

GOAT'S MILK ICE CREAM

by: MOHD SURIA AFFANDI Y, ABDUL RAHMAN I,
WAN ROSNANI I & FAIZAH S

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Ice cream is a frozen product containing 10% milkfat, 20% total milk solids, permitted sweeteners, stabilizers, flavours and dairy derived ingredients. Milk, either from cows or goats, is the source of dairy ingredients in ice cream which is composed of water, milkfat and nonmilk solids. Milkfat and nonmilk solids contribute significantly to the flavour of ice cream. Milkfat is more important than nonmilk solids because it provides the rich, full and creamy flavour that ice cream requires. Nonmilk solids, on the other hand, have indirect effects on flavour. The protein helps give body and a smooth texture to the ice cream. Lactose displaces water and adds to the sweetness produced largely by added sugars. The mineral salts carry a slightly salty flavour that rounds off the finished flavour of ice cream.

Goat's milk ice cream is prepared from the same types of ingredients and with similar formulae as that prepared with cow's milk. Some of the advantages using goat's milk in ice cream are as follows:

- i) Goat's milk is a highly compatible, nourishing, natural food for people who are allergic to cow's milk.
- ii) The fat content in goat's milk is very low compared to cow's milk. The fat globules are 1/9 the size of cow's milk which makes it easy for digestion.
- iii) Suitable for those who are lactose intolerant.
- iv) The chemical structure of goat's milk is very close to that of mother's milk
- v) Goat's milk neutralizes acids and toxins.



Filling, Hardening and Storing

- vi) Goat's milk is high in healing enzymes and has a superior form of calcium than cow's milk.

A significant number of consumers suffer from some degree of inability to completely digest lactose. These lactose malabsorbers sometimes experience discomfort in the lower bowel when lactose which escapes absorption in the small

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Malaysian Palm Oil Board, Ministry of Primary Industries, Malaysia
P. O. Box 10620, 50720 Kuala Lumpur, Malaysia. Tel: 03-89259155, 89259775, Homepage: <http://mpob.gov.my> Telefax: 03-89259446



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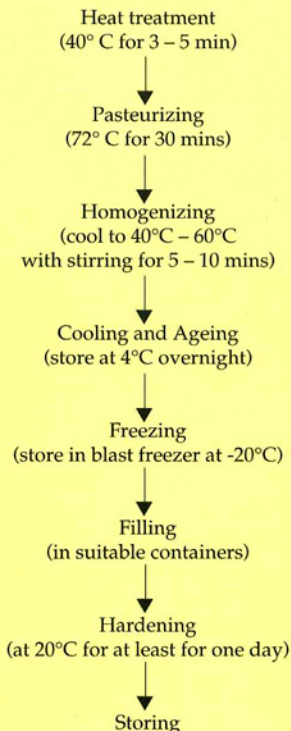
intestine is fermented into acid and gas in the colon. This can cause gas pain and in severe cases, diarrhoea. One solution is to consume ice cream made with goat's milk.

PREPARATION OF GOAT'S MILK ICE CREAM

The initial step in processing is composing of mix. The procedure may range in scope from a batch operation, in which each ingredient is weighed or measured individually into a pasteurizing vat, to a large, automated, continuous operation in which liquid ingredients

PROCESSING

Mix all the ingredients in the container



are metered into a batching tank. Pumping of ingredients and mix through a closed system cuts costs of handling, reduces risks of contamination and makes possible automated cleaning in place (CIP) of the equipment. The other steps that follow are freezing, filling in the container, hardening and storing. The ingredients and detailed steps are as follows:

INGREDIENTS

Fats	10.0 %
Nonfat milk solid	10.5
Sweetener (sugar and corn syrup)	12.0
Emulsifier	0.3
Stabilizer	0.2
Water	64

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For more information kindly contact:

Director-General
MPOB
P. O. Box 10620
50720 Kuala Lumpur, Malaysia.
Tel: 03-89259155, 89259775,
Homepage: <http://mpob.gov.my>
Telefax: 03-89259446