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FSSAI Publishes Revised Standards for Varied Food Products

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Report Highlights:

On August 14, 2018, the Government of India's Food Safety and Standards Authority of India (FSSAI) notified the Food Safety and Standards (Food Products Standards and Food Additives) Ninth Amendment Regulations, 2018. The amendment regulations revise standards for honey, prescribe comprehensive standards for all pulses, and create new standards for whole and decorticated pearl millet grains, degermed maize flour and maize grit, couscous, tempe (tempeh), textured soy protein (TSP), sago flour, bee wax, and royal jelly.

General Information:

DISCLAIMER: The information contained in this report was retrieved from the Food Safety and Standard Authority of India's (FSSAI) website http://www.fssai.gov.in/. The Office of Agricultural Affairs, USDA and/or the U.S. Government make no claim of accuracy or authenticity.

On August 14, 2018, FSSAI published the Food Safety and Standards (Food Products Standards and Food Additives) Ninth Amendment Regulations, 2018. The amendment regulations revise standards for honey, prescribe comprehensive standards for all pulses, and create new standards for whole and decorticated pearl millet grains, degermed maize flour and maize grit, couscous, tempe (tempeh), textured soy protein (TSP), sago flour, bee wax, and royal jelly.
The regulations went into force on July 31, 2018, the date of publication in the Official Gazette of India. Food business operators will be required to comply with the new regulations effective January 1, 2019.

The full text of the amendments is pasted below and is available on FSSAI's website http://www.fssai.gov.in/.

PRESS NOTE

Standards for Honey revised to build public interest in quality of honey in market.

FSSAI has notified the Food Safety and Standards (Food Products Standards and Food Additives) ninth Amendment Regulations, 2018.

The amendment regulations prescribe revised standards of Honey. In addition, it also prescribes comprehensive standards for all pulses and new standards for whole and decorticated Pearl Millet grains, Degermed Maize flour and Maize Grit, Couscous, Tempe, Textured soy Protein, Sago flour, Bee Wax & Royal Jelly.

Honey has been a target of adulteration through artificial colours and sugars for a long time now. It is believed that Adulteration with corn syrup, cane sugars, rice syrup, beet sugar, sulphite-ammonia caramel is common in honey. It is due to the general drop in production and consequent increase in market prices that have encouraged falsification practices.

Through this amendment notification the existing standards of honey has been revised to include several new quality parameters which address the issues concerning quality and purity of the product and also to curb rampant adulteration in honey. The parameters which can play major role in detecting and curbing adulteration are diastase activity, $^{13}C/\ ^{12}C$ ratio between fructose and glucose, Specific marker for Rice Syrup (SMR), Trace marker for Rice Syrup (TMR) etc.

As per these regulations, honey can be labelled according to floral or plant source, if the product comes essentially from the indicated source and possesses its organoleptic, physicochemical and microscopic characteristics corresponding with that origin.

Earlier FSSAI has also notified the tolerance limit of 10 antibiotics in honey to prevent the malpractices of using these antibiotics at producer level.

With these standards of honey, the falsification/ adulteration practices in honey could be curbed. Further, FSSAI would also initiate monitoring and surveillance activities based on these revised standards for honey which are available in the market.

The above regulation came into force on the date of their publication in the Official Gazette. However, Food Business Operator shall have to comply with all the provisions of these regulations by 1st January, 2019.

MINISTRY OF HEALTH AND FAMILY WELFARE

(Food Safety and Standards Authority of India)

NOTIFICATION

New Delhi, the 31st July, 2018

F.No. Stds/CPL&CP/ Draft Notification/FSSAI-2017.— Whereas the draft Food Safety and Standards (Food Products Standards and Food Additives) Amendment Regulations, 2017, were published as required by sub-section (1) of section 92 of the Food Safety and Standards Act, 2006 (34 of 2006), vide notification of the Food Safety and Standards Authority of India number Stds/CPL&CP/ Draft Notification/FSSAI-2017, dated the 14th December, 2017, in the Gazette of India, Extraordinary, Part III, Section 4, inviting objections and suggestions from persons likely to be affected thereby before the expiry of period of thirty days from the date on which the copies of the Official Gazette containing the said notification were made available to the public;

And whereas copies of the said Gazette were made available to the public on the 19th December, 2017;

And whereas objections and suggestions received from the public in respect of the said draft regulations have been considered by the Food Safety and Standards Authority of India;

Now, therefore, in exercise of the powers conferred by clause (e) of sub-section (2) of section 92 of the Food Safety and Standard Act, 2006, the Food Safety and Standards Authority of India hereby makes the following regulations further to amend the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011, namely:-

1. (1) These regulations may be called the Food Safety and Standards (Food Products Standards and Food Additives) Ninth Amendment Regulations, 2018.

(2) They shall come into force on the date of their publication in the Official Gazette and Food Business Operator shall comply with all the provisions of these regulations by 1st January, 2019.

2. In the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011,-

(a) in regulation 2.3 relating to "FRUIT & VEGETABLE PRODUCTS", in sub-regulation 2.3.47, in paragraph 1 relating to "Groundnut kernal", the parameter "Aflatoxin content" and the entries relating thereto shall be omitted;

(b) in regulation 2.4 relating to "CEREALS AND CEREAL PRODUCTS",-

(i) in sub-regulation 2.4.6, relating to "Food grains",-

(A) in clause 2, serial number (vii) relating to "Aflatoxin" and the entries relating thereto shall be omitted;

(B) in clause 3, serial number (vii) relating to "Aflatoxin" and the entries relating thereto shall be omitted;

(C) for clause 4 , the following clause shall be substituted, namely;-

"4. Jawar:

Jawar shall be the dried mature grains of Sorghum Vulgare Pers. and shall be sweet, hard, clean and wholesome, which shall conform to the following standards, namely:—

S.No.	Parameter	Limit
(I)	Moisture	Not more than 16 per cent. by weight (obtained by heating the pulverised grains at 130°C-133°C for two hours).
(II)	Foreign matter -Extraneous Matter	Not more than 1 per cent. by weight of which not more than 0.25 per cent. by weight shall be mineral matter and not more than 0.10 per cent. by weight shall be impurities of animal origin.
(III)	Other edible grains	Not more than 3 per cent. by weight.
(IV)	Damaged grains	Not more than 6 per cent. by weight out of which ergot affected grains shall not exceed 0.05 per cent. by weight.
(V)	Weevilled grains	Not more than 6 per cent. by weight.
(VI)	Uric acid	Not more than 100 mg per kg.

Provided that the total of foreign matter, other edible grains and damaged grains shall not exceed 10 per cent. by weight.";

(D) in clause 5, serial number (vi) relating to "Aflatoxin" and the entries relating thereto shall be omitted;
(E) clauses 6,7,8,9,10,11,12,13 and 14 shall be omitted;
(F) in clause 15, serial number (vii) relating to "Aflatoxin" and the entries relating thereto shall be omitted;
(G) after clause 21 the following clauses shall be inserted, namely:-

"22. Pulses: (1) This standard applies to the whole or shelled (de-husked) or split pulses and they shall be free from toxic or noxious seeds and added coloring matter and also applies to mix of various pulses covered in this standard.

(2) The following pulses shall be covered under his standards, namely:-

(I) Lentil (Masur) - *Lenil esculenta* Moench *or Lens culinaris* Medik *or Ervem lens* Linn;

(II) Black gram (Urd) – *Phaseolus mungo*Linn;

(III) Green gram (Moong) - *Phaseolus aureus* Roxb., *Phaseolus radiatus* Roxb;
(IV) Bengal gram (Chana or Chick pea) or Kabuli chana or Chhole or(green chick pea) hara chana - *Cicer arietinum* Linn;
(V) Red gram (Arhar) – *Cajanus cajan* (L) Millsp;
(VI) Horse gram (Kulthi) –*Dolichosbiflorus;*
(VII) Field bean (Black, Brown, White), Sem - *Phaseolus vulgaris* ;
(VIII) Peas dry (Matra) –*Pisumsativum;*
(IX) Soybean – *Glycine max* Merr.*);*
(X) Rajmah or Double beans or Broad beans or Black beans – (*Phaseolus vulgaris*); Phaseolus vulgaris)
(XI) Lobia or black eyed beans or black eyed white lobia – (*Vignacatjang*);
(XII) Moth bean (matki) – (*Phaseolusaconitifolius* Jacq.).

(3) The pulses shall conform to the following standards, namely:-

Sl.No.	Parameter	Limit	
(I)	Moisture Content (per cent. by mass), Max.	14	Pulses without seed coat - 12
(II)	Extraneous Matter	Not more than 1 per cent. by mass of which not more than 0.25 per cent. by mass shall be mineral matter and not more than 0.10 per cent. by mass shall be impurities of animal origin.	
(III)	Defects (III) Seeds with serious defects. (Seeds in which the cotyledons have been affected or attacked by pests; seeds with very slight traces of mould or decay; or slight cotyledon staining.)	Not more than 1 per cent.	
	(IV) Seeds with slight defects. (Seeds which have not reached normal development; seeds with extensive seedcoat staining, without the cotyledon being affected; seeds in which the seedcoat is wrinkled, with pronounced folding or broken pulses *)	Not more than 7 per cent. of which broken pulses must not exceed 3 per cent.	
(IV)	Other edible pulses/ grains ,by mass	Not more than 2 per cent.	
(V)	Discoloured seeds by mass	Not more than 3 per cent.	
(VI)	Uric acid (not more than)	100 mg per kg.	

Note- * Broken in whole pulse in which the cotyledon is separated or one cotyledon is broken and broken in split pulses are pulses in which the cotyledon is broken.

23. Whole and decorticated pearl millet grains (Bajra): (1)Pearl millet grains (whole or decorticated grains) shall be the dried mature grains of *Pennisetum typhoideum* Rich or *Pennisetum americanum* L.

(2) Whole grains.- The whole grains of pearl millet obtained as such after proper threshing with no mechanical treatment.

(3) Decorticated grains.- The decorticated grains of pearl millet from which outer parts, amounting to 20–22per cent. of the weight of the whole grains is removed in an appropriate manner using mechanical treatment including simple abrasion.

(4) The grain shall be free from abnormal flavours, odours and living insects and they shall also be free from added coloring matter, moulds, weevils, obnoxious substances, discoloration, poisonous seeds, etc.

(5) The grain shall conform to the following standards for Whole millet grains, namely.-

Sl.No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	13
(II)	1 Litre mass (in gms)	750-820
(III)	Extraneous matter	Not more than 1 per cent. By mass of which not more than 0.25 per cent. By mass shall be mineral matter and not more than 0.10 per cent. By mass shall be impurities of animal origin.
(IV)	Damaged grains per cent. by mass (Not more than)	6 out of which ergot affected grains shall not exceed 0.05 per cent. by mass
(V)	Weevilled grains(Not more than)	6 per cent. by count
(VI)	Other edible grains per cent. by mass (Not more than)	2
(VII)	Uric acid (Not more than)	100 mg per kg

(6) The grain shall conform to the following standards for decorticated millet grains, namely:-

Sl.No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	13
(II)	Appearance: Brown, white or green	Hard, uniform in shape and size.
(III)	1000 kernel weight Decorticated millet grains (in gms)	4.0-8.0
(IV)	1 Litre mass (in gms)	750-820
(V)	Extraneous matter	Not more than 1 per cent. By mass of which not more than 0.25 per cent. By mass shall be mineral matter and not more than 0.10 per cent. By mass shall be impurities of

		animal origin.
(VI)	Damaged grains (per cent. by mass), Not more than	6 out of which ergot affected grains shall not exceed 0.05 per cent. by mass
(VII)	Weevilled grains per cent. (Not more than)	6 per cent. by count
(VIII)	Immature & Shrivelled grain per cent. by mass (Not more than)	8
(IX)	Other edible grains (per cent. by mass), Not more than	2
(X)	Ash (per cent. on dry matter basis)	0.8 to 1
(XI)	PROTEIN (per cent. by mass on a dry basis), Not less than	8
(XII)	Decortication per cent.	20 -22
(XIII)	crude fibre per cent. by mass (on a dry basis)	2
(XIV)	fat per cent. by mass on a dry basis	2 to 4
(XV)	Uric acid (Not more than)	100 mg per kg.”;

(c) in sub-regulation 2.4.8 relating to “CORN FLAKES”, for clause 1, the following clause shall be substituted, namely:-

“1. Corn flakes means the product obtained from dehulled, degermed and cook corn (*Zea mays* L.) by flaking, partially drying and toasting. It may contain any other permitted ingredients appropriate to the product whose standards are prescribed in these regulations. It shall be in the form of crisp flakes of reasonably uniform size and golden brown in colour. It shall be free from dirt, insects, larvae and impurities and any other extraneous matter.

The Corn flakes shall conform to the following standards, namely.-

Sl. No.	Parameter	Limit
(I)	Moisture (per cent. By mass), Max.	7.5
(II)	Total ash excluding salt (per cent. on dry mass basis), Max	1
(III)	Ash insoluble in dilute HCl (per cent. on dry mass basis), Max	0.1
(IV)	Alcoholic acidity (with 90 per cent. alcohol)	Shall be equivalent to not more than 2.0 ml. N. NaOH per 100 g. of dried substance.”;

(d) after sub-regulation 2.4.23 relating to “Durum Wheat Semolina and Whole durum wheat semolina”, the following sub-regulations shall be inserted, namely:-

"2.4.24. Degermed Maize (Corn) Meal and Maize (Corn) Grits: (1) Degermed maize (corn) meal are prepared from fully mature, cleaned, free from mould degermed kernels of maize (corn), *Zea mays* L., by a grinding process in which the grain is comminuted to a suitable degree of fineness and from which bran and germ are removed. In its preparation, coarse particles of the ground maize kernel may be separated, reground and recombined with all of the material from which they were separated.

(2) Degermed maize (corn) grits are prepared from fully mature, cleaned, free from mould, kernels of maize (corn), *Zea mays* L., by a grinding process in which the grain is comminuted to a suitable degree of fineness and from which bran and germ are almost completely removed.

(3) Degermed Maize (Corn) Meal and Maize (Corn) Grits shall be free from abnormal flavours, odours, living insects and filth (impurities of animal origin, including dead insects).
(4) The Degermed Maize (Corn) Meal and Maize (Corn) Grits shall conform to the following standards:

Sl. No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	14
(II)	Ash (on dry matter basis), Max per cent.	1
(III)	Protein (Nx6.25) (on dry matter basis), Min per cent.	7
(IV)	Crude Fat (on dry matter basis), Max per cent.	2.25
(V)	Particle size (i) degermed maize meal	95 per cent. or more shall pass through a 0.85 mm sieve(20 mesh); -and- 45 per cent. or more shall pass through a 0.71 mm sieve(25 mesh); -and- 25 per cent. or less shall pass through a 0.210 mm sieve(70 mesh)
	(ii) degermed maize grits	95 per cent. or more shall pass through a 2.00 mm sieve(10 mesh); -and- 20 per cent. or less through a 0.71 mm sieve(25 mesh),

Note: The parameter 'Particle size' will not be applicable for intermediate products not for direct consumption.

2.4.25.(1) Couscous is obtained from durum wheat semolina *(Triticum durum)* the elements of which are bound by adding potable water and which has undergone physical treatment such as cooking and drying.

(2) Couscous may be prepared from a mixture of coarse and fine semolina and it can also be prepared from "coarse medium" semolina which shall be clean and safe.

(3) Semolina proportions in the mixture intended for the preparation of couscous are:
(I) 20–30per cent. for fine semolina;
(II) 70–80per cent. for coarse semolina.

(4) "Coarse medium" semolina obtained from a mixture of:
(I) 25–30per cent. for coarse semolina;
(II) 70–75per cent. for medium semolina.

(5) The Couscous shall conform to the following standards:

Sl. No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	13
(II)	Ash (on dry matter basis), Max per cent.	1.1
(III)	Granularity (microns)	min. 600(0.60 mm= 30 mesh) microns to max. 2000 microns (2.0 mm= 10 mesh), with a tolerance of 6 per cent. .

2.4.26. (1) Tempe is a compact, white, cake-form product, prepared from dehulled boiled soybeans through solid state fermentation with *Rhizopus* spp.
(2) Product covered by this standard shall consist of the following ingredients:

(I) Soybean (any variety);
(II) Mould of *Rhizopus* Spp. (*R.oligosporus, R. oryzae* and/ or *R. stolonifer*) mix with Cooked rice powder, rice bran powder and/ or wheat bran powder as an inocula.

It shall conform to the following standards, namely:-

S.No.	Parameter	Limit
(I)	Moisture (per cent. by mass), Max.	65
(II)	Protein Content (on dry matter basis), Min per cent.	15
(III)	Fat Content (per cent. on dry mass basis), Min.	7
(IV)	Crude Fibre (per cent. on dry mass basis) Max	2.5
(V)	Urease Index Value	0.05-0.2 pH Units rise

2.4.27. Textured Soy Protein (Soy Bari or Soy Chunks or Soy Granules) is obtained by extrusion of defatted soy flour or grits.
Textured Soy Protein shall conform to the following standards,namely:-

S.No.	Parameter	Limits
(I)	Moisture (per cent. by mass), Max.	7

(II)	Protein (N x 6.25) (per cent. on dry matter basis), Min.	50
(III)	Fat (per cent. not more than) on dry mass basis	1
(IV)	Total Ash (per cent. on dry mass basis), Max.	8
(V)	Crude Fiber (per cent. on dry mass basis) Max.	3.5
(VI)	Acid Insoluble Ash (per cent. on dry mass basis), Max.	0.3
(VII)	Hexane, Max.	10 ppm
(VIII)	Urease Index Value	0.05-0.2 pH Units rise

2.4.28. Sago flour is the product prepared from the pith or soft core of sago palm tree (*Metroxylon sp.*) or the Sago of Tapioca (*Manihot utilissima*). The product shall be free from off-flavours and odours. It must be free from filth (impurities of animal origin including insects) and other extraneous matters. Colour shall be white to light-brown.

Sago flour shall conform to the following standards, namely:-

S.No.	Parameter	Limit
(I)	Moisture (Not more than) , per cent. by mass	13
(II)	Ash Inorganic extraneous matter(Not more than) , per cent. by mass	0.5
(III)	Acidity (mg KOH/100g) (Not more than) , per cent. by mass	220
(IV)	Starch content (Not less than) , per cent. by mass	96
(V)	Crude fibre (Not more than) , per cent. by mass	0.2
(VI)	Particle size	Not less than 95 per cent. flour shall pass through a 100 mesh sieve.”;

(e) In the regulation 2.7 relating to Sweets and Confectionery, after the sub-regulation 2.7.5, the following sub-regulation shall be inserted, namely:-

“2.7.6 Dry Mixtures of Cocoa and Sugars (1) The standard applies to dry mixtures of cocoa and sugars intended for direct consumption. Dry Mixtures of Cocoa and Sugars is the product obtained from Cocoa Cake transformed into powder.

(2) Essential requirements:

a) Moisture Content, per cent. by mass : Not more than 7 per cent. ;

b) Dry Mixtures of Cocoa and Sugars:

Parameter	Cocoa Butter Content (as a minimum cocoa powder content on a dry matter basis)			
	Level	≥20per cent. m/m	≥10per cent. m/m but < 20per cent. m/m	< 10per cent. m/m
Cocoa powder content in dry mixtures	Not < 25per cent. m/m	Sweetened Cocoa, or Sweetened Cocoa Powder, or Drinking Chocolate	Sweetened Cocoa, Fat-reduced, or Sweetened Cocoa Powder, Fat-reduced, or Fat-Reduced Drinking Chocolate	Sweetened Cocoa, Highly Fat-reduced or Sweetened Cocoa Powder, Highly Fat-reduced or Highly Fat-Reduced

				Drinking Chocolate
	Not < 20per cent. m/m	Sweetened Cocoa Mix, or Sweetened Mixture with Cocoa	Sweetened Cocoa Mix, Fat-reduced, or Sweetened Mixture with Cocoa, Fat-reduced:	Sweetened Cocoa Mix, Highly Fat-reduced or Sweetened Mixture with Cocoa, Highly Fat-reduced
	< 20per cent. m/m	Sweetened Cocoa-flavoured Mix	Sweetened Cocoa-flavoured Mix, Fat-reduced	Sweetened Cocoa-flavoured Mix, Highly Fat-reduced

c) Chocolate Powder: Mixture of cocoa powder and sugars and/or sweeteners, containing not less than 32 per cent. wt/wt cocoa powder (29 per cent. wt/wt on a dry matter basis).

(3) Optional Ingredients

(a) Spices

(b) Salt (Sodium chloride)

(f) in the regulation 2.8 relating to "Sweetening agents including Honey", for sub-regulation 2.8.3, the following shall be substituted, namely:-

" 2.8.3: Honey and it's by products:

1. Honey. -

(I) Honey shall be the natural sweet substance produced by honey bees from the nectar of blossoms or from secretions of plants, which honey bees collect, transform and store in honey combs for ripening. It shall possess pleasant aroma, sweet flavour and taste characteristic of honey.

(II) Honey shall be free from organic and inorganic matter including visible mould, insects and insect debris, fragments of bees, brood, pieces of bees wax, grains of sand, and any other extraneous matter.

(III) Honey consists essentially of different sugars, predominantly fructose and glucose as well as other substances such as organic acids, enzymes and solid particles derived from honey collection. The colour of honey varies from nearly colourless to dark brown. The consistency can be fluid, viscous or partly to entirely crystallised.

(IV) Honey sold as such shall not have added to it any food ingredient, including food additives, nor shall any other addition be made other than honey.

(V) Honey shall comply with the following requirements:

Sl. No.	Parameters	Limits
1.	Specific gravity at 27° C, Min.	1.35
2.	Moisture, per cent. by mass, Max.	20
3.	Total reducing sugars, per cent. by mass, Min.	65
	Carviacallosa and Honeydew honey, per cent. by mass, Min.	60

	Blends of Honeydew honey with blossom honey, per cent. by mass ,Min.	45
4.	Sucrose, per cent. by mass, Max.	5
	Carviacallosa and Honeydew honey, Max.	10
5.	Fructose to Glucose ratio (F/G Ratio)	0.95-1.50
6.	Total Ash, per cent. by mass, Max	0.50
7.	(a) Acidity expressed as formic acid per cent. by mass, Max,	0.20
	(b) Free Acidity milliequivalents acid/ 1000 g, Max	50.0
8.	Hydroxy Methyl Furfural (HMF) mg/kg, Max	80.0
9.	Diastase activity, Schade units, Min	3
10.	Water insoluble matters per cent. by mass, Max,	0.10
	For Pressed honey, per cent. by mass, Max.	0.5
11.	C4 Sugar, per cent. by mass, Max	7.0
12.	Pollen count/g , Min	25000
13.	Specific marker for Rice Syrup (SMR)	Negative
14.	Trace marker for Rice Syrup (TMR)	Negative
15.	Foreign oligosaccharides per cent. , Max.	0.1
16.	Proline, mg/kg, Min.	180
17.	Electrical Conductivity: (a) oneys not listed under Honeydew, Max.	0.8 µS/cm
	(b) oneys listed under Honeydew, Min.	0.8 µS/cm
18.	(a) $\Delta\delta^{13}$C Max (Maximum difference between all measured δ^{13}C values); per mil	± 2.1
	(b) $\Delta\delta^{13}$CFru – Glu (The difference in $^{13}C/^{12}C$ ratio between fructose and glucose); per mil	± 1.0
	(c) Δδ13C (per cent.) Protein – Honey (The difference in $^{13}C/^{12}C$ between honey and its associated protein extract) per mil	≥ – 1.0

(vi)Honey shall not be heated or processed to such an extent that its essential composition is changed and / or its quality is impaired.

(vii) Honey can be labelled according to floral or plant source, if it comes from any particular source, and has the organoleptic, physicochemical and microscopic properties corresponding with that origin:

(a) in the case of "Monofloral Honey", the minimum pollen content of the plant species concerned shall not be less than 45 per cent. of total pollen content; and

(b) in the case of "Multi floral Honey", the pollen content of any of the plant species shall not exceed 45 per cent. of the total pollen content.

Note: "Carvia callosa" is the honey derived from flower of *Carvia callosa* plant which is described as thixotrophic and is gel like extremely viscous when standing still and turns into liquid when agitated or stirred.

(viii)"Honeydew honey" is the honey which comes mainly from excretions of plant sucking insects of Order *Hemiptera* on the living parts of plants or secretions of living parts of plants.

2. Bees Wax.- (i) Beeswax is obtained from the honeycombs of bees (Family: *Apidae* e.g. *Apis mellifera* L) after the honey has been removed by draining or centrifuging. The combs are melted with hot water, steam or solar heat and the melted product is filtered and cast into cakes of yellow beeswax. White beeswax is obtained by bleaching the yellow beeswax with oxidizing agents, e.g. hydrogen peroxide, sulfuric acid, or sunlight.

Beeswax consists of a mixture of esters of fatty acids and fatty alcohols, hydrocarbons and free fatty acids; minor amounts of free fatty alcohols are also present.

(II) Description.- (a) Yellow beeswax: Yellow or light-brown solid that is somewhat brittle when cold and presents a dull, granular, non-crystalline fracture when broken; it becomes pliable at about 35°. It has a characteristic odour of honey.

(b) White beeswax: White or yellowish white solid (thin layers are translucent) having a faint and characteristic odour of honey.

(III) Requirements: When tested in accordance with method specified in JECFA for Beeswax (INS No. 901) shall conform to the following requirement:

Sl.No.	Parameter	Limit
1.	Solubility	Insoluble in water; sparingly soluble in alcohol; very soluble in ether
2.	Melting point range, °C	62 – 65
3.	Acid value	17 – 24
4.	Peroxide value, Max	5
5.	Saponification value	87 -104
6.	Carnauba wax	Absent
7.	Ceresin, paraffins and certain other waxes	Absent
8.	Fats, Japan wax, rosin and soap	Absent
9.	Glycerol and other polyols, per cent. by mass, Max.	0.5
10.	Lead, mg/kg, Max.	2.0
11.	Ash, per cent. by mass, Max.	0.50
12.	Total Volatile matter, per cent. by mass, Max.	0.75

3. Royal Jelly.- (a) Royal jelly is the mixture of secretions from hypopharyngeal and mandibular glands of worker bees, free from any additive. It is the food of larval and adult queens.

It is a raw and natural food, unprocessed except for filtration which does not undergo addition of substances. The color, taste and the chemical composition of royal jelly are determined by absorption and transformation by the bees fed with the following two types of foods during the royal jelly production time:

(i) type 1: only bee's natural foods (pollen, nectar and honey);

(ii) type 2: bee's natural food and other nutrients (proteins, carbohydrates)

(b) 10-hydroxy-2-decenoic acid (HDA): HDA is the characteristic component of royal jelly.

(c) Requirements,-

(I) Description Royal jelly is milky white, pale yellow, with lustre. It is pasty or jelly-like at normal temperature with fluidity, and shall be free from the bubble and foreign substances. Minor crystallization phenomena can occur naturally in royal jelly during storage.

(II) Odor and taste: It is pungent, unfermented and shall not be rancid. It is acerb, spicy, and brings acrid taste to palate and throat.

(III) Chemical requirements: Royal jelly shall comply with the requirements as follows:

Table - Chemical requirements of royal jelly

Sr.No.	Characteristic	Permissible limit	
		Type 1	Type 2
1.	Moisture content per cent. by mass, Max.	62-68.5	
2.	10-HDA per cent. by mass, Min.	1.4	
3.	Protein, per cent. by mass	11-18	
4.	Total sugar, per cent. by mass	7-18	
5.	Fructose, per cent. by mass	2-9	
6.	Glucose, per cent. by mass	2-9	
7.	Sucrose, per cent. by mass, Max.	3	NA*
8.	Erlose, per cent. by mass, Max.	0.5	NA*
9.	Maltose, per cent. by mass, Max.	1.5	NA*
10.	Maltotriose, per cent. by mass, Max.	0.5	NA*
11.	Total acidity, ml of 1 mol/l NaOH l/100 g	30.0-53.0	
12.	Total lipid, per cent. by mass	2-8	
13.	C13/C12 Isotopic ratio (δ ‰)	–29 to –20	–29 to –14

*NA = Not applicable

(iv) Furosine is an additional, optional quality parameter which shows freshness of royal jelly.;

(g). in regulation 3.2, in sub-regulation 3.2.2, under clause 1 relating to "Steviol Glycoside",-

(i) for the words, "PURITY", the following shall be substituted, namely:-

"Assay/purity	Not less than 95 per cent. of the total of steviol glycosides on the dry weight basis"

(ii) for the entries against the "Total ash" shall be substituted, namely:-

"Total ash Not more than 1 per cent.".

PAWAN AGARWAL, Chief Executive Officer

[ADVT.-III/4/Exty./166/18]