

ICE CREAM MIX POWDER

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INTRODUCTION

Dry ice cream mix or ice cream mix powder is a comparatively new product. Ice cream mix powder can be conveniently reconstituted to meet the demands for the production of ice cream. Other advantages are ease of packing and

transportation and ready for quick use. Ice cream mix powder can be produced by several methods such as spray dryer, roller dryer *etc.*

Abraham *et al.* (1971) patented the spray drying process for making ice cream mix powder from coconut oil. The other fats that have been suggested are palm kernel oil, peanut oil, cottonseed oil, sunflower oil and mixture of soya bean and peanut oil. Spray dried ice cream mix manufactured by using pregelatinized potato starch and polyoxyethylene sorbitan mono-oleate was done by Bhandari *et al.* (1984). Jain *et al.* (1969) used the roller dryer for producing dry ice cream mix from

milk fat. Johnson and Olson (1952) and Stimpson and Whitaker (1955) concentrated normal ice cream mixes to 80% and 65% total solids respectively, in a vacuum pan. MacCollom (1961) suggested a process for the evaporation of milk in the manufacture of ice cream mix.



Vanilla flavoured ice cream



Chocolate flavoured ice cream

PRODUCTION OF ICE CREAM MIX POWDER

The ingredients for production of ice cream mix powder (dry basis) are palm based fat, skim milk powder, corn syrup solid sugar, protein and small amounts of emulsifier, stabilizer, flavourings and optional colouring. The moisture content of the dry product is about 1.5% to 2.0%.

Preparation of the mix is carried out in two stages. The first is to spray dry the liquid premix, followed by dry blending of the dry material. The ice cream is prepared by adding one part of the mix to two parts of water. The liquid is

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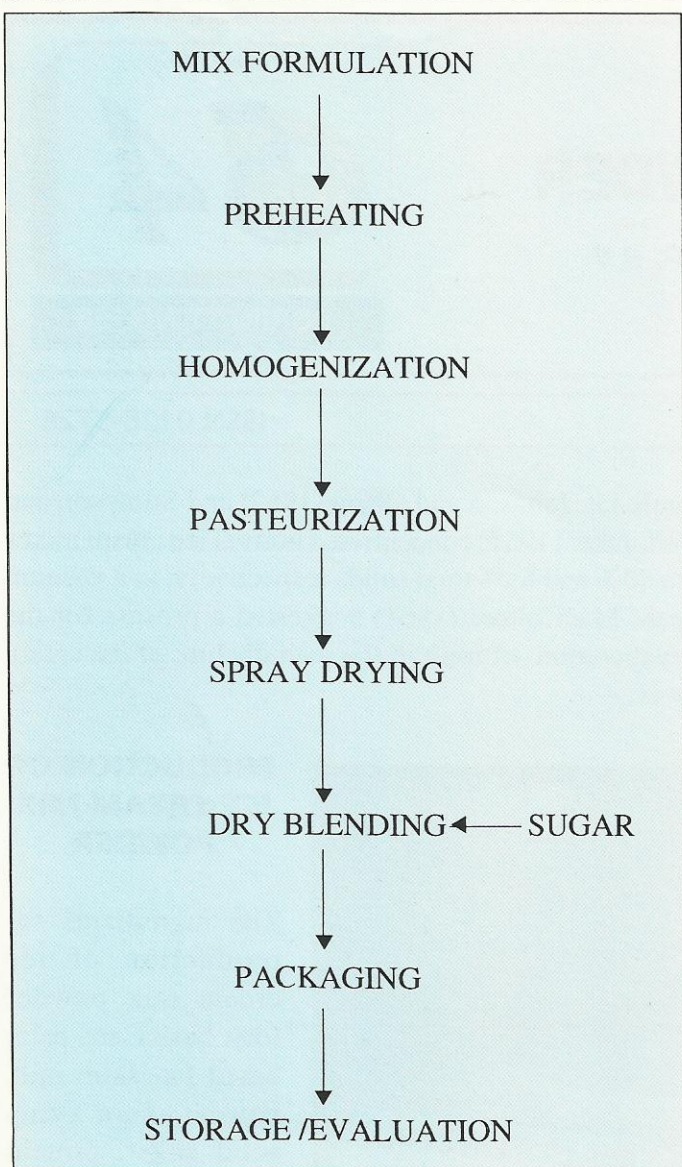


Figure 1. Flow sheet of manufacture palm based ice cream mix powder.

then placed the freezing compartment. The ice cream produced is a soft serve ice cream, which has a good flavour and texture.

ADVANTAGES OF ICE CREAM MIX POWDER

1. Ice cream mix powder will be conveniently reconstituted for ice cream production
2. Ice cream mix powder will provide for convenient handling packaging and transportation
3. It will enhance the stability and increase the shelf life of product during storage

REFERENCES

ABRAHAM, R; MARYSVILLE, M; DONALD, E Y; COLUMBUS and JOSEPH, J (1971). US Patent 3 594193

BHANDARI, V and BALACHANDRAN, R(1984). *New Zealand Journal of Dairy Sci. and Tech.* 19: 213-219.

JAIN, S C and VERMA, I S (1969). *Indian J. Dairy Sci.* 22: 230-236.

JOHNSON, P E and OLSON, H C (1952). *Dairy Sci Abstract.*14: 254.

MAC COLLOM, D B (1961). *Dairy Sci. Abstract.*23: 2514

STIMPSON, E G and WHITAKER, R(1956). *Dairy Sci. Abstract* 18: 2004

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