



A REVIEW ON
FOOD SAFETY STANDARDS
And
BUREAU OF SUGAR STANDARDS

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The logo for the Food Safety and Standards Authority of India (FSSAI) features the word "fssai" in a stylized font. The letters "f", "s", "s", and "a" are in blue, while the "i" is in orange. A green leaf is positioned above the "i". The entire logo is underlined with a green line.

FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA

Inspiring Trust, Assuring Safe & Nutritious Food

Ministry of Health and Family Welfare, Government of India

एफ एस एस ए आई की स्थापना खाद्य वस्तुओं के लिए विज्ञान आधारित मानकों का निर्धारण करने और मानव उपभोग के लिए सुरक्षित और पौष्टिक आहार की उपलब्धता सुनिश्चित करने हेतु उनके विनिर्माण, भंडारण, वितरण, बिक्री तथा आयात को विनियमित करने के लिए की गई है।

<https://www.fssai.gov.in/home>

FSSAI has been mandated by the FSS Act, 2006 for performing the following functions:

- Framing of Regulations to lay down the Standards and guidelines in relation to articles of food and specifying appropriate system of enforcing various standards thus notified.
- Laying down mechanisms and guidelines for accreditation of certification bodies engaged in certification of food safety management system for food businesses.
- Laying down procedure and guidelines for accreditation of laboratories and notification of the accredited laboratories.
- To provide scientific advice and technical support to Central Government and State Governments in the matters of framing the policy and rules in areas which have a direct or indirect bearing of food safety and nutrition.

- Collect and collate data regarding food consumption, incidence and prevalence of biological risk, contaminants in food, residues of various, contaminants in foods products, identification of emerging risks and introduction of rapid alert system.
- Creating an information network across the country so that the public, consumers, Panchayats etc receive rapid, reliable and objective information about food safety and issues of concern.
- Provide training programmes for persons who are involved or intend to get involved in food businesses.
- Contribute to the development of international technical standards for food, sanitary and phyto-sanitary standards.
- Promote general awareness about food safety and food standards.

एफ एस एस ए आई को भारतीय खाद्य संरक्षा और मानक अधिनियम, २००६ द्वारा निम्नलिखित कार्यों को करने के लिए अधिदेश प्राप्त है :-

- खाद्य वस्तुओं के मानक तथा दिशा-निर्देश निर्धारण करने के लिए विनियम तैयार करना और इस तरह अधिसूचित विभिन्न मानकों के प्रवर्तन की समुचित प्रणाली को विनिर्दिष्ट करना।
- खाद्य व्यवसायियों के लिए खाद्य संरक्षा प्रबंधन प्रणाली के प्रमाणन निकायों के प्रत्यायन हेतु तंत्र तथा दिशा-निर्देश निर्धारित करना
- प्रयोगशालाओं के प्रत्यायन के लिए प्रक्रिया तथा दिशा-निर्देश निर्धारित करना और प्रत्यायित प्रयोगशालाओं की अधिसूचना।
- खाद्य संरक्षा तथा पोषण को प्रत्यक्ष या अप्रत्यक्ष रूप से प्रभावित करने वाली नीति तथा नियमों को बनाने के विषय में केंद्र तथा राज्य सरकारों को वैज्ञानिक सलाह और तकनीकी सहयोग मुहैया कराना।
- खाद्य उपभोग, जैविकीय जोखिम की घटना एवं उनका प्रचालन, खाद्य में संदूषक, विभिन्न अवशिष्टों, खाद्य उत्पादों में संदूषकों, प्रकट हो रहे जोखिम तथा द्रुत सतर्कता प्रणाली को शामिल करने संबंधी आंकड़े का संग्रह तथा उनका मिलान करना।
- पूरे देश में एक सूचना नेटवर्क की स्थापना करना जिससे कि आम उपभोक्ता, पंचायत आदि खाद्य संरक्षा और इससे जुड़े मुद्दों के संबंध में वस्तुनिष्ठ सूचना प्राप्त कर सकें।
- खाद्य व्यवसाय में शामिल या शामिल होने की इरादा रखने वाले व्यक्तियों के लिए प्रशिक्षण कार्यक्रमों को उपलब्ध कराना।
- खाद्य, स्वच्छता तथा पादप स्वच्छता के लिए अंतरराष्ट्रीय तकनीकी मानकों के विकास में योगदान देना।
- खाद्य संरक्षा तथा खाद्य मानकों के बारे में सामान्य सचेतता को आगे बढ़ाना।

Objective

The Food Safety and Standards Authority of India (FSSAI) has been created under Food Safety and Standards Act, 2006 for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption and for matters connected therewith or incidental thereto.

Standards

Standards of sugar are specified in sub regulations 2.8.1 of Food

Safety and Standards (Food Products and Food Additives) Regulations, 2011. Standards of following sugars are specified under

sub Regulations:

- Plantation white sugar
- Refined sugar
- Khandsari sugar
- (i)Khandsari Sugar Desi; and
- (ii)Khandsari Sugar(sulphur) also known as "Sulphur Sugar".
- Bura sugar
- Cube sugar
- Icing sugar

1. PLANTATION WHITE SUGAR (commonly known as sugar):crystallized product obtained from sugarcane or sugar beet. It shall be free from dirt, filth, iron filings, and added colorings matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

- | | |
|--------------|---------------------------------------|
| (a) Moisture | Not more than 0.5 per cent by weight. |
| (b) Sucrose | Not less than 98 per cent by weight. |

2. REFINED SUGAR : white crystallized sugar obtained by refining of plantation white sugar. It shall be free from dirt, filth, iron filings and added colorings matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

- | | |
|--------------|--|
| (a) Moisture | Not more than 0.5 per cent by weight. |
| (b) Sucrose | Not less than 99.5 per cent by weight. |

The product may contain food additives permitted under FSS Regulations.

3. KHANDSARI SUGAR

Obtained from sugarcane juice by open pan process may be of two varieties, namely:

- (i) Khandsari Sugar Desi;
- (ii) Khandsari Sugar (sulphur) also known as "Sulphur Sugar".

It may be crystalline or in powder form. It shall be free from dirt, filth, iron filings and added colouring matter. Extraneous matter shall not exceed 0.25 per cent by weight.

It may contain sodium bicarbonate (food grade). It shall also conform to the following standards, namely:—

Parameters	Khandsari Sugar Desi;	Khandsari Sugar (sulphur)
Moisture	Not more than 1.5 per cent by weight	Not more than 1.5 per cent by weight
Sucrose	Not less than 93.5 per cent by weight	Not less than 96.5 per cent by weight
Ash insoluble in dilute hydrochloric acid	Not more than 0.7 per cent by weight	Not more than 0.5 per cent by weight
Conductivity (106 mho/cm ²)	Not more than 100 in 5% solution at 30oC	100-300 in 5% solution at 30oC
Calcium oxide (mg/100gms)	Not more than 50	Not more than 100

4. BURA SUGAR

The fine grain size product made out of any kind of sugar. It shall be free from dirt, filth, iron filing and added coloring matter. Extraneous matter shall not exceed 0.1 per cent by weight. It shall also conform to the following standards, namely:—

- | | |
|---|--|
| (a) Sucrose | Not less than 90.0 per cent by weight. |
| (b) Ash insoluble in dilute hydrochloric acid | Not more than 0.7 per cent by weight. |

5. CUBE SUGAR

The sugar in the form of cube or cuboids blocks manufactured from refined crystallized sugar. It shall be white in colour, free from dirt and other extraneous contamination. It shall conform to the following standards :—

- | | |
|---------------|--|
| (a) Sucrose | Not less than 99.7 per cent by weight. |
| (b) Moisture | Not more than 0.25 per cent by weight. |
| (c) Total ash | Not more than 0.03 per cent by weight |

The product may contain food additives permitted under FSS Regulations.

6. ICING SUGAR :

The sugar manufactured by pulverizing refined sugar or vacuum pan (plantation white) sugar with or without edible starch. Edible starch, if added, shall be uniformly extended in the sugar. It shall be in form of white powder, free from dust, or any other extraneous matter.

It shall conform to the following standards:—

- | | |
|---|--|
| (a) Total starch and sucrose
(moisture free) | Not less than 99.0 per cent by weight. |
| (b) Moisture | Not more than 0.80 per cent by weight. |
| (c) Starch | Not more than 4.0 percent by
weight on dry basis. |

The product may contain food additives permitted under FSS Regulations.

Food Safety and Standards Labelling Regulations

General Labelling Requirements-

- Every pre-packaged food shall carry a label.
- The information on the label shall be in English or Hindi in Devnagri script. Any other language in addition may be used.
- The information shall not be false, misleading or deceptive.
Contents on the label shall be clear, prominent, indelible and readily legible by the consumer under normal conditions of purchase and use.
- Where the container is covered by a wrapper, the wrapper shall carry the necessary information or the label on the container shall be readily legible through the outer wrapper and not obscured by it

Labelling of Pre-packaged Foods

Every package of food shall carry the following information on the label:

- The Name of food
- List of Ingredients
- Nutritional Information
- Declaration regarding Veg & Non-Veg
- Declaration regarding food additives
- Name and address of the manufacturer
- Net Quantity
- Lot/Code/Batch Identification
- Date of manufacturing or packing
- Best Before and Use by Date
- Country of origin
- Instructions for use

Declaration regarding Veg, Non-Veg and Food not meant for human consumption

- Every package of non-vegetarian food shall consist of a brown colour filled circle inside a square as indicated below :



- Every package of vegetarian food shall consist of a green colour filled triangle inside a square as indicated below:



- Every package of food material which is not meant for human consumption shall bear a declaration to this effect by a symbol as stipulated below:



With Us You Will Get Safe Food

We Follow These 12 Golden Rules

Hygiene Rule Codes		Hygiene Rule Codes	
1	Keep premise clean and have regular pest control 		Wear clean clothes/ uniform 7
2	Use potable water for food preparation 		Wash hands before & after handling food and after using toilets, coughing, sneezing, etc. 8
3	Cook food thoroughly. Keep hot food above 60°C and cold food below 5°C 		Use water proof bandage to cover cuts or burn wounds 9
4	Store veg & non veg food, raw & cooked food in separate containers 		Do not handle food when unwell 10
5	Store cold food below 5°C and frozen products at -18°C or below 		Use clean and separate dusters to clean surfaces and wipe utensils 11
6	Use separate chopping boards, knives, etc. for raw/cooked & veg/non veg food 		Keep separate & covered dustbins for food waste 12

If any concern

Give your Feedback to Company Name

Call toll free
1800 112 100
SMS or Whatsapp
9868686868

Always quote FSSAI Number for quick action

(Company Name)
(Contact Details)

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② fssai.nic.in

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FOOD SAFETY DISPLAY BOARDS

There is a mandatory requirement of displaying FSSAI License Number at food premises.

Food Safety Display Boards (FSDBs) will be introduced at various food businesses which deals directly with the consumers such as, retail stores, milk booths, vegetable & fruit retail, meat shops, restaurants, street food vendors and sugar and allied products.

BUREAU OF SUGAR STANDARDS :

On behalf of Bureau of Indian Standards, National sugar Institute Kanpur prepares and undertakes sales of Sugar Standard Grade for every sugar season for ease of trade and consumer protection.

At the end of every sugar season, a wide survey is carried out by the Institute to collect the sugar samples, produced by Indian Sugar factories in different part of India. After the survey, these sugar samples are analyzed for its different grades (Size and Reflectance). The draft standards after their approval by the expert committee on sugar standards are released. The validity of the sugar standards grades remains for one season only.

Methods of determining MR value :

The photo-electric Reflectancemeter as specified in (IS-7424-1974) is connected to AC mains. The voltage is maintained at 230 volts by a voltage stabilizers, alternatively, a 6 or 8 volt storage battery may be used. The lamp voltage is adjusted to the specific value and the galvanometer is also adjusted to zero with the help of the knob meant for the purpose. Put the green filter (colour correcting filter) in the search unit and place it on the polished black glass plate. The meter should then indicate zero reflectance, if not, adjust the zero control to set the meter to zero. Then place the search unit on the standard white plaque and adjust the sensitivity control to get the correct reflectance reading for the calibrated plaque, that is, if the plaque is for 92.2 reflectance should be 92.2.

Now place the search unit on the gray enamel plaque and check that the meter gives the correct value of reflectance for the calibrated plaque. This is a check of the linearity of the meter scale. The plaque and the black plate should be washed with a neutral detergent or soft soap and dried before use. Care should be taken not to scratch their surfaces, especially, that of the black glass plate. After suitable interval, the reflectance values of the white and gray enamel plaques should be checked against magnesium oxide standard.

The sugar to be tested is sieved through standard sieves for 15 minutes and only that portion between the sieves is taken which conforms to its grain size. Then it is packed tightly in the square shaped bottle of colourless glass and corked. While filling the sugar, the bottle should be gently tapped. There should not be any empty space below the cork. The bottle is then placed on the search unit and the reflectance reading is taken on all the four sides of the bottle at several places and the mean value of all the reflectance readings is found out. Let this be R, then MR value is equal to $R \times G$ where G is the grain size of the sugar under test.

Bureau of Sugar Standards

Requirements for Grain-Size Group of Crystal-Plantation White Sugar

Sl. No	Size designation	Retained on		Percent Retained by mass, Max.
		IS sieve	Taylor Mesh	
1	L	1.70 mm	10	70
		850 micron	20	95
		600 micron	28	99
2	M	1.18 mm	14	70
		600 micron	28	95
		425 micron	35	99
3	S	600 micron	28	70
		300 micron	48	95
		212 micron	65	99
4	SS	212 micron	65	70
		175 micron	80	95
		147 micron	100	99

BUREAU OF SUGAR STANDARDS :

Grade	Passing Through		Retained on	
	IS Sieve	Tyler Sieve	IS Sieve	Tyler Sieve
L-31	2.36 mm	9	1.70 mm	10
L-30				
M-31	1.70 mm	10	1.18 mm	14
M-30				
S-31	1.18 mm	14	0.60 mm	28
S-30				
SS-31	0.60 mm	28	0.212 mm	65

MODILATED REFLECTANCE (M.R.)

VALUE OF INDIAN SUGAR STANDARDS

Grade	Average Grain Size	Average Reflectance Value	MR Value of Approved Set
L-31	2.03 mm	46.6	93.0 +/- 0.5
L-30		41.6	85.0 +/- 0.5
M-31	1.44 mm	47.0	71.0 +/- 0.5
M-30		43.0	62.0 +/- 0.5
S-31	0.89 mm	52.7	47.0 +/- 0.5
S-30		48.8	43.0 +/- 0.5
SS-31	0.405 mm	68.4	27.0 +/- 0.5

BUREAU OF SUGAR STANDARDS

On behalf of Bureau of Indian Standards, National Sugar Institute, Kanpur prepares and undertakes sales of Sugar Standard Grades for every sugar season for ease of trade and consumer protection.

At the end of every sugar season, a wide survey is carried out by the institute to collect the sugar samples, produced by Indian Sugar factories in different parts of India. After the survey, these sugar samples are analyzed for its different grades (Size and Reflectance). These analysis are carried by experts using Precision instruments. On the basis of results obtained, the selection of sugar is made for preparation of different Sugar Standard Grades. The draft standards after their approval by the expert Committee on sugar standards are released. The validity of the Sugar Standard Grades remains for one sugar season only.

Grade Designation	Passing Through		Retained on	
	IS Sieve	Tyler Sieve	IS Sieve	Tyler Sieve
L-11	2.36 mm	8	1.70 mm	10
L-30				
M-11	1.70 mm	10	1.18 mm	14
M-30				
S-11	1.18 mm	14	0.60 mm	28
S-30				
SS-11	0.60 mm	28	0.212 mm	65

