperature applications.
- ✓ It also act as good barrier of oxygen and water vapor.



3. HDPE or PP: High density Polyethylene or Polypropylene cup has been also used for packaging of rabri, basundi, kheer and curd. The benefits include:

- i. Weather-resistance
- ii. Malleability
- iii. Light-weight
- iv. Cost-effective
- v. Hygienic
- vi. Recyclable
- vii. FDA-approved



4. ALUMINIUM FOIL

- Aluminium is used for packaging as it is highly malleable.
- It can be easily converted to thin sheets and folded, rolled or packed.
- Aluminium foil acts as a total barrier to light and oxygen odours and flavors, moistness, and used broadly in food packaging, including long-life packs.



PACKAGING MATERIAL FOR RABRI INSTANT MIX

5. PAPER BOARD (White Lined Chipboard): Mostly used for rabri instant mix packaging because of low moisture.

- ✓ Recycled
- ✓ Economic
- ✓ Easy to print
- ✓ May take any shape
- ✓ Lightweight



PACKAGING MATERIAL FOR RABRI

6. RABRI IN WRAPPER:

Wrappers are typically made of multiple materials like:

- i. mixture of plastic, aluminum and paper
- ii. polypropylene flim
- iii. Cellophane
- ✓ Economic
- ✓ Easy to print
- ✓ May take any shape
- ✓ Lightweight



- ✓ Automatic cup filling and lid sealing machine.
- ✓ The same machine may be use for shrikhand, curd and ice cream.



SOME RECENT TRENDS IN PACKAGING :

MODIFIED ATMOSPHERE PACKAGING:

- MAP can be defined as packaging of food items where atmosphere inside the packet has been modified to increase the shelf life of food products. It involves active modification or passive modification.
- In active modification air is displaced with a controlled, desired mixture of gases, and the process is called as gas flushing.
- Passive modification occurs due to respiration and the metabolism of microorganisms associated with the food.

SOME RECENT TRENDS IN PACKAGING :

ACTIVE AND INTELLIGENT PACKAGING :

- Active packaging is defined as packaging in which subsidiary constituents have been deliberately included in or on either the packaging material or the package headspace to enhance the performance of the package system.
- Intelligent packaging is defined as packaging that contains an external or internal indicator to provide information about the history of the package and/or the quality of the food.
- Various functions performed by intelligent packaging includes: Oxygen absorber, Carbon dioxide absorber or emitter, Ethylene absorber, Ethanol emitter, Moisture absorber.

SOME RECENT TRENDS IN PACKAGING :

ASEPTIC PACKAGING :

- Aseptic packaging is the filling of sterile containers with a commercially sterile product under aseptic conditions, and then sealing the containers so that re-infection is prevented; that is, so that they are hermetically sealed.
- **Aseptic packaging are used for :**
 - ✓ To take advantage of high temperature.
 - ✓ Increase shelf life of food products at normal temperature.
 - ✓ In package sterilization.

LABELING

- Labeling is a means of performing the communication function of packaging, informing the consumer about nutritional content, net weight, product use and so on.

✓ Labeling acts as a silent salesman of a company

✓ Shape and design of the container attracts the customers.



General requirement for packaging:

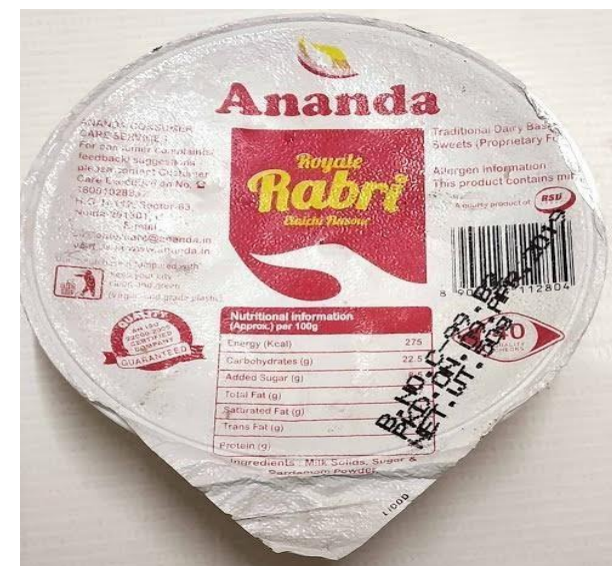
- A utensil or container made of the following materials or metals, when used in the preparation, packaging and storing of food shall be deemed to render it unfit for human consumption:—
 - (a) containers which are rusty;
 - (b) enameled containers which have become chipped and rusty;
 - (c) copper or brass containers which are not properly tinned
 - (d) containers made of aluminium not conforming in chemical composition to IS:20 specification for Cast Aluminium & Aluminium Alloy for utensils or IS:21 specification for Wrought Aluminium and Aluminium Alloy for utensils.

- **Labeling should contain following information:**

- ✓ Name of the food product.
- ✓ List of ingredients.
- ✓ Nutritional information.
- ✓ Declaration of VEG and NON VEG.
- ✓ Declaration of added food additives.
- ✓ Name and address of manufacturer.



- ✓ Net quantity
- ✓ Code number
- ✓ Lot number/ Batch number.
- ✓ Date of manufacturing.
- ✓ Best before date
- ✓ Country of origin.
- ✓ .Number of pieces
- ✓ Bar Code
- ✓ Brand Name etc



- The proper storage of rabri with utmost care is very important as it will rancid much faster because of high fat percentage which may further alter the aroma and flavor and can also harm the health of consumer.

The proper storage requires following :

- **Dark Place** : rabri should be always stored in a dark room to avoid it from sunlight or UV light, so that quality such as aroma and flavor should be maintained till final consumption.
- **Airtight** : To avoid rabri from absorbing moisture and unpleasant odour from air.



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