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IS 10501 (1983): Kulfi [FAD 19: Dairy Products and Equipment]



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“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
SPECIFICATION FOR
KULFI

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MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR

KULFI

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SHRI S. K. SUD
Deputy Director (Agri & Food), ISI

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Indian Standard
SPECIFICATION FOR
KULFI

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 28 February 1983, after the draft finalized by the Dairy Products Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 *KULFI* is a typical indigenous frozen dessert sold by small vendors in many parts of this country. Cow, buffalo or mixed milk either as such or skimmed partially is concentrated in large open pan kept over a fire hearth and then stirred with required amount of sugar, colour and flavour. The addition of nuts is optional. The mix after cooling is filled in suitable conical containers. The containers with *KULFI* mix are then immersed in salt-ice mixture in an earthen pot and frozen.

0.3 This standard is for *KULFI* only. Indian Standard specification for Ice-Cream IS : 2802-1964*, has already been published. This Standard is expected to help in exercising proper quality control in the manufacture of *KULFI* of good quality under hygienic conditions.

0.4 While formulating this standard, necessary consideration has been given to the relevant rules prescribed by the Government of India under the Prevention of Food Adulteration Act, 1954. However, this standard is subject to the restriction imposed under the Act, and the Rules framed thereunder, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960†. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Specification for ice-cream.

†Rules for rounding off numerical values (revised).

1. SCOPE

1.1 This standard prescribes the requirements, methods of sampling and test for *KULFI*.

2. TERMINOLOGY

2.0 For the purpose of this standard the following definition shall apply.

2.1 *KULFI* means the frozen product obtained from cow or buffalo milk or a combination thereof or from any other milk products, with or without the addition of cane sugar, dextrose, liquid glucose and dried liquid glucose, eggs, fruits, fruit juices, preserved fruits, nuts, chocolates, edible flavours and permitted food colours.

3. PHYSICAL REQUIREMENTS

3.1 Odour and Flavour — The product shall have a pleasant agreeable aroma and taste.

3.2 Texture and Appearance — The product shall be attractive in appearance, uniform in consistency, free from big sized ice crystals and coagulated milk particles.

3.3 Freedom from Dirt — The product shall be free from dirt and such other foreign materials. All ingredients used shall be clean, wholesome in every way and fit for human consumption. The container in which the *KULFI* is frozen shall be leak-proof and the lids should be tight fitting to avoid seepage of saline water into *KULFI*.

4. COMPOSITION

4.1 The product shall also comply with the requirements given in Table 1.

4.2 No fat other than milk fat shall be present in the product with the exception of that derived from eggs, cocoa, nuts and emulsifiers (mono-glycerides) if added to *KULFI*.

4.3 The product shall not contain any added starch.

4.4 The permitted stabilizers and emulsifiers, if used, shall not be more than 0.5 percent by mass.

4.5 The cane sugar, milk and milk products, fruits, nuts, eggs, chocolates, edible flavours, permitted food colours, stabilizers and emulsifiers and other products shall be of a quality as well as heat-treated and processed as prescribed in **4.3** to **4.4.9.2** of IS : 2802-1964*.

*Specification for ice-cream.

TABLE 1 COMPOSITION OF KULFI
(Clause 4.1)

SL No.	CHARACTERISTIC	REQUIREMENT		METHOD OF TEST, REF TO		
		<i>KULFI</i>	Fruits, Nuts and Chocolate <i>KULFI</i>	Appendix of This Standard	Appendix of IS : 2802-1964*	Other Indian Standard
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Total solids, percent by mass, <i>Min</i>	35.0	30.0	—	B	—
ii)	†Milk fat, percent by mass, <i>Min</i>	8.0	6.0	—	C	—
iii)	Protein, percent by mass, <i>Min</i>	3.5	3.5	—	—	IS : 7219-1973‡
iv)	Acidity (as lactic acid), percent by mass, <i>Max</i>	0.3	0.3	—	D	—
v)	Sucrose, percent by mass, <i>Min</i>	13.0	13.0	—	E	—
vi)	Total colony count per gram (standard plate count), <i>Max</i>	250 000	250 000	—	F	—
vii)	Coliform count, per gram, <i>Max</i>	100	100	—	G	—
viii)	Phosphatase test of Mix	Negative	Negative	—	H	—
ix)	Presence of starch	Negative	Negative	A	—	—

*Specification for ice-cream.

†Subject to the approval by the Central Committee for Food Standards.

‡Method for determination of protein in foods and feeds.

4.6 Milk and milk solids in appropriate proportion, mixed with sugar shall be concentrated to the desired total solids level by suitable method followed by addition of permitted colour and flavour.

4.6.1 The prepared mix shall be cooled to 4°C and maintained at that temperature until filled in containers and frozen.

4.7 *KULFI* mix shall be filled in *KULFI* containers of suitable shape and size (cones, cylinder or any other fancy type moulds made of aluminium galvanized iron sheets, stainless steel or plastic may be used) under

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hygienic condition and containers closed securely with screw type or tight fitting lids so that no leakage takes place.

4.8 The *KULFI* shall be frozen in an ice-salt mixture (ice and salt 4 : 1 ratio) in an earthen pot or other suitable vessel with intermittent stirring of the freezing mixture.

4.9 Colouring matter and flavouring agents as permitted under Prevention of Food Adulteration Rules, 1955 may be added. The colour and the flavour to be added may be as desired by the purchaser. No chemical preservative shall be present in *KULFI*.

5. HYGIENIC REQUIREMENTS

5.1 The product shall be processed, packed, stored and distributed under strictly hygienic conditions (see IS : 2491-1972*). Contamination shall be avoided.

5.2 The standard plate count and coliform count shall be as shown in Table 1.

5.3 The entire mix excluding flavour(s) and colouring matter before concentration shall be suitably heat treated (see **5.3** and **5.3.1** of IS : 2802-1964†) at a temperature and for a period which ensures the destruction of all pathogenic organisms and gives a negative phosphatase test.

5.3.1 The *KULFI* mix shall be cooled immediately to 4°C after preparation and shall be stored at that temperature until ready for filling in container and freezing. The filling of *KULFI* mix shall be done quickly in clean sanitized containers.

5.4 Cleaning and Sterilization — The cleaning and sterilization of milk handling equipments, *KULFI* cones, etc, shall be carried as per IS : 5253-1969‡.

6. PACKING AND MARKING

6.1 All the materials used for wrapping or packaging the *KULFI* shall be of such a nature as to impart no off-flavour or odour, nor in any other way contaminate the product packed under normal conditions of manufacture, storage and use.

*Code for hygienic conditions for food processing units (*first revision*).

†Specification for ice-cream.

‡Guidelines for cleaning and sterilizing dairy equipment.

6.2 Marking — In addition to the particulars required under the Prevention of Food Adulteration Rules, 1955 the container, wrapper or label shall be marked with the following particulars:

- a) Name and type of product;
- b) Name and full address of the manufacturer;
- c) Batch or code number;
- d) Date of manufacture;
- e) Volume of contents in litre/millilitre; and
- f) Other requirements according to the Standards of Weights and Measures (Packaged Commodities) Rules, 1977.

6.2.1 Each container may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 Representative samples shall be drawn and conformity of the material to the requirements of this specification shall be determined according to the procedure given in Appendix J of IS : 2802-1964*.

A P P E N D I X A

[*Table 1, Item (ix)*]

TEST FOR STARCH

A-1. PROCEDURE

A-1.1 Dilute melted *KULFI* sample in water (1 : 1 dilution). To diluted *KULFI* sample add about 0.5 ml of 0.1 percent solution of iodine in potassium iodide. The mixture shall not develop any blue colour in order to give a negative test.

*Specification for ice-cream.

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*Shri D. S. Chadha was the convener for the meeting in which this standard was finalized.

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m ²