

## **Module 25: Ginger products**

### **25.1. Ginger Products**

#### **25.1.1. Ginger Oil**

Ginger oil can be prepared by steam distillation of grind paste or dried powdered ginger which is used as a flavouring agent for soft drinks, ginger beer and in food preparation. For oil extraction, dried rhizomes are ground to a coarse slurry, paste or powder, loaded into a still for distillation and steam is passed through the slurry/paste/powder. This steam containing the volatile components is condensed with cold water and collected in separate container. The oil can be separated from the water upon cooling by the separatory funnel. Re-distillation can be done to increase oil yield. Usually oil yield obtained from dried rhizomes is 1.5% to 3.5% on dry weight basis and 0.4% on green weight basis depending upon variety of ginger used. It is widely claimed as a Stomachic, aromatic, carminative, aphrodisiacs, diaphoretic, antiemetic, allergic rhinitis and gastric stimulant and for treating migraine headache. It is also used as an antispasmodic against intestinal colic. Ginger oil is used in mouthwashes and liquors

#### **25.1.2. Ginger Oleoresin**

It is blend of oil and resinoids. Oleoresin is obtained by extraction of dried ginger, pulverized to coarse powder, with organic solvents like ethanol or acetone. Oleoresin content ranges from 3.5 to 9.5%.

#### **25.1.3. Ginger Candy**

Ginger candy can be prepared by selecting big sized rhizomes of low fiber content. These rhizomes should be washed with water to remove the adhered dirt and debris. The peel should be removed with the help of wooden splinters or knives and wash thoroughly with water. After this, rhizomes should be pricked properly with the help of forks so that sugar can penetrate deep in the tissues. The pricked rhizomes should be cut into pieces of 1-2 cm thickness. The pieces should be boiled for almost one hour until they become soft. After boiling sufficiently, the ginger pieces should be removed from water and kept in shade for drying. After this, the ginger pieces should be spread in a stainless steel utensil having alternate layer of sugar and ginger pieces (1Kg ginger pieces: 1 Kg sugar) and kept for 24 hours. On second day remove the ginger pieces from sugar syrup and add 2 gm citric acid and boil the syrup until sugar strength reached up to 600 Brix. Allow the syrup to cool, add the ginger pieces in to the syrup and keep it for 24 hours. On third day remove the ginger pieces and add 1 gm citric acid and boil the syrup until sugar strength reached up to 650 Brix. Allow the syrup to cool and add the ginger pieces in to the syrup. Again keep it for 24 hours. On next day the same process should be repeated by addition of 1 gm citric acid and boiling the syrup until the sugar strength reached up to 750 Brix. Allow the syrup to cool and add the pieces in to the syrup. Keep it for 4 days in syrup. Then remove the well soaked pieces from syrup and dry it in oven at 60°C for 6-8 hrs. These dried pieces can be coated with powdered sugar or confectioner's sugar or glucose powder

by sprinkling the powder over the pieces and mixed thoroughly. Fill the coated ginger candy in glass/ jars or pack in polyethylene pouches and store in cool and dry place.

#### **25.1.4. Ginger Soft Drink (RTS)**

Ginger ready to serve (RTS) soft drink can be prepared by selecting healthy and blemish free rhizomes. Wash the rhizomes with water and peel with the help of wooden splinters or knives. Cut into small pieces and make pulp by passing through mixer-grinder by addition of little water to facilitate easy pulping. After pulping strain the pulp and keep it for 1 hour for settling down the sediments at bottom. Then siphon off the clear juice and mix it with sugar syrup solution which can be prepared by addition of sugar + citric acid + water @ 120 gm + 3 gm citric acid + 850 ml water. Strain the sugar syrup with muslin cloth to remove the impurities from dissolved sugar and mix the ginger juice or pulp @ 30 ml and then add the preservative potassium metabisulphite @ 40 mg/ liter of RTS. Mix all the ingredients thoroughly and fill into the bottles then crown corked. The sealed bottles should be pasteurized at 85°C for 15 minutes and then air cooled and can be kept for storage in cool and dry place.

#### **25.1.5. Ginger Shreds**

Ginger shreds can be prepared by washing and peeling of the rhizomes. After peeling rhizomes should be grated in to small pieces. Then grated small pieces of ginger should be kept in the muslin cloths and squeezed slightly to remove excess juice content. Then add black salt and common salt @ 4% and it should be kept in oven for drying at 60°C for two days. Final product should be packed in polyethylene pouches and kept in cool and dry place for use.

#### **25.1.6. Ginger Pickle**

Ginger pickle can be prepared by washing and peeling of the rhizomes. Then peeled rhizomes should be cutted into small rectangular pieces. These pieces should be dried in shade for removal of outer moisture. The mixture of spices (ajowain + black pepper + cumin seed + chilli powder and citric acid @ 10 gm. each for 250 gm. of ginger pieces) should be prepared and mixed together. After this, fill all material into glass jar and keep it for sun drying up to two weeks with occasional stirring. Finally it can be stored in cool and dry place.

#### **25.1.7. Ginger Chutney**

Chutney of good quality and taste can be prepared by using ginger. For this ginger rhizome (250 g) should be washed, peeled and grind in mixer. Tamarind (250 g) and garlic (100 g) should also be grind in mixer and then grinded paste of ginger, tamarind and garlic should be mixed. This mixture should be heated to a little and add salt (100 g). Then frying of another garlic paste (100 g), fenugreek powder (20 g) should be done in little mustard oil (100 ml). This fried mixture of spices should be mixed with ginger paste, sugar (500 g) and fill into glass jar. Final product should be stored in cool and dry place.

### 25.1.8. Ginger oil

It is produced by steam distillation from coarsely ground rhizomes and used in food preparations and in perfume industries.

### 25.1.9. Ginger powder

It is made by pulverizing ginger to mesh size 50 - 60. Ginger is ground to release the flavour, the finer the powder, the more readily available the flavour and readily dispensable in the matrix. Some flavour may be lost by heat development during grinding. This can be minimized by adopting cryomilling and freeze grinding. It is used in curry powder, recipes and in distilleries for preparation of ginger beer.

### Summary

There are different products derived from ginger which are further used for various purposes like Ginger oil is ready by steam distillation of grind paste or dried ginger that is employed as a seasoner agent for soft drinks, potable and in food preparation. For oil extraction, dried rhizomes are unit ground to a rough suspension, paste or powder, loaded into a still for distillation and steam is undergone the slurry/paste/powder, Ginger Oleoresin is a blend of oil and resinoids, Ginger candy which is prepared by selecting big sized rhizomes of low fiber content, Ginger ready to serve (RTS) soft drink prepared by selecting healthy and blemish free rhizomes, Ginger pickle prepared by washing and peeling of the rhizomes. Then peeled rhizomes should be cutted into small rectangular pieces. These pieces should be dried in shade for removal of outer moisture, ginger Chutney of good quality and taste can be prepared by using ginger.. Ginger powder It is made by pulverizing ginger to mesh size 50 - 60.

### SUGGESTED READINGS:

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