

# Burfi, Peda and Milkcake: Product description, Compositional profile and Manufacturing practice





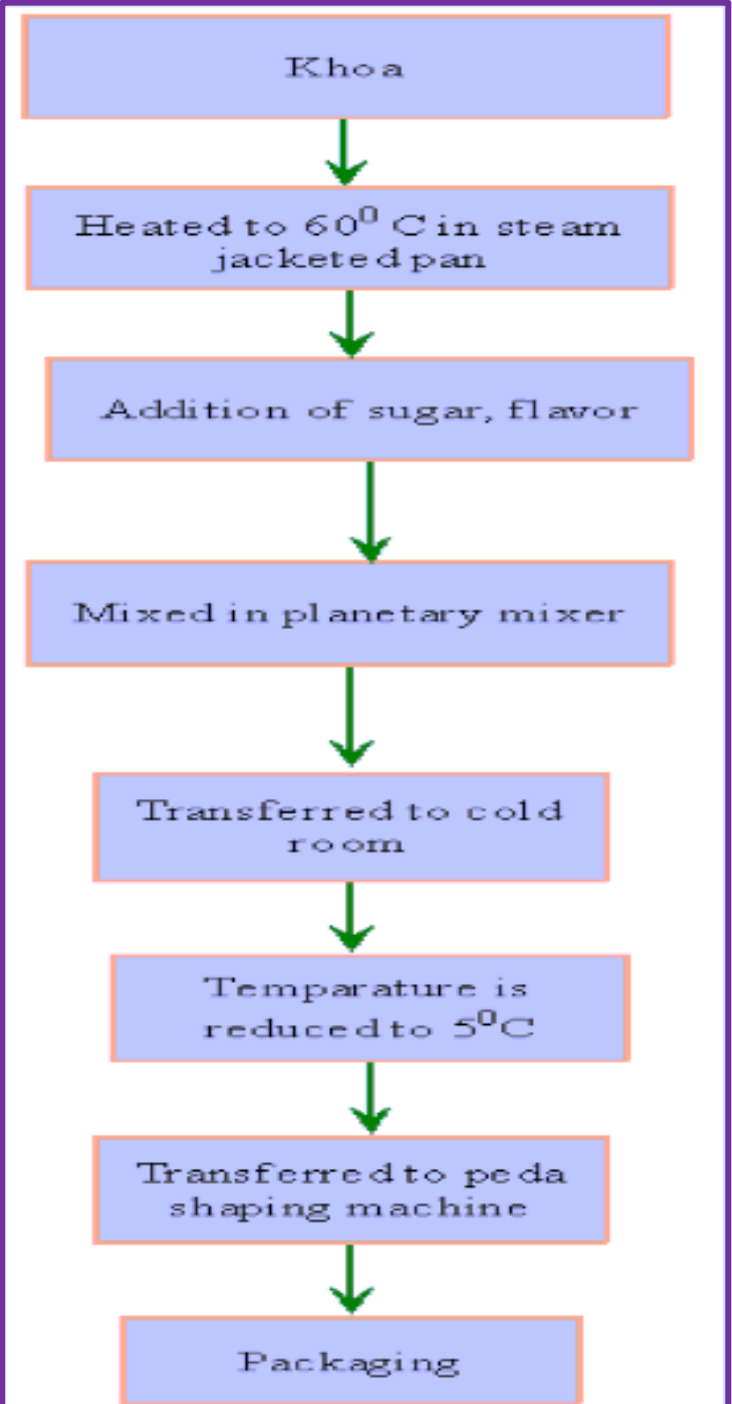
- **Peda** is a sweet prepared from pindi variety of khoa by the addition of sugar.
- Since peda contains sugar and lower moisture content it has a better keeping quality than khoa.
  - Popular and common variety: **Doodh peda**
- Characterized as a circular slightly flattened ball with low moisture content and white to creamy white in colour and smooth texture.

#### Religious Importance

Offered as “Prasad”  
during worship of  
God in the temples

#### Offered to Guests

Time of ceremonial  
celebration like  
marriages, birthday



Chemical Constituents	Percentage
Moisture	13.5
Fat	20.0
Protein	19.5
Lactose	16.3
Sucrose	31.8

### Preparation of peda from *khoa*

## ***Dharwad peda***

From *Dharwad* region of Karnataka State.

In traditional process, *khoa* is fried in ghee and mixed with sugar.

Brown coloured product with sugar crystals seen on surface.

Longer shelf-life than *doodh peda* owing to low moisture content and high sugar content coupled with ghee frying.

## ***Thirattupal***

Popular in Tamil Nadu and Kerala

Characterized by coarse granular texture

Slightly sour milk or small quantity of curd is added to hot milk during preparation to get granular texture.

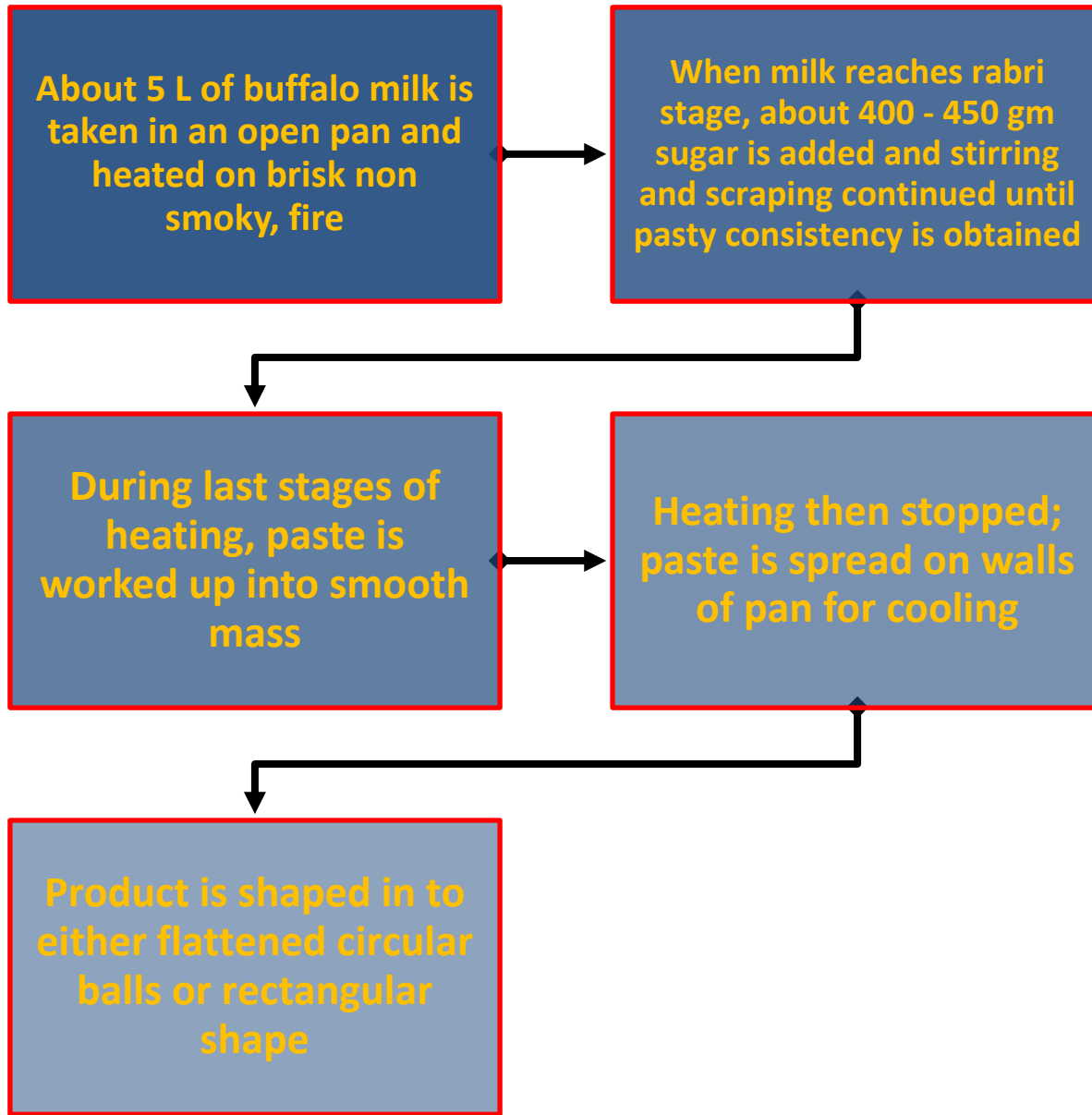
## ***Lal peda***

Highly browned

Intense cooked flavour

Lot of free fat is prepared in some parts of Eastern Uttar Pradesh with cardamom flavour

# Traditional Method of Preparation of Doodh Peda



# Preparation of Peda From Khoa

1.

- *Pindi khoa* is broken into bits and heated to 90°C

2.

- Powdered sugar @ 30% on basis of *khoa* is added and heating is continued with rigorous working to obtain smooth pasty consistency

3.

- Product is cooled and shaped on moulds

# Chemical Quality of Peda

Type and  
quality of milk

Quality  
of *khoa* if used

Amount of  
sugar added

Method of  
production

Optional  
ingredients and  
flavors added

Storage  
condition

# Packaging of Peda:

- Peda is generally packed in paper board containers lined with parchment paper or grease proof paper.
- Plastic trays, tubs can be used to pack peda to enhance its marketability.
- Peda packed either in polythene bags or parchment paper lined paper board boxes can keep well for 7 days at room temperature and 30 days at refrigeration temperature.
- Use of laminates with oxygen scavenger property is also advocated.





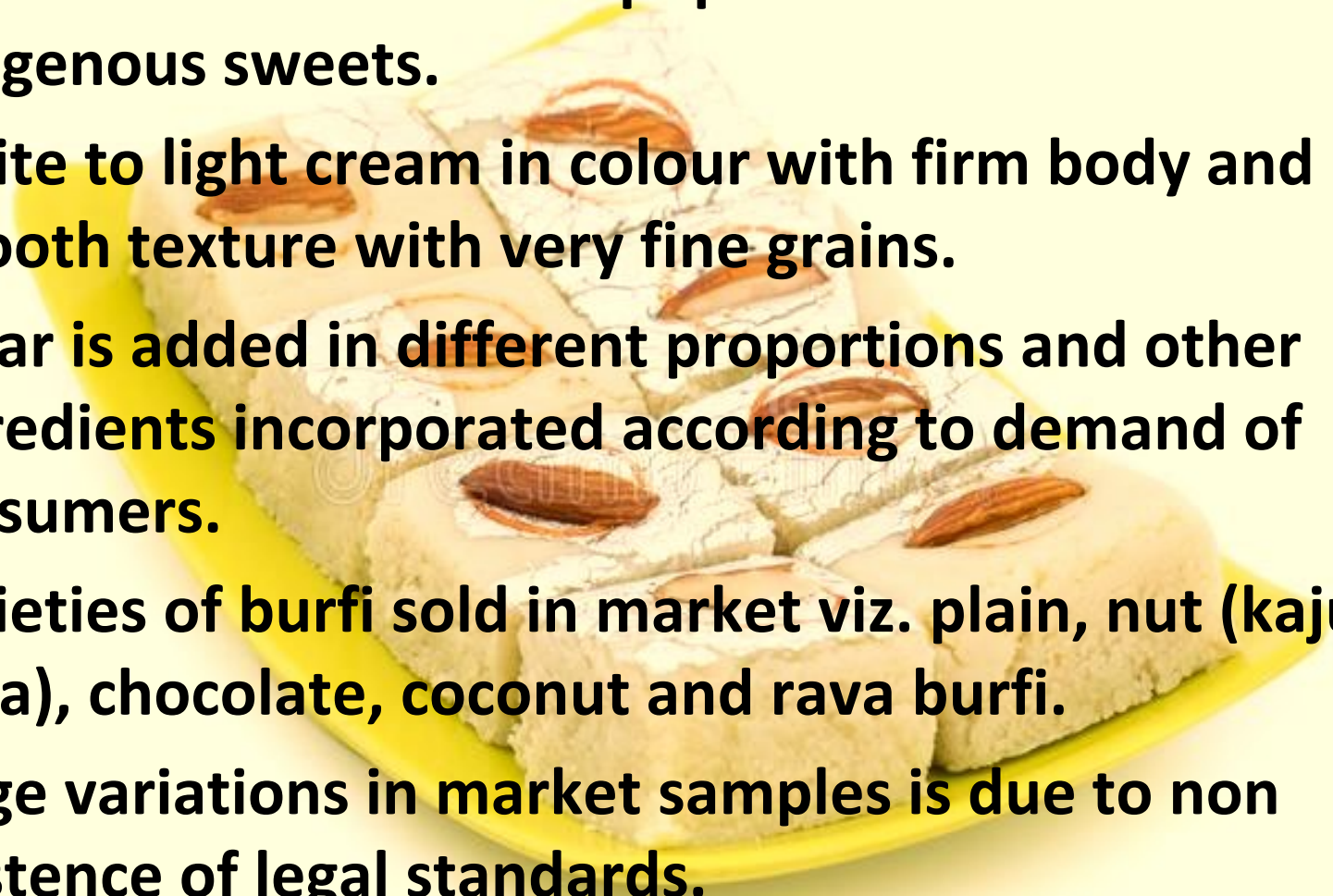
# Shelf-life of peda:

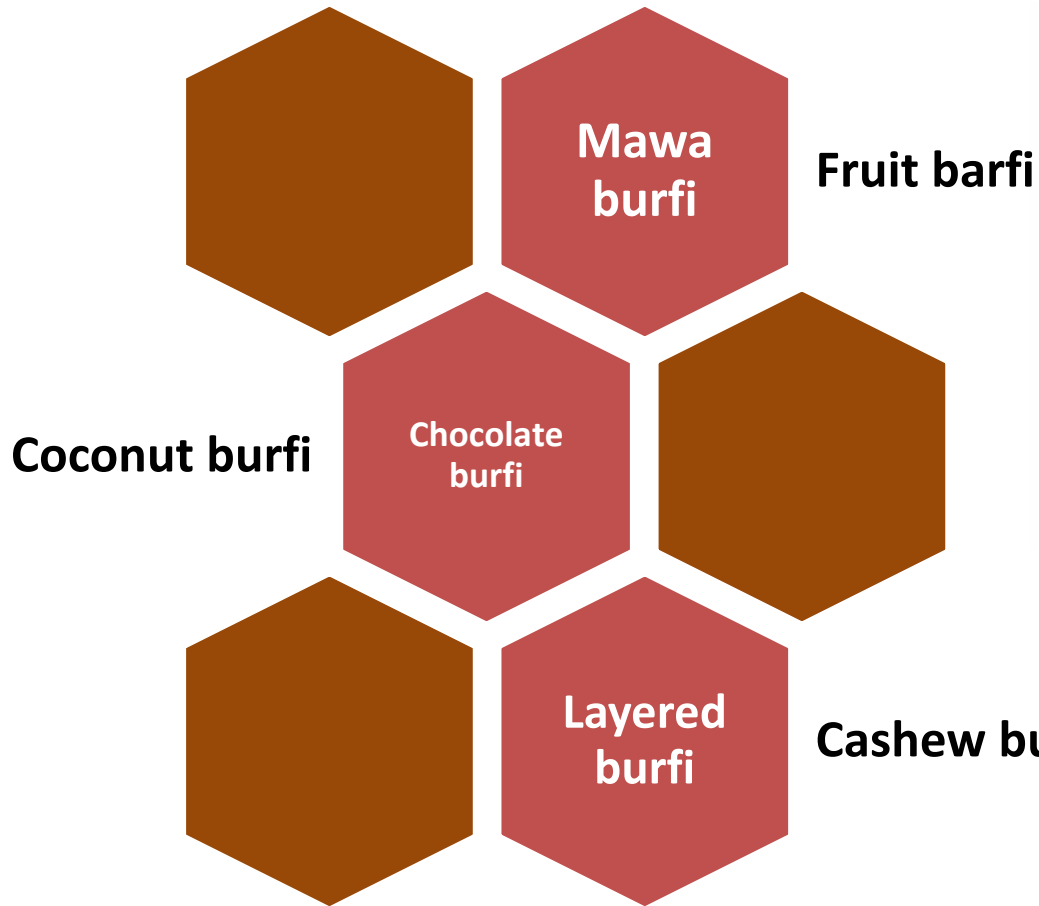
- Keeps well for 5-7 days at room temperature.
- Peda packed in multilayer transparent laminate pouches under modified atmospheric packing of Nitrogen and CO<sub>2</sub> had a shelf life of 15 days at room temperature and 30 days at 20°C.
- Peda samples packed in pouches with oxygen scavenger exhibited a shelf life of 2 months at 37°C and 6 months at 20°C.

**IF YOU COMBINE GOOD FLAVORS, FOOD TURNS INTO AN ORCHESTRA**



- **Burfi** is one of the most popular khoa based indigenous sweets.
- White to light cream in colour with firm body and smooth texture with very fine grains.
- Sugar is added in different proportions and other ingredients incorporated according to demand of consumers.
- Varieties of burfi sold in market viz. plain, nut (kaju, pista), chocolate, coconut and rava burfi.
- Large variations in market samples is due to non existence of legal standards.





*Dry fruits burfi*



*Mawa burfi*

*Chocolate nut burfi*



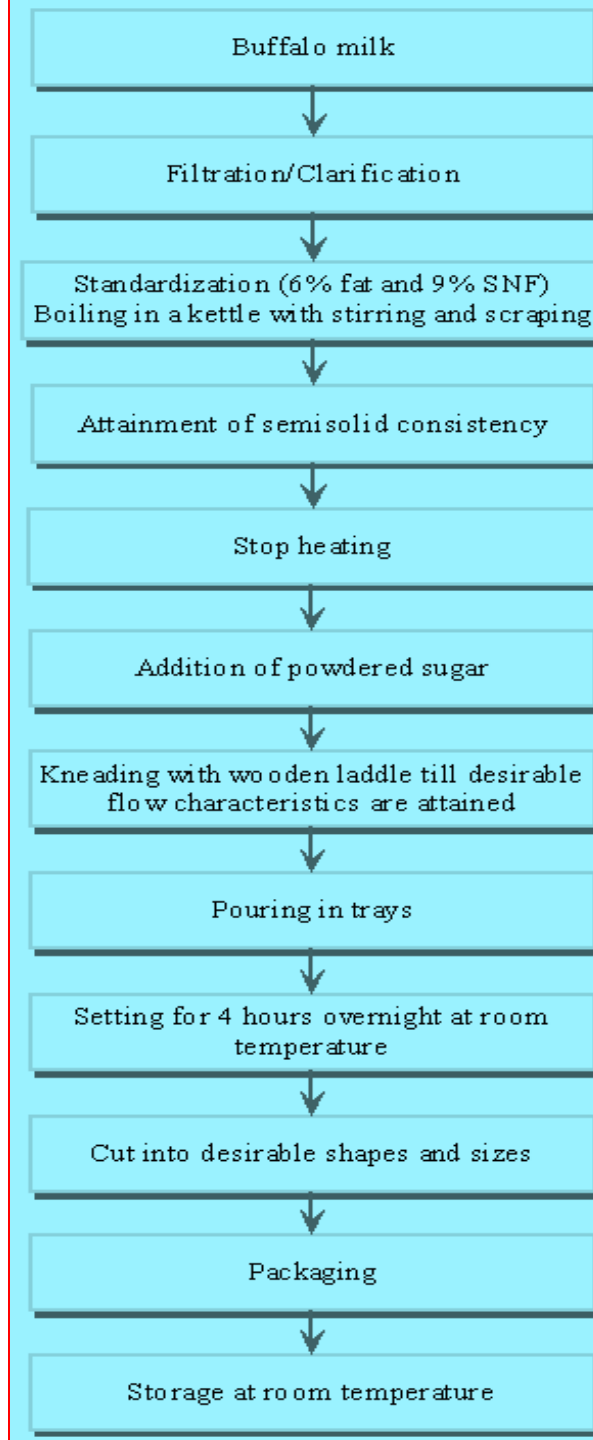
*Layered burfi*

*Coconut burfi*



# Methods of Preparation:

- Buffalo milk is preferred, should not have objectionable flavours and titratable acidity should not be  $>0.16\%$ .
- Milk is filtered before use to remove visible objectionable foreign matter.
- Standardized buffalo milk with 6% fat and 9% SNF in quantities of 4-5 l per batch is taken in a double jacketed stainless steel kettle and heated.
- Milk is boiled continuously with constant stirring and scraping so as to avoid burning of solids on surface of kettle.
- When semisolid consistency is attained, heating is discontinued.
- Powdered sugar @ 30% on the basis of khoa is added and blended thoroughly into khoa with the help of a flattened wooden ladle.
- When homogeneous mass with desirable flow characteristics is achieved, blend is transferred to greased trays.
- Product is allowed to set for minimum of 4 hr.
- Cut into desirable shapes and sizes with a knife and packed burfi is stored at room temperature.



## **Preparation of burfi from pre-made khoa:**

- Burfi can also be prepared from pre made khoa obtained from market.
- Hot sugar syrup is prepared from 300 gm sugar by adding minimum quantity of water.
- Hot sugar syrup is added to 1 kg khoa and heated to 80° C.
- Mixture is kneaded properly and when desirable flow characteristics are attained, it is poured in trays and allowed to set at room temperature.

## **Manufacture of burfi from concentrated milk:**

- Acceptable quality burfi can be prepared from concentrated milk.
- Concentrated milk with 35% total solids is taken and heated in a kettle.
- When a semisolid consistency is reached, ground sugar @ 30 percent on khoa weight basis is added and kneaded.
- When desirable flow characteristics are seen in the product, the mix is emptied into trays and set-aside.

## Preparation of burfi from cream and skim milk powder:

- Cream with 30% fat and skimmed milk powder are mixed in 1:2 ratio.
- Mixture is heated to 92° C and heating is continued till 75% total solids are attained in product.
- Heating is then stopped; ground sugar is added at 50°C and kneaded.
- Then mixture is poured in to trays for setting.

## Mechanized production of burfi:

- Successfully developed by **NDDB**.
- All ingredients, like khoa, sugar, cardamom, etc, are first heat processed to blend uniformly in a planetary mixer.
- Processed ingredients are then fed to a Rheon-shaping and forming machine. A die is placed at the end of the encrusting.
- Machine gives shape to the burfi emerging out from the machine in a continuous uninterrupted flow and then packed.

## BIS specifications

Characteristics	<i>Mawa Burfi</i>	<i>Other Burfi</i>
Moisture % by wt max	15.0	15.0
Milk fat % by wt min.	12.5	10.0
Lactose % by wt min	15.0	12.0
Sucrose % by wt max	48.0	40.0
Acidity % as Lactic Acid max	0.35	0.45
Standard plate count /gm max	30,000	30,000
Yeast & moulds count/ gm max	10	10

Chemical composition depends upon quality and composition of milk, amount of sugar and other ingredients and extent of desiccation. Average chemical composition of a good quality burfi prepared from buffalo milk (6% fat & 90% SNF)

Characteristic	Percentage
Moisture	15
Fat	20.50
Protein	16.12
Lactose	15.83
Sucrose	30.10
Ash	2.45



# Shelf life of Burfi:

- **Low moisture content and presence of sugar keeps burfi well for fairly long periods.**
- **Shelf life of burfi packed in parchment paper is 15 days at 30° C and 50 days at 5° C.**

## Low moisture content:

Burfi with very low moisture could be stored for 6 months but lower moisture content renders burfi hard, dry, chewy and unacceptable for consumer

## Addition of antioxidants:

Burfi samples treated with propyl gallate and dodecyl gallate and stored at 25° C kept well for 12 months.

## Packaging in tins:

Burfi packed in tins and stored at 30° C  $\pm$  10° C was good for 150 days.

## Hot filling:

Filling burfi into tins while hot was suggested to prevent growth of molds and off-flavour development during storage of one year.

## Use of antifungal agents:

Incorporation of 0.15% sorbic acid in burfi and packaging in polyethylene pouches enhance shelf life of burfi up to 90 days.





- **Milk Cake** is a khoa based sweet prepared from either buffalo milk or from danedar variety of khoa.
- Milk cake differs from kalakand for its higher content of sugar, lower moisture content and slightly more sticky and chewy grains.
- Milk cake has two distinct layers i.e. central dark brown colored caramelized centre covered by light colored product on entire surface.
- **Kalakand** is characterized by uniform whitish to light brown colour throughout the mass.

*Milk cake*

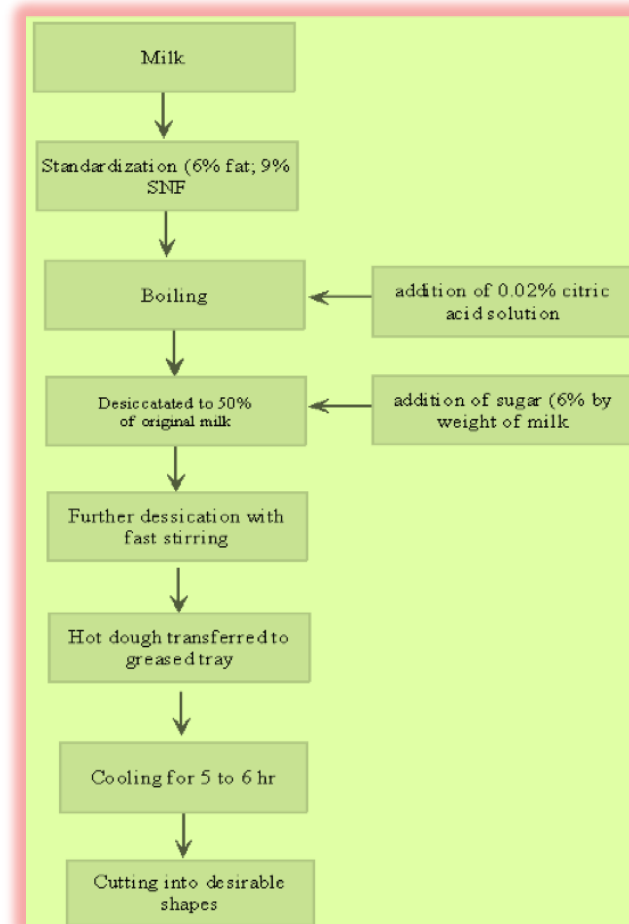


*Kalakand*



# Methods of Preparation (Milk Cake):

- Whole buffalo milk is boiled in an open pan.
- When comes to first boil, 0.05% citric acid on milk basis is added as 1% solution.
- After addition of citric acid solution, small tiny granules tend to appear in milk.
- Heating is continued further with rigorous stirring. When mass shows signs of leaving surface of pan, sugar @ 50% of expected khoa yield 12.5% on basis of milk is added and mix is heated with rigorous stirring.
- Controlled heating is required to get better quality product.
- When product shows signs of dry appearance, mix is poured in deep metal moulds while hot.
- Milk cake is allowed to cool slowly at room temperature so that central portion of pat turns brown and caramelized flavour develops due to residual heat.
- After cooling, product is cut into desirable sizes.
- Vessel containing hot mass is placed in a container with water so that surface of milk cake cools fast giving white appearance outside and brown coloration in central core.



- **Packaging of Milk Cake**

Pieces of milk cake are generally packed in vegetable parchment lined paper board boxes. Individual pieces are packed in LDPE pouches.

- **Shelf Life**

Since milk cake contains higher amount of sugar and lower moisture content, it has longer shelf life than kalakand. Milk cake will have 15-20 days shelf life at room temperature.

Product	Total Solids %	Fat %	Protein %	Lactose %	Sucrose %	Ash %
Milk Cake	84.17	21.32	11.38	7.67	40.46	2.29