



SNS COLLEGE OF TECHNOLOGY

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COIMBATORE-641 035, TAMIL NADU



UNIT II-BAKERY MACHINERY AND EQUIPMENTS


TOPIC 1: INTRODUCTION TO UTENSILS AND EQUIPMENTS USED IN BAKERY INDUSTRY WITH THEIR PURPOSE

EQUIPMENT REQUIRED IN A BAKERY

Various types of equipment are needed and used to facilitate the process of baking. Depending upon the use, equipment may be as light equipment and heavy equipment.

(i) Light Equipment

1. Knives - * peelliate knife * sharp knife * peeler * scraper/spatula
2. Scissors
3. Grater
4. Sieve
5. Strainer
6. Chopping board
7. Spoons - * Measuring spoons * Round spoon * Frying spoon* Wooden spoon
8. Rolling pin
9. Whisks * Hand operated/balloon whisk * Electrical whisk
10. Measuring jug/flask
11. Enamel bowls of different sizes
12. Degchi
13. Saucepan
14. Karahi
15. Turn table
16. Cake dummies
17. Lemon squeezer
18. Pastry brush
19. Weighing scales'

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20. Sugar thermometer
 21. Biscuit cutters
 22. Piping bags and nozzles of different shapes
 23. Cooling rack
 24. Steel thalis/ trays
 25. Cake tins of various sizes and shapes
 26. Jelly mould
 27. Swiss roll tray
 28. Tartlet moulds
 29. Madeliene moulds
 30. Flan rings
 31. 'Bread moulds/tins
 32. Baking trays

Muffin trays

34. Savarin moulds

(ii) Heavy Equipment

1. Oven
 - gas oven
 - coal oven/ bhatti
 - electric oven
2. Proving chamber
3. Refrigerator
4. Dough mixer
5. Deep freezer
6. Work tables
7. Storage cabinet
8. Gas burners

SELECTION AND MAINTENANCE REQUIRED

1. Oven

This may be heated by coal, gas, oil or electricity. The source of heat does not matter as far as the baking products are concerned. Depending upon the volume of baking, a single deck oven

or a double or three deck oven. Oven can also have a proving chamber attached to it. Electric oven has a thermostat which makes temperature regulation easier and it should be possible to control top and bottom heating control top and-bottom heating control from separate knobs. In other ovens exact temperature regulation is not possible so rely more on experience for checking of temperature. Oven should be kept clean to prevent any spillage from becoming caked. Periodic checking by the electrician should be done. Ovens should be used 10-15 cm from ground to permit easy cleaning.

2. Proving chambers

These are cabinets with temperature and humidity control. These are used for keeping just fermented goods like bread, rolls, buns, etc., during the fermentation period so that ideal conditions can be provided for fermentation. They can be separate chambers or can be attached to the oven. These are a must for good bakers. These should be kept clean. Water should be removed and replaced after

cleaning every few days.

3. Refrigerator

The capacity varies from 100 litres to 380 litres. The choice of are refrigerator, its overall size and the size of the frozen food storage compartment depends on the

- a) Size of the bakery
- b) Expected volume of sale
- c) Availability of other cold storage means.

It is wise to choose a larger model as per the requirement because need keeps on increasing with time. A refrigerator should be de-frosted weekly. Spills should be mopped up at once and the cabinet should be washed occasionally with soda bicarbonate or detergent and water.

4. Deep Freezers

The capacity varies from 140 Itrs to 380 Itrs. It can be of three types:

- a) The chest type with top opening lid
- b) The upright type with front opening
- c) A combination type with both openings

Freezers should be defrosted at least once a month. Wash the insides with soda bicarbonate and water and dry before switching it on. Most freezers and refrigerators work for years unimpaired but the telephone number and address of the service agency should be kept handy.

5. Dough Mixer

It is generally made to order but available capacities vary from 25 kg to 35 kg. Most commercial modules are heavy and should be fitted on sturdy rollers for easy movement. The stainless steel bowl and beater should be washed and cleaned after every use and the machine should be serviced regularly.

6. Work Tables

Steel preparation tables last for years. The table top could also be made from marble which is smooth, easy to keep clean and remains cool. There should be no unwanted cracks or joints and the design should be simple. Tables with open sides and without drawers are the best as dirt does not accumulate. Work table should be maintained scrupulously clean as they can cause cross contamination. They should be scrubbed with plastic brush and detergent and washed and dried.

7. Storage Cabinets

These should be good sized food cupboards to store provisions and smaller equipments, some of them should have air-vents for proper ventilation. These can be built-in types or made of metal-free standing style. But all cabinets should be kept clean and free from pests.

8. Grass Burners

One low pressure gas burner with a simple and easy to clean design is a must in a bakery. Preference should be given to stainless steel instead of enamelled metal. Gas ranges should be periodically serviced to check on burners efficiency and they should be kept clean and free from obstruction.