# GOVERNMENT OF INDIA MINISTRY OF AGRICULTURE DEPARTMENT OF AGRICULTURE AND CO-OPERATION

New Delhi, the 24<sup>th</sup> September, 2012

# **NOTIFICATION**

G.S.R. 711 (E).-- whereas the draft of Spices Grading and Marking Rules, 2012 was published as required by section 3 of the Agricultural Produce (Grading and Marking) Act, 1937 (1of 1937) in the Gazette of India, Extraordinary, Part II, Section 3, Sub- section (i), *vide* notification number G.S.R. 262(E), dated, the 29<sup>th</sup> March, 2012, inviting objections and suggestions from all persons likely to be affected thereby within forty-five days from the date on which copies of the said notification published in the Gazette of India were made available to the public;

And, whereas, copies of the said notification were made available to the public on the 26<sup>th</sup> April, 2012;

And, whereas, the objections and suggestions received from the public in respect of the said draft rules have been duly considered;

Now, therefore, in exercise of the powers conferred by section 3 of the Agricultural Produce (Grading and Marking) Act, 1937 (1of 1937) and in supersession of the Spices Grading and Marking Rules, 2005 except as respects things done or omitted to be done before such supersession, the Central Government hereby makes the following rules, namely:-

# **RULES**

- **1. Short title, application and commencement. -** (1)These rules may be called Spices Grading and Marking Rules, 2012.
- (2) They shall apply to the following spices (whole and powder) namely:-
  - (a) Turmeric
  - (b) Chillies
  - (c) Black Pepper
  - (d) Cardamom
  - (e) Large Cardamom
  - (f) Coriander
  - (g) Ginger
  - (h) Cumin
  - (i) Cumin Black (Kalonji)
  - (i) Fennel
  - (k) Fenugreek
  - (I) Celery seed
- (3) They shall come into force on the date of their publication in the Official Gazette.
- 2. (1) **Definitions**. In these rules, unless the context otherwise requires,-
- (a) "Agricultural Marketing Adviser" means the Agricultural Marketing Adviser to the Government of India;
- (b) "authorised packer" means a person or a body of persons who has or have been granted a certificate of authorisation to grade and mark spices in accordance with the grade standards and procedure prescribed under these rules;
- (c) "Certificate of Authorisation" means a certificate issued under the provisions of the General Grading and Marking Rules, 1988, authorising a person or a body of persons to grade and mark spices (whole and powder) with the grade designation mark;
- (d) "General Grading and Marking Rules" means the General Grading and Marking Rules, 1988 made under section 3 of the Agricultural Produce (Grading and Marking) Act, 1937 (1 of 1937);
- (e) "grade designation mark" means the "Agmark Insignia" referred to in rule 3.
- (f) "Schedule" means a Schedule appended to these rules.
- (2) Words and expressions used in these rules and not defined but defined in the Agricultural Produce (Grading and Marking) Act, 1937 (1of 1937) and the General Grading and Marking Rules, 1988 shall have the same meanings as are assigned to them under the said Act and the said rules.

- **3. Grade designation mark .-** The grade designation mark shall consist of "AGMARK Insignia" consisting of a design incorporating the certificate of authorisation number, the word "AGMARK", name of commodity and grade designation resembling the design as set out in Schedule I.
- **4. Grade designations.** The grade designations to indicate the quality of spices shall be as set out in column I of Criteria for Grade designation of Schedule II to XXXII.
- **5. Quality. -** For the purpose of these rules, the quality of spices shall be as given in Schedule- II to XXXII.
- 6. Method of packing.- (1)Spices (whole and powder) shall be packed in new clean and dried jute bags, paper bags, cloth bags, poly woven bags with inner lining of food grade material or poly pouches, High Density Poly Ethylene (HDPE) bags of food grade material or any other packing material as approved by the Agricultural Marketing Adviser.
  - (2) The packing material shall be free from insect or fungal infestation and shall not impart any toxic substance or undesirable odour or flavour to the product.
  - (3) Spices (whole and powder) shall be packed in pack sizes as per provisions in the Legal Metrology (Packaged Commodities) Rules, 2011 or as per the instructions issued by Agricultural Marketing Adviser from time to time.
  - (4) Each package shall contain spices (whole and powder) of the same type and of the same variety, origin and grade designation and the visible part of the contents of the package shall be representative of the entire contents.
  - (5) Graded material of small pack sizes of the same lot or batch and grade may be packed in a master container with complete details thereon along with grade designation mark.
  - (6) Each package shall be securely closed and sealed so as to disallow spilling.
  - (7) The material used inside the package shall be new, clean and of such a quality as to avoid causing any external or internal damage to the produce.
  - (8) The use of material paper or stamps bearing trade specifications may be permitted provided that printing or labeling is done with non-toxic ink or glue.
- 7. Method of Marking and Labeling.- (1) The grade designation mark shall be securely affixed to or printed on each package in a manner approved by the Agricultural Marketing Adviser or an officer authorised by him in this behalf in accordance with rule 11 of the General Grading and Marking Rules.
  - (2) In addition to the grade designation mark, the following particulars shall be clearly and indelibly marked on each package, namely:-
    - (a) Name and address of the authorised packer:
    - (b) Place of packing or processing;
    - (c) Lot or batch number;

- (d) Date of packing;
- (e) Grade;
- (f) Variety (wherever applicable);
- (g) Type (wherever applicable);
- (h) Net weight;
- (i) Maximum retail Price(inclusive of all taxes);
- (j) BEST BEFORE------YEAR;
- (k) any other information as may be specified under the Legal Metrology (Packaged Commodities) Rules, 2011, the Food Safety and Standards Act, 2006 or instructions issued by the Agricultural Marketing Adviser or any officer authorised by him.
- (I) Country of origin (wherever applicable);
- (3) The ink used for marking on packages shall not contaminate the product;
- (4) The authorised packer may, after obtaining prior approval of the Agricultural Marketing Adviser or an officer authorised by him in this behalf, mark his private trade mark or trade brand on the graded packages provided that the same do not indicate quality other than that indicated by the grade designation mark affixed to the graded packages in accordance with these rules.
- **8. Special conditions of certificate of authorisation.-** In addition to the conditions specified under the sub-rule(8) of rule 3 of the General Grading and Marking Rules, the following shall be the special conditions of every certificate of authorisation issued for the purpose of these rules, namely:-
  - (1) The authorised packer shall either set up his own laboratory as per the specified norms or have access to an approved State Grading Laboratory or cooperative or association laboratory or a private commercial laboratory manned by a qualified chemist approved by the Agricultural Marketing Adviser or an officer authorised by him in this regard in accordance with rule 9 of the General Grading and Marking Rules, for testing the quality of spices (whole and powder);
  - (2) The premises shall be maintained in hygienic and sanitary conditions with proper ventilations and well lighted arrangement. The personnel engaged in these operations shall be in good health and free from any infectious, contagious or communicable diseases;
  - (3) The premises shall have adequate storage facilities with clean and proper flooring and free from rodent and insect infestation:
  - (4) The authorised packer and the approved chemist shall observe all instructions regarding testing, grading, packing, marking, sealing and maintenance of records which may be issued by the Agricultural Marketing Adviser or any other officer authorised by him in this regard from time to time.

# Schedule- I

(See rule 3) (Design of Agmark Insignia)



Name of Commodity	
Grade	

#### Schedule-II

(See rule 4)

Grade designations and quality of Turmeric (whole)

Grade			Quality								
Designation											
	Special Characteristics (percent by mass)										
	Organic	Inorganic	Defective	Moisture,	Curcuminoid	Insect	Lead				
	extraneous	extraneous	rhizomes,		content on	damaged	chromate				
	matter,	matter,			dry weight	matter	test				
					basis,						
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Maximum)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
Special	0.3	0.1	3.0	11.0	3.0	0.20	Negative				
Standard	0.7	0.3	5.0	12.0	2.0	0.50	Negative				
		L	General Cha	racteristics	<u>l</u>	·L	1				
			(9	))							

- (1) The turmeric whole is the primary or secondary rhizomes of Curcuma longa L.
- (2) The rhizomes shall be well dried, well developed and shall have the shape ,colour characteristic of the variety;
- (3) It shall have all characteristic odour and flavour of the turmeric;
- (4) The cured rhizomes shall be in natural state or polished;
- (5) It shall not be treated with any artificial colour, including lead chromate and shall also be free from added starch and harmful substances;
- (6) It shall be free from mould growth, living and dead insects, insect infestation, insect fragments and rodent contamination;
- (7) It shall be free from mustiness and rancidity:
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (9) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations.-**

(a)	"Defective rhizomes" means	Shriveled fingers and or bulbs, internally
		damaged, hollow or porous rhizomes, rhizomes
		scorched by boiling and other types of damaged
		rhizomes.
(b)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth.
(c)	"Organic extraneous matter"	Such as chaff, stems, straw.
(d)	"Insect damaged matter"	The produce internally or partially bored or
		damaged by pest/insect.

Note: When fingers are graded separately, it shall not contain more than -

- (1) 2% and 7% (m/m) of pieces of rhizomes (of length less than 15 mm and fragments) in special grade and standard grade respectively;
- (2) 2% and 5% (m/m) of bulbs in special grade and standard grade respectively;

## Schedule-III

(See rule 4)

# Grade designations and quality of Turmeric Powder

Grade		Quality											
Designation													
	Special Characteristics (percent by mass)												
	Moisture	Total ash on	Ash insoluble	Curcuminoid	Total Starch	Test of							
		dry basis	in Dil. HCl , on	content on dry		Lead							
			dry basis	basis		chromate							
	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Maximum)								
(1)	(2)	(3)	(4)	(5)	(6)	(7)							
Special	9.0	7.0	1.0	3.0	60.0	Negative							
Standard	10.0	9.0	1.5	2.0	60.0	Negative							

# **General Characteristics**

(8)

- (1) Turmeric powder shall be prepared by grinding clean, wholesome dry Turmeric (*Curcuma longa L*) rhizomes or bulbous roots in hygienic conditions:
- (2) It shall be ground to such fineness that 95% of the product passes through a 300 micron sieve. It shall be labeled "Coarse Ground" when 95% of the product passes through 500 micron sieve;
- (3) It shall have all its characteristic odour, flavour of the turmeric;
- (4) It shall be free from musty odour or rancidity;
- (5) It shall be free from any added colouring matter, morphologically extraneous matter including foreign starch and any other harmful substances;
- (6) It shall be free from mould growth, lumps,dust, dirt, living insects and dead insects, insect fragments, insects infestation and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## Schedule - IV

(See rule 4)

Grade designations and quality of Dry Chillies and Capsicums (Lal Mirchi)

Grade Designat-		Quality											
ion													
	Special Characteristics (percent by mass)												
	Organic	Inorgani	Unripe	Broken	Moistur	Total	Ash	Capsaic	Insect				
	extraneo	С	and	fruits,	е	ash on	insoluble	inoid	damaged				
	us	extrane	marked	seed and		dry	in Dil. HCI,	content	matter				
	matter	ous	fruits	fragment		basis)	on dry						
		matter		S			basis						
	(Maximu- m)	(Maxim- um)	(Maximu- m)	(Maximu- m)	(Maximu- m)	(Maximu- m)	(Maximum)	(Minim- um)	(Maximu- m)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				
Special	0.50	Nil	1.0	3.0	10.0	6.0	1.2	0.30	0.20				
Standard	0.75	0.10	2.0	5.0	11.0	7.0	1.3	0.10	0.50				
		•		General Ch	aracteristic	cs			•				
		•		(*	11)				·				

- (1) Chilies and Capsicums are dried ripe pods (fruits) with or without stalk of plants of genus *Capsicum annum L& Capsicum frutescens .L of family Solanaceae;*
- (2) It shall have all characteristic strong odour of variety Chillies and Capsicums;
- (3) It shall be free from rancidity and mustiness;
- (4) It shall be free from mould growth, living and dead insects, insect fragments, insects infestation, rodent contamination, coloring matter, coating of mineral oil and other harmful substances;
- (5) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations:**

(a)	"Broken fruits" means	Fruits/Pods which are broken during handling and of which a part of the pod is missing;
(b)	"Fragments" means	small pieces of fruits coming from broken fruits;
(c)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth;
(d)	"Marked fruits" means	black or black stained fruits;
(e)	"Organic extraneous matter"	Such as chaff, stems, straw;
(f)	"Unripe fruits" means	Fruits not yet fully mature, the colour of which is
		different from that of the batch under consideration.
(g)	Insect damaged matter	The produce internally or partially bored or damaged by pest/insect.

# Note:

- (1) Capsicum shall have a length of minimum 25 mm.
- (2) For Special grade Capsaicinoid content shall be declared on the label.
- (3) Extraneous matter does not include unripe. Marked, or broken fruits of the variety under consideration.

## Schedule -V

(See rule 4)

Grade designations and quality of ground (powdered) or fragmented Chillies and Capsicums (Lal Mirchi)

Grade Designation	Quality											
	Special Characteristics (percent by mass)											
	Moisture	Total ash on dry basis	Ash insoluble in Dil. HCl, on dry basis	Crude fiber On dry basis	Non-volatile Ether extract on dry basis	Capsaicinoid content						
(1)	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum) (6)	(Minimum) (7)						
Special	10.0	7.0	1.25	28.0	13.0	0.30						
Standard	11.0	8.0	1.30	30.0	12.0	Not specified						
	1	Gei	neral Characte	ristics		1						
			(8)									

(8)

- (1) Fragmented /ground Chilies and Capsicums are the products obtained by grinding or fragmenting clean, dried, ripened fruits or pods of *Capsicum annum L & Capsicum frutescens L of family Solanaceae* without stalk respectively in hygienic condition. It can also be a mixture of Chilies, Capsicums;
- (2) It shall have all characteristic pungent taste;
- (3) It shall be without any added coloring matter, flavoring matter, mineral oil and other harmful substances;
- (4) It shall also be free from rancidity, mustiness and off flavor;
- (5) It shall be free from lumps, mould growth, insects infestation, living and dead insects, insect fragments, dirt and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

Note: (1) For special grade, Capsaicinoid content shall be declared on the label.

(2) Chillies powder may contain any edible vegetable oil to a maximum limit of 2 per cent by mass under a label declaration for the amount and nature of vegetable oil used.

## Schedule -VI

(See rule 4)

Grade designations and quality of Processed Black Pepper (Whole)

Grade					C	Quality						
Designat												
ion												
			Sp	ecial Chara	acteristics(	percent	by mas	s)				
	Organic extrane ous matter	Inorganic extraneou s matter	Light berries	Pinhead s or broken berries	Bulk Density gm/litre	Mois ture	Total ash on dry basis	Non- volatile ether extract on dry basis	Volatile oil on dry basis per cent (v/w)	Piperine content on dry basis	Insect damaged matter	
	(Maximu- m)	(Maximum)	(Maxim- um)	(Maximu- m)	(Minimu- m)	(Maxi- mum)	(Maxi- mum)	(Minim- um)	(Minimu- m)	(Minimu- m)	(Maximum)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Special	0.50	0.10	3.0	1.0	500	11.0	4.0	7.0	2.2	4.5	0.20	
Standard	0.75	0.20	5.0	2.0	490	12.0	5.0	6.0	2.0	4.0	0.50	
				Gen	eral Charac	teristic	S		•			
					(13)							

- (1) Black pepper shall be sound, dried, mature berries of *Piper nigrum L*. of family *Piperaceae* having an unbroken pericarp, brown to black in colour with wrinkled pericarp.
- (2) It shall have the fresh and pungent taste and flavour Characteristics of black pepper;
- (3) it shall be free from rancidity and mustiness;
- (4) It shall be free from mould growth, living and dead insects, insect fragments and rodent contamination;
- (5) It shall be free from added coloring matter and coating of mineral oil and any other harmful substances;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations.-**

(a)	"Broken berries" means	berry that has been separated into two or more pieces;
(c)	"Inorganic extraneous matter" "Light berries" means	Such as dust, dirt, stones and lumps of earth; berry that has reached an apparently normal stage of development but the kernel does not exist. Light berries ,pin head or broken are not considered as extraneous matter.
(d)	"Organic extraneous matter" means	Such as chaff, stems, straw;
(e)	"Pinhead" means	berry of very small size that has not developed;
(f) (g)	"Processed black pepper" "Insect damaged matter"	Means pepper that has been cleaned.  The produce internally or partially bored or damaged by pest/insect.

Note: (1) Volatile oil content should be determined immediately after grinding.

- (2) It may be marked 'Malabar". It shall have bulk density of 550 gm/litter (Min.)
- (3) It may also be marked TGEB (Tellichery Garbled Extra Bold) or TGSEB (Tellichery Garbled Special Extra Bold) depending upon size of the berries. The berries shall be retained on sieve having holes of diameter 4.25 mm and 4.75 mm for TGEB and TGSEB respectively. Both shall have bulk density of 530 gm/liter(Min.) for Special Grade and 500 gm/liter(Min.) for Standard Grade.

# Schedule - VII

(See rule 4)

Grade designations and quality of Non-Processed or Semi-Processed Black Pepper (Whole)

Quality

Designati											
on											
	Special Characteristics (percent by mass)										
	Organic	Inorganic	Light	Pinheads	Insect	Bulk	Moisture	Total ash	Non-	Volatile	Piperine
	Extraneo	extraneo	berries	& broken	damaged	Density,		on dry	volatile	oil %	content
	us	us matter		berries	matter	gm/litre		basis	éther	(v/w) on	on dry
	matter								extract on	dry	basis
									dry basis	basis	
	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Minimu-	(Maximu-	(Maximu-	(Minimu-	(Minimu-	(Minimu-
	m)	m)	m)	m)	m)	m)	m)	m)	m)	m)	m)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Special	0.50	0.10	4.0	3.0	0.7	500	12.0	5.0	7.0	2.2	4.0
Standard	0.75	0.25	5.0	4.0	1.0	490	13.0	6.0	6.0	2.0	4.0
				G	eneral Cha	racteristic	S				
					(13	3)					
(1) B	lack pepper s	shall be drie	d mature b	erries of Pip	oer nigrum l	of family i	Piperaceae	having an ui	nbroken pei	ricarp brown	n to black
	colour with v		,								
	may be un c	leaned or pa	artially clear	ned;							
	shall be frest										
	4) It shall be free from mould growth, living and dead insects, insect fragments, insects infestation and rodent contamination;										
(5) It	shall be free	from added	l colouring r	natter, coat	ing of mine	ral oil and o	ther harmfu	Il substances	s;		
(6) It	shall comply	with restric	tions in rega	ard to Aflato	oxins, Heav	y Metals, In	secticide or	Pesticide re	sidue, nat	urally occur	rring toxic
s	ubstances, N	/licrobial loa	ad or other	r food safe	ty requirem	ents as spe	ecified in the	Food Safet	y and Stand	dards (Cont	aminants,

**Explanations.-**

importing Countries requirements for exports.

Grade

(7)

(a)	"Broken berries" means	berry that has been separated into two or more pieces;
(b)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth;
(c)	"Light berries" means	berry that has reached an apparently normal stage of development but the kernel does not exist;
(d)	"Non-processed pepper" means	pepper that has not undergone any cleaning;
(e)	"Organic extraneous matter"	Such as chaff, stems, straw;
(f)	"Pinhead" means "Semi-Processed pepper" means	berry of very small size that has not developed;

Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives)

It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or

Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.

- (h) Insect damaged matter The produce internally or partially bored or damaged by pest/insect.
- Note:(1) Non-Processed or Semi-Processed Whole Black Pepper is not meant for direct human
  - (2) Volatile oil content should be determined immediately after grinding.
  - (3) It may be marked 'Malabar". It shall have bulk density of 550 gm/litre (Min.) It may also be marked TGEB (Tellichery Garbled Extra Bold) or TGSEB (Tellichery Garbled Special Extra Bold) depending upon size of the berries. The berries shall be retained on sieve having holes of diameter 4.25 mm and 4.75 mm for TGEB and TGSEB respectively. Both shall have bulk density of 530 gm/litre (Minimum) for Special Grade and 500 gm/liter (Minimum) for Standard Grade.

## Schedule- VIII

(See rule 4)

Grade designations and quality of Black Pepper Powder

Grade			Quality									
Designation												
	Special Characteristics (percent by mass)											
	Moisture	Total ash on dry basis	Ash insoluble in Dil. HCl , on dry basis	Crude fiber On dry basis	Non- volatile ether extract on dry basis	Volatile oil content per cent on dry basis (v/w)	Piperine content on dry basis					
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Minimum)	(Minimum)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
Special	11. 0	5.0	1.0	17.0	6.5	2.0	4.5					
Standard	12.0	6.0	1.2	17.5	6.0	1.75	4.0					

**General Characteristics** 

(9)

- (1) It shall be obtained by grinding dried sound berries of *Piper nigrum L of family Piperaceae* without addition to any other matter;
- (2) It shall be ground to such fineness that the whole of it passes through a 500 micron sieve. It can be ground to such fineness that whole of it passes through 1000 micron sieve, In such case, the product should be labeled 'Coarse Powder';
- (3) It shall have all characteristic aromatic flavour;
- (4) It shall be free from foreign odour ,mustiness or rancidity;
- (5) It shall be free from any foreign matter, lumps, mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination:
- (6) It shall be free from added coloring matter, mineral oil and any other harmful substances;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## Schedule-IX

(See rule 4)

Grade designations and quality of Cardamom Whole Capsules (Chhoti Elaichi)

Grade					Quality								
Designati													
on													
			Special	Characterist	ics (percent b	y mass)							
	Organic	Inorganic	Empty and	Immature	Insect	Mass in	Moisture	Total ash	Volatile				
	Extraneo	extraneou	malformed	&	damaged	gm/litre		on dry	oil on dry				
	us	s matter	capsules	shriveled	matter *			basis	basis %				
	matter		per cent by	capsules					(v/w)				
			count										
	(Maximu-	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimu-	(Maximu-	(Maximu-	(Minimu-				
	m)					m)	m)	m)	m)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)				
Special	0.2	0.1	2.0	2.0	0.20	435	11.0	8.0	4.0				
Standard	0.7	0.3	3.0	3.0	0.50	385	13.0	9.5	3.5				
	•			General Ch	aracteristics								
				(1	1)								

- (1) Cardamom capsules shall be dried, sound and wholesome (without split and black) fruits of Elettaria cardamomum (L).of family zingiberaceae;
- (2) It shall be oblong in shape with a rounded part or three cornered and having ribbed appearance;
- (3) It shall be well formed and contain sound seeds;
- (4) It shall have all characteristic odour and flavor of Cardamom;
- (5) It shall be free from any foreign odour or flavors including those of rancidity and mustiness;
- (6) Colour of the capsules may be (a) Light Green (b) Green (c) Deep Green or (d) pale Brownish, (e) pale cream to white when bleached with sulphur dioxide. Capsules shall be packed according to the colour group and it shall be indicated on the label. At least 95% of the capsules shall correspond to the respective colour group;
- (7) In addition to grade, cardamom may be marked as described below. This marking shall be done only when the product is produced only in the particular area:-
  - (a) Alleppey Green Extra Bold (AGEB) when retained on sieve having holes of diameter 7.0 mm.
  - (b) Corg Green Extra Bold (CGEB) when retained on sieve having holes of diameter 8.0 mm.
  - (c) Alleppy Green Bold (AGB) when retained on sieve having holes of diameter 6.0 mm.
  - (d) Corg Green Bold (CGB) when retained on sieve having holes of diameter 7.5 mm.
  - (e) Alleppy Green Superior (AGS) when retained on sieve having holes of diameter 5.0 mm.
  - Corg Green Superior (CGS) when retained on sieve having holes of diameter 6.0 mm.
- (8) It shall be free from any added coloring matter and other harmful substances;
- (9) It shall be free from mould growth, living and dead insects, insect fragments and rodent contamination;
- (10) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (11) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Explanations.

(a)	"Empty and Malformed capsules"	capsules which have no seeds or are scantily filled with seeds;
(b)	"Immature and Shriveled capsules"	capsules which are not fully developed;
(c)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth;
(d)	"Organic extraneous matter"	Such as chaff, stems, straw;
(e)	Insect damaged matter	The produce internally or partially bored or damaged by pest/insect.

**Note:-** (1) The determination of Volatile Oil shall be made immediately after grinding the seeds obtained by separating the skin.

<sup>\*</sup> Thrip marks alone should not lead to the conclusion that the capsules have been infested with insects.

# Schedule-X

(See rules 4)

Grade designations and quality of Bleached or Half Bleached Cardamom Whole Capsules (Chhoti Elaichi)

Grade Designati on		Quality								
			Sp	ecial Chara	cteristics (	percent b	y mass)			
	Organic Extraneo us matter	Inorgani c extrane ous matter	Empty and malform ed capsules	Immature and shriveled capsules	Size Diameter of holes in mm. in the sieve on which retained)	Mass in gm/litre	Moistur e	Total ash on dry basis	Volatile oil on dry basis per cent (v/w)	Insect damaged matter *
	(Maximu- m)	(Maximu- m)	(Maximu- m)	(Maximu- m)	,	(Minim- um)	(Maximu- m)	(Maximu- m)	(Minimu- m)	(Maximu- m)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Special	0.50	0.10	Nil	Nil	8.5	360	12.5	8.0	4.0	0.20
Standard	0.75	0.25	Nil	Nil	5.0	300	13.0.	9.5	3.5	0.50
	I		I	Genera	l Characte	ristics	l .			l .
					(12)					
(2) I (3) I (4) I (5) I	Cardamom C shall be oble shall be ble shall be free shall be free shall be free odent contan	ong in shap ached and/ e from adde e from mo	e with a rou or half bleaded d coloring r	unded part o ched by Sulp matter and h	r three corn hur dioxide armful subs	ered with s and color tances;	skin ribbed o shall range	or smooth; from pale c	ream to whi	te;
c a ( F	It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act,2006 for domestic trade.									
	occurring to Alimentarious							ents as spe	ecified by t	he Codex

# **Explanations.-**

(c)

(a) "Empty and Malformed capsules" Capsules which have no seeds or are scantily filled with seeds;
 (b) "Immature and Shriveled Capsules which are not fully developed;

capsules" means

"Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth;

(d) "Organic extraneous matter" Such as chaff, stems, straw;

(e) Insect damage matter The produce internally or partially bored or damaged by

pest or insect

**Note:-** (1) The determination of Volatile Oil shall be made immediately after grinding the seeds obtained by separating the skin.

<sup>\*</sup> Thrip marks alone should not lead to the conclusion that the capsules have been infested with insects.

## Schedule -XI

(See rule 4)

Grade designations and quality of Cardamom (Chhoti Elaichi) Seeds Powder / fragmented

	Quality												
Special Characteristics (percent by mass)													
Moisture	Total ash on dry basis	Ash insoluble in Dil. HCl , on dry basis	Volatile oil on dry basis per cent (v/w)	Crude fibre on dry basis									
(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Maximum)									
(2)	(3)	(4)	(5)	(6)									
10.0	7.0	2.5	3.5	10.0									
11.0	8.0	3.0	3.0	12.0									
	Moisture  (Maximum)  (2)	Special Characterist  Moisture Total ash on dry basis  (Maximum) (Maximum)  (2) (3)  10.0 7.0	Special Characteristics (percent by maximum)  (Maximum)  (Maximum)  (Maximum)  (Maximum)  (Maximum)  (Maximum)  (Ash insoluble in Dil. HCl, on dry basis  (Maximum)  (Maximum)  (A)  10.0  7.0  2.5	Special Characteristics (percent by mass)    Moisture									

**General Characteristics** 

(7)

- (1) It shall be obtained by grinding/fragmenting the dried wholesome seeds of any variety of *Elettaria* cardamomum(L) of family zingiberaceae; without addition of any other substance;
- (2) It shall have all characteristic taste and flavour of Cardamom;
- (3) It shall be free from foreign odour, rancidity and mustiness;
- (4) It shall be free from any adulterant, added colouring matter and any other harmful substances;
- (5) It shall be free from lumps, mould growth,insects infestation, living and dead insects, insect fragments and rodent contamination;
- (6) It may be in the form of small piece of seeds or finely ground form;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XII

(See rule 4)

Grade designations and quality of Cardamom (Chhoti Elaichi) Seeds

Grade Designat				Quality								
ion												
Special Characteristics (percent by mass)												
	Organic Extraneo us matter	Inorganic extraneo us matter	Light seeds	Mass in gm/litre	Moisture	Total ash on dry basis	Volatile oil on dry basis(v/w)	Insect damaged matter				
	(Maximu- m)	(Maximu- m)	(Maxim- um)	(Minimu- m)	(Maxim- um)	(Maximum)	(Minimum)	(Maximu- m)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)				
Special	0.5	0.3	2.0	675	12.0	7.0	4.0	0.20				
Standard	1.5	0.5	3.0	625	13. 0	9.5	3.5	0.50				
			Gen	eral Charact	eristics							

(10)

- (1) It shall be obtained by separating the seeds from the dried capsules of nearly ripe fruits Elettaria cardamomum(L); of family zingiberaceae;
- It shall have all characteristic odour and flavor of the Cardamom;
- (3) It shall be free from foreign odour or flavour including those of rancidity and mustiness;
- (4) It shall be free from added colouring matter and any other harmful substances;
- (5) It shall be free from mould growth, insect infestation, living insects and dead insects, insect fragments and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## **Explanations:-**

- (a) "Light Seeds" – includes seeds brown or red in colour and immature and shriveled seeds;
- (b) "Organic Extraneous matter" - Such as chaff, stems, straw;
- (c)
  - "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth;
- Insect damaged matter The produce internally or partially bored or damaged by pest/insect (d)

Note: Volatile Oil shall be determined immediately after grinding.

## Schedule-XIII

(See rule 4)

Grade designations and quality of Large Cardamom Capsules (Badi Elaichi)

Grade				Quality	1								
Designati													
on													
	Special Characteristic (percent by mass)												
	Organic	Inorganic	Immature	Empty	Mass	Moisture	Total ash	Ash	Volatile	Insect			
	Extraneo	extran-	shriveled,	and	in		on dry	insoluble	Oil on	damaged			
	us	eous	capsules	malforme	gm/lit		basis	in Dil. HCl ,	dry	matter			
	matter	matter		d				on dry	basis %				
				capsules				basis	(v/w)				
				(% By									
				count)									
	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Mini-	(Maximu-	(Maximu-	(Maximu-	(Minim-	(Maximu-			
	m)	m)	m)	m)	mum)	m)	m)	m)	um)	m)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
Special	0.6	0.10	1.0	1.0	350	11.0	6.0	1.0	1.5	0.10			
Standard	0.8	0.20	2.0	2.0	300	12.0	8.0	2.0	1.0	0.50			
				General	Characte	ristics							
					(12)								

- (1) It shall be dried, nearly ripe to ripe wholesome (without split and black) fruits(capsule) of Amomum subulatum Roxb;
- (2) It shall be ovoid and more or less triangular shaped with a ribbed appearance;
- (3) It shall have all characteristic taste and flavour of the Large Cardamom;
- (4) It shall be free from foreign odour, rancidity and mustiness;
- (5) It shall be free from added colouring matter and any other harmful substance;
- (6) It shall be free from mould growth, insect infestation, living and dead insects, insect fragments and rodent contamination:
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## **Explanations -**

"Empty and Malformed capsules" capsules which are without seeds or are scantily filled (a) means

with seeds:

"Immature and Shriveled (b) capsules" means

capsules which are not fully developed;

(c) "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth;

(d) "Organic extraneous matter" Such as chaff, stems, straw;

Insect damaged matter (e)

The produce internally or partially bored or damaged

by pest/insect

Note: The determination of Volatile Oil shall be made immediately after grinding the seeds obtained by separating the skin.

## Schedule-XIV

(See rule 4)

Grade designations and quality of Large Cardamom (Badi Elaichi) Seeds

Grade				Quality										
Designati														
on														
	Special Characteristics (percent by mass)													
	Organic	Inorganic	Light	Insect	Moisture	Total ash	Ash	Volatile Oil						
	Extraneou	extraneo	seeds/	damaged		on dry	insoluble in	on dry basis						
	s matter	us	brown/red	matter		basis	Dil. HCl ,	%						
		matter	seeds				on dry	(v/w)						
							basis							
	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maximum)	(Minimum)						
	m)	m)	m)	m)	m)	m)								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)						
Special	0.5	0.3	2.5	0.10	11.0	7.0	1.5	1.5						
Standard	1.5	0.5	3.0	0.50	12.0	8.0	2.0	1.0						
	П	ı	Gene	eral Charact	eristics	ı	1	1						
I														

(10)

- (1) Large Cardamom Seeds shall be obtained by decorticating the dried wholesome capsules of *Amomum subulatum Roxb*;.
- (2) It shall have all characteristic taste and flavour of the Large Cardamom;
- (3) It shall free from foreign odour, rancidity and mustiness;
- (4) It shall be free from added colouring matter and any other harmful substance;
- (5) It shall be free from mould growth, insects infestation and living and dead insects, insect fragments and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## **Explanations.-**

- (a) "Light Seeds" includes seeds which are brown or red in colour, broken, immature and shriveled;
- (b) "Organic Extraneous matter" Such as chaff, stems, straw;
- (c) "Inorganic extraneous matter"- Such as dust, dirt, stones and lumps of earth;
- (d) Insect damaged matter- The seeds internally or partially bored or damaged by pest/insect.

Note: Volatile Oil shall be determined immediately after grinding.

## Schedule-XV

(See rule 4)

Grade designations and quality of Large Cardamom (Badi Elaichi) Seed Powder/Fragmented

Grade		Qualit	ty										
Designation													
Special Characteristics (percent by mass)													
	Moisture	Total ash on dry basis	Ash insoluble in Dil. HCl , on dry basis	Crude fibre on dry basis	Non-volatile ether extract on dry basis	Volatile oil on dry basis % (v/w)							
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Minimum)							
(1)	(2)	(3)	(4)	(5)	(6)	(7)							
Special	10.0	7.0	1.5	12.0	4.0	1.5							
Standard	11.0	8.0	2.0	15.0	2.0	1.0							

## **General Characteristics**

(8)

- (1) It shall be obtained by grinding seeds separated from capsules of *Amomum subulatum Roxb* without addition of any other substance;
- (2) It shall have all characteristic taste and flavour;
- (3) It shall be free from foreign odour, rancidity and mustiness;
- (4) It shall be ground to such a fineness that it shall pass completely through a 1000 micron sieve;
- (5) It shall be free from any added colouring matter and other harmful substance;
- (6) It shall be free from lumps, insect infestation, mould growth and living and dead insects, insect fragments and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XVI

(See rule 4)

Grade designations and quality of Coriander (Whole)

Grade			Qual	lity						
Designati				-						
on										
	Special Characteristics (percent by mass)									
	Organic	Inorganic	Split	Damaged,	Moisture	Total ash	Ash	Volatile Oil	Insect	
	Extraneo	extraneous	fruits	discoloure		on dry	insoluble	on dry	damaged	
	us matter	matter		d and		basis	in Dil.	basis %	Matter	
				shriveled			HCI, on	(v/w)		
				fruits			dry basis			
	(Maximu-	(Maximu-	(Maxi-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Minimum)	(Maximum)	
	m)	m)	mum)	m)	m)	m)	m)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Special	0.25	0.10	4.0	1.0	8.0	6.0	1.0	0.2	0.10	
Standard	0.75									
	1			General C	haracteristi	cs				
					(11)					
` '	`	,		,	,		rum L of the	family <i>Umbelli</i>	iferae;	
		from mustine		and flavour o	or the Conan	uer,				
(4) It		e from moul			station ,livin	g and dead	insects, ins	sect fragments	s and rodent	
		,	colouring	g matter and a	any other har	mful substar	ices;			
				-		-		cide or Pesti		
	•	•					•	ents as spe		
	•		•			, .		and the Foo	•	
	•					•	2011 or any	other Regula	ation notified	
		•		ls Act, 2006 fo						
` '	•	•		•		•		Pesticide resid	•	
	•							specified by	tne Codex	
Al	imentarious	Commission	orimport	ing Countries	requirement	s for exports	j.			

# **Explanations.**-

(a)	"Damaged, discolored, shriveled, fruits"	includes whole or split fruits that are damaged, discolored or shriveled;
(b)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth;
(c)	"Organic extraneous matter"	Such as chaff, stems, straw;
(d)	"Split fruits"	Includes fruits which have been split longitudinally into two parts.
(e)	Insect damaged matter	The produce internally or partially bored or damaged by pest/insect

Note: (1) The Volatile oil content shall be determined immediately after grinding.

## Schedule-XVII

(See rule 4)

Grade designations and quality of Coriander Powder

Grade Designation		Quality											
Designation	Special Characteristics (percent by mass)												
	Moisture	Total ash	Ash	Crude fiber	Non-volatile	Volatile oil							
		on dry	insoluble in	on dry	ether extract on	on dry basis							
		basis	Dil. HCl ,	basis	dry basis	,% (v/w)							
			on dry										
			basis										
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Minimum)							
(1)	(2)	(3)	(4)	(5)	(6)	(7)							
Special	8.0	6.5	1.0	25.0	15.0	0.15							
Standard	9.0	7.0	1.5	28.0	12.0	0.09							

**General Characteristics** 

(8)

- (1) Coriander Powder shall be obtained by grinding clean, sound, dried and mature fruits of *Coriandrum* sativum L. of the family *Umbelliferae*;
- (2) It shall be ground to such fineness that 98% of the product passes through a 500 micron sieve. It shall be labeled "coarse ground" when 98% of the product passes through 1000 micron sieve;
- (3) It shall have a typical aroma and flavour and all characteristic of the Coriander;
- (4) It shall be free from musty odour and rancidity;
- (5) It shall be free from added coloring matter ,starch ,bleach or preservatives ,any foreign matter and other harmful substance;
- (6) It shall be free from lumps, mould growth, insect infestation, living and dead insects, insect fragments and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XVIII

(See rule 4)

Grade designations and quality of Garbled Non-bleached Ginger (Whole)

Grade Designation			Quality									
	Special Characteristics (percent by mass)											
	Size of	Organic	Inorganic	Moisture	Total ash	Calcium	Volatile	Insect				
	rhizomes,	Extraneous	extraneous		on dry	(as	Oil on dry	damaged				
	(length in	matter	matter		basis	calcium	basis %	matter				
	mm).					oxide) on	(v/w)					
						dry basis						
	(Minimum)	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Maximum)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)				
Special	20.0	0.20	0.10	11.0	7.0	1.0	1.7	0.20				
Standard	15.0	0.75	0.20	12.0	8.0	1.1	1.5	0.50				
			Gener	al Characteri	stics							

(10)

- (1) It shall be dried wholesome rhizomes of Zingiber officinale Roscoe of family Zinziberacea in pieces, irregular in shape and size, pale brown in colour;
- (2) Its fibrous content shall be characteristic of the variety with peel not entirely removed;
- (3) It shall have all characteristic taste and flavour of Ginger;
- (4) It shall be free from musty odour, rancid or bitter taste;
- (5) It shall be free from added colouring matter and any other harmful substance;
- (6) It shall be free from mould growth, insects infestation and living and dead insects, insect fragments and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## **Explanations:**

(a) "Inorganic extraneous Such as dust, dirt, stones and lumps of earth;

matter"

(b) "Organic extraneous matter" Such as chaff, stems, straw;

(c) "Insect damaged" matter The produce internally or partially bored or damaged

by pest/insect

**Note:** (1) Pieces of rhizomes smaller than 15 mm can be graded with the marking "Garbled Non-bleached Ginger(Pieces)".

(2) It may be marked "Garbled Non-bleached Calicut" (NGK) or "Garbled Non-bleached Cochin" (NGC) depending upon its place of origin.

#### Schedule- XIX

(See rule 4)

Grade designations and quality of Ungarbled Non-bleached Ginger (Whole)

Grade			Quality	у								
Designation												
			Special Ch	aracteristic	s (percent b	y mass)						
	Size of	Organic	Inorganic	Insect	Very light	Moisture	Total	Calcium	Volatile			
	rhizom	Extraneou	extraneo	damaged	pieces		ash on	(as	Oil on			
	es	s matter	us	matter			dry	calcium	dry			
	(length		matter				basis	oxide) on	basis			
	in mm)							dry basis	%(v/w)			
	(Minimu-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maxim-	(Maximum)	(Minim-			
	m)	m)	m)	m)	m)	m)	um)		um)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)			
Special	20.0	0.25	0.10	0.5	4.0	11.0	7.0	1.0	1.7			
Standard	Standard 15.0 0.75 0.20 1.0 6.0 12.0 8.0 1.1 1.5											
	General Characteristics											
				(11	)							

- (1) It shall be dried wholesome rhizomes of *Zingiber officinale Roscoe*, of family *Zinziberacea* in pieces, irregular in shape, pale brown in colour:
- (2) Its fibrous content shall be characteristic of the variety with peel not entirely removed;
- (3) It shall have all characteristic taste and flavour of Ginger;
- (4) It shall be free from musty odour, rancid or bitter taste
- (5) It shall be free from any added colouring matter and any other harmful substance;
- (6) It shall be free from mould growth, insects infestation and living and dead insects, insect fragments and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

## **Explanations:**

(a) "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth;

(b) "Organic extraneous matter" Such as chaff, stems, straw;

(c) Insect damaged matter The produce internally or partially bored or damaged

by pest/insect

**Note:** (1) Pieces of rhizomes smaller than 15 mm can be graded with the marking "Ungarbled Non-bleached Ginger(Pieces)".

(2) It may be marked "Ungarbled Non-bleached Calicut" (NUGK) or "Ungarbled Non-bleached Cochin" (NUGC) depending upon its place of origin.

## Schedule-XX

(See rule 4)

Grade designations and quality of Garbled bleached Ginger (Whole)

Grade			Quality									
Designation												
		Spec	cial Character	istics (perce	ent by mass							
	Size of	Organic	Inorganic	Moisture	Total ash	Calcium	Volatile	Insect				
	rhizomes,	extraneous	extraneous		on dry	(as calcium	Oil on	damaged				
	(length in	matter	matter		basis	oxide) on	dry basis	matter				
	mm).					dry basis	% (v/w)					
	(Minimum)	(Maximum)	(Maximum)	(Maximu- m)	(Maximu- m)	(Maximum)	(Minimu- m)	(Maximu- m)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)				
Special	20.0	0.5	0.1	11.0	11.0	1.0	1.7	0.20				
Standard	Standard 15.0 0.8 0.2 12.0 12.0 2.5 1.5 0.50											
General Characteristics												
·	·		·	(10)								

- (1) It shall be dried rhizomes of *Zingiber officinale Roscoe*, of family *Zinziberacea* in pieces, irregular in shape, pale brown in colour;
- (2) Its fibrous content shall be characteristic of the variety with peel not entirely removed;
- (3) It shall be lime bleached;
- (4) It shall have all characteristic taste and flavour of Ginger;
- (5) It shall be free from musty odour, rancid or bitter taste;
- (6) It shall be free from any added colouring matter and any other harmful substance;
- (7) It shall be free from mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination;
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (9) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations:**

(a) "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth;

(b) "Organic extraneous matter" Such as chaff, stems, straw;

(c) Insect damaged matter The produce internally or partially bored or damaged

by pest/insect

**Note:** (1) Pieces of rhizomes smaller than 15 mm can be graded with the marking "Garbled bleached Ginger (Pieces)".

(2) It may be marked "Garbled bleached Calicut" (BGK) or "Garbled bleached Cochin" (BGC) depending upon its place of origin.

## Schedule- XXI

(See rule 4)

Grade designations and quality of Ungarbled bleached Ginger (Whole)

Grade			Quality							
Designat										
ion										
			Special Ch	aracterist	ics (percent	by mass)				
	Size of	Organic	Inorganic	Very	Moisture	Total ash	Calcium	Volatile	Insect	
	rhizomes	Extraneo	Extraneo	light		on dry	(as	Oil on	damaged	
	(length in	us	us	pieces		basis	calcium	dry basis	matter	
	mm).	matter	matter				oxide) on	% (v/w)		
							dry basis	, ,		
	(Minimum)	(Maximu-	(Maximu-	(Maxi-	(Maximu-	(Maximu-	(Maximu-	(Minimu-	(Maximu-	
		m)	m)	mum)	m)	m)	m)	m)	m)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
Special	20.0	0.60	0.15	4.0	11.0	10.0	1.0	1.7	0.5	
Standard	15.0	0.80	0.20	6.0	12.0	12.0	2.5	1.5	1.0	
	General Characteristics									
				(	11)					

- (1) It shall be dried rhizomes of Zingiber officinale Roscoe of family Zinziberacea in pieces, irregular size shape and pale brown in colour;
- (2) Its fibrous content shall be characteristic of the variety with peel not entirely removed;
- (3) It shall be lime bleached;
- (4) It shall have all characteristic taste and flavour of Ginger;
- (5) It shall be free from musty odour, rancid or bitter taste;
- (6) It shall be free from added colouring matter and any other harmful substance;
- (7) It shall be free from mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination;
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (9) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations:**

(a) "Inorganic extraneous matter": Such as dust, dirt, stones and lumps of earth;

(b) "Organic extraneous matter": Such as chaff, stems, straw;

(c) Insect damaged matter The produce internally or partially bored or damaged

by pest / insect;

**Note :** (1) Pieces of rhizomes smaller than 15 mm can be graded with the marking "Ungarbled bleached Ginger (Pieces)".

(2) It may be marked "Ungarbled bleached Calicut" (BUGK) or "Ungarbled bleached Cochin" (BUGC) depending upon its place of origin.

# Schedule- XXII

(See rule 4)

Grade designations and quality of Ginger Powder (Unbleached)

Grade			Quality					
Design-								
ation								
			pecial Charact			1		
	Moisture	Total ash	Ash	Water	Calcium	Alcohol	Cold water	Volatile Oil
		on dry	insoluble in	soluble	(as calcium	(90%v/w)	soluble	per cent
		basis	Dil. HCl ,	Ash on	oxide) on	soluble	extract on	on dry
			on dry	dry basis	dry basis	extract on	dry basis	basis
			basis			dry basis		(v/w)
	(Maximu-	(Maximu-	(Maximum)	(Minimum)	(Maximum)	(Minimu-	(Minimum)	(Minimum)
	m)	m)				m)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Special	11.0	7.0	0.75	1.9	0.75	5.5	12.0	1.7
Standard	12.0	8.0	1.0	1.7	1.1	5.1	11.4	1.5
		-II	Genera	l Characteris	stics			
				(10)				
(1)	It shall be prod	duct obtained	by grinding unb	oleached Ging	jer (Whole) or	pieces of <i>Zin</i>	giber officinal	e Roscoe of
	family Zingibe	raceae in hyg	ienic condition;					
(2)	It shall be grou	unded to such	a fineness that	t whole of it pa	asses through	1000 micron	sieve;	
(3)	It shall have a	II characteristi	c taste and flav	our of the Gi	nger;			
(4)	It shall be free	from musty	odour, rancid	or bitter taste;				
(5)	It shall be free	from added of	colouring matter	r and other ha	rmful substanc	es;		
(6)	It shall be f	ree from lun	nps, mould gi	rowth, living	and dead in	sects, insec	t fragments	and rodent
	contamination	;						
(7)	It shall comp	ly with restric	tions in regard	to Aflatoxins	s, Heavy Meta	lls, Insecticid	le or Pesticid	e residue,
	naturally occi	urring toxic s	ubstances, Mic	crobial load o	rother food	safety requi	rements as	specified in
	the Food Saf	ety and Star	ndards (Contam	ninants, Toxin	s and Residu	es) Regulat	ions, 2011 aı	nd the Food
	Safety and S	tandards (Fo	od Products St	andards and	Food Additiv	es) Regulat	ions, 2011 d	or any other
	Regulation no	otified under	the Food Safet	y and Standaı	rds Act, 2006 f	or domestic	trade.	
(8)	It shall comp	ly with restric	ctions in regard	d to Aflatoxins	s, Heavy Met	als, Insectici	de or Pestici	de residue,
	naturally occu	irring toxic su	ıbstances, Mic	robial load o	r other food s	safety requir	ements as	specified by
	the Codex Ali	imentarious C	ommission or in	mporting Cour	ntries requirem	ents for exp	orts.	_

Note: It shall be marked on the label accordingly to the powder obtained from type of Ginger.

# Schedule-XXIII

(See rule 4)

Grade designations and quality of Ginger Powder (bleached)

Grade				Quality				
Designation		Sp	ecial Charact	eristics(perc	ent by mass)			
	Moisture	Total ash on dry basis	Ash insoluble in Dil. HCl	Water soluble Ash on	Calcium (as calcium oxide) on	Alcohol (90%v/w) soluble	Cold water soluble extract on	Volatile Oil per cent on dry
			, on dry basis	dry basis	dry basis	extract on dry basis	dry basis	basis (v/w)
	(Maximu- m)	(Maximum)	(Maximu- m)	(Minimum)	(Maximum)	(Minimu- m)	(Minimum)	(Minimum)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Special	11.0	11.0	0.75	1.9	2.0	5.5	12.4	1.7
Standard	12.0	12.0	1.0	1.7	2.5	5.1	11.4	1.5
	I	1	Genera	l Characteris	stics			
				(10)				

- (1) It shall be product obtained by grinding bleached Ginger (Whole) or pieces of *Zingiber officinale Roscoe* of family *Zinziberacea* in hygienic condition;
- (2) It shall be grounded to such a fineness that whole of it passes through 1000 micron sieve;
- (3) It shall have all characteristic taste and flavour of Ginger and shall not have a musty odour or a rancid or bitter taste;
- (4) It shall be free from any added colouring matter and other harmful substances;
- (5) It shall be free from mould growth and living insects and dead insects, insect fragments and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

Note: It shall be marked on the label accordingly to the powder obtained from type of Ginger.

## Schedule-XXIV

(See rule 4)

Grade designations and quality of Cumin (Whole)

Grade Designati on		Quality									
	Special Characteristics (percent by mass)										
	Organic	Inorganic	Damaged,	Moisture	Total	Ash	Non-	Volatile	Edible	Insect	
	extraneo	extraneo	shrivelled,		ash on	insoluble	volatile	Oil on dry	seeds	damag	
	us	us	dis-		dry	in Dil.	ether	basis ,	other	ed	
	matter	matter	coloured		basis	HCI, on	extract	percent(v	than	matter	
			and			dry basis	on dry	/w)	cumin		
		immature basis seeds									
			seeds								
	(Maximu-	(Maximu-	(Maximu-	(Maximu-	(Maxim-	(Maximu-	(Minimu-	(Minimu-	(Maxi-	(Maxi-	
	m)	m)	m)	m)	um)	m)	m)	m)	mum)	mum)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
Special	1.0	0.5	3.0	9.0	8.0	1.0	16.0	2.5	Nil	0.20	
Standard	2.0	1.0	4.0	10.0	9.5	2.5	15.0	1.5	Nil	0.50	
	General Characteristics										
				(12)							

- (1) It shall be dried wholesome mature seeds of Cuminum cyminum L. of family Apiaceae;
- (2) Its flavour shall be characteristic aromatic flavor of the Cumin and free from mustiness and rancidity;
- (3) It shall be free any from any added colouring matter any other harmful substances;
- (4) It shall be free from mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination;
- (5) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations** .-

- (a) DD Damaged, shrivelled, discoloured and immature seeds" includes broken, dis-coloured, shriveled and immature fruits.
- (b) "Inorganic extraneous matter"

- Such as dust, dirt, stones and lumps of earth.

(c) "Organic extraneous matter"

- Such as chaff, stems, straw;

(d) Insect damaged matter

 The produce internally or partially bored or damaged by pest/insect

**Note:** The Volatile Oil content shall be determined immediately after grinding.

# Schedule-XXV

(See rule 4)

Grade designations and quality of Cumin Powder

Grade		Qu	ality		
Designation		cial Characteristic	cs (percent by m	1200	
	Moisture	Total ash on	Ash insoluble	Non-volatile	Volatile oil on
	Moisture	dry basis	in Dil. HCl .	ether extract	dry basis
		ury basis	on dry basis	on dry basis	percent(v/w)
			On dry basis	orrary basis	percent(v/w)
	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Minimum)
(1)	(2)	(3)	(4)	(5)	(6)
Special	9.0	8.0	1.0	16.0	1.5
Standard	10.0	9.5	1.5	15.0	1.3
	<u> </u>	General Cha	racteristics	ı	I
		(7	,		
(1)	Cumin Powder sha Cuminum cyminum			, sound and m	nature seeds of
(2)	It shall be ground to sieve;	o such a fineness	that it shall pass	completely throu	igh 1000 micron
(3)	Its shall have all chand rancidity;	aracteristic aroma	atic flavor of the C	Cumin and free fro	om mustiness
(4)	It shall be free fro substances;	m added colourin	g matter, foreig	n matter and an	y other harmful
(5)	It shall be free from			estation, living ar	nd dead insects,
(6)	It shall comply with Pesticide residue, safety requirement (Contaminants, Tox Standards (Food Fany other Regulatt domestic trade.	h restrictions in r naturally occurrin nts as specific kins and Residue Products Standard ion notified und	egard to Aflatoxing toxic substanced in the Fes) Regulations, ds and Food Aer the Food Saf	ces, Microbial loa food Safety a 2011 and the f dditives) Regula ety and Standard	d or other food and Standards Food Safety and ations, 2011 or ds Act, 2006 for
(7)	It shall comply wi or Pesticide residue safety requirements Countries requirem	e, naturally occu s as specified by the	rring toxic substa	nces, Microbial Id	ad or other food

#### Schedule-XXVI

(See rule 4)

Grade designations and quality of Cumin Black (Kalonji) whole

Grade Designat ion				Quality									
1011	Special Characteristics (percent by mass)												
	Organic	Inorganic	Damaged,	Moisture	Total ash	Ash	Non-	Volatile	Edible	Insect			
	extrane	extraneous	shrivelled,		on dry	insolubl	volatile	Oil on dry	seeds	damage			
	ous	matter	dis-		basis	e in Dil.	ether	basis ,	other	d			
	matter		coloured			HCI,	extract	percent(v/	than	matter			
			and			on dry	on dry	w)	cumin				
			immature			basis	basis		Black				
			seeds										
	(Maxim-	(Maximum)	(Maximum)	(Maxim-	(Maximu-	(Maxim-	(Mini-	(Minimum)	(Maxi-	(Maxim-			
	um)			um)	m)	um)	mum)		mum)	um)			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			
Special	0.25	0.10	3.0	9.0	6.0	1.0	13.0	1.5	1.0	0.20			
Standard	1.0	0.25	5.0	10.0	8.0	1.5	12.0	1.0	2.0	0.50			
			Ger	neral Chara	cteristics	•	•	•	•	•			
					(12)								

- (1) It shall be dried wholesome mature seeds of Nigella sativa L;
- (2) Its flavour shall have all characteristic aromatic flavor of the Cumin Black and free from mustiness and rancidity;
- (3) It shall be free from added colouring matter and any other harmful substances;
- (4) It shall be free from mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination;
- (5) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# **Explanations** .-

- (a) Damaged, shrivelled, discoloured and immature seeds" Includes broken, discoloured, shriveled and immature fruits.
- **(b)** "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth.
- (c) "Organic extraneous matter" Such as chaff, stems, straw;
- (d) Insect damaged matter The produce internally or partially bored or damaged by pest/insect

Note: The Volatile Oil content shall be determined immediately after grinding.

#### Schedule-XXVII

(See rule 4)

Grade designations and quality of Cumin Black (kalonji) Powder

Grade Designation		Quality									
Special Characteristics (percent by mass)											
	Moisture	Total ash on	Ash insoluble	Non-volatile	Volatile oil on dry						
		dry basis	in Dil. HCl , on	ether extract	basis						
			dry basis	on dry basis	percent(v/w)						
	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Minimum)						
(1)	(2)	(3)	(4)	(5)	(6)						
Special	8.0	6.0	1.0	14.0	1.2						
Standard	9.0	7.0	1.5	12.0	0.9						
	General Characteristics										
			(7)								

- (1) Cumin Black Powder shall be obtained by grinding dried, sound and mature seeds of Nigella sativa L;
- (2) It shall be ground to such a fineness that it shall pass completely through 800 micron sieve;
- (3) It shall have all characteristic aromatic flavor of the Cumin Black and free from mustiness and rancidity;
- (4) It shall be free from added colouring matter, foreign matter and any other harmful substances;
- (5) It shall be free from lumps , mould growth, insects infestation, living and dead insects, insect fragments and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XXVIII

(See rule 4)

Grade designations and quality of Fennel (Whole)

Grade	Quality								
Designation	1	•	nacial Chara	cteristics (pe	roont by mac	c)			
	Organic	Inorganic		ve seeds	Moisture	Volatile Oil	Crude fibre	Insect	
	extraneous matter	extraneou s matter	Broken damaged seeds	Immature, shriveled, discoloured, blackened	Worsture	per cent on dry basis (v/w)	on dry basis	damaged matter	
	(Maximum)	(Maximu- m)	(Maximu- m)	seeds (Maximum)	(Maximum)	(Minimum)	(Maximum)	(Maximu- m)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
Special	1.0	0.10	1.0	1.0	10.0	1.75	11.0	0.20	
Standard	1.5	0.40	2.0	3.0	12.0	1.0	15.0	0.50	
Total Ash on dry basis (Maximum)	Ash insoluble in Dil. Hcl, on dry basis (Maximum)	Edible seeds other than Fennel							
(10)	(11)	(12)							
8.0	1.0	Absent							
10.0	2.0	Absent							
			Gene	ral Character	istics				
(1)	Fennel seeds Umbelliferae.	shall be wh	olesome drie	(13) ed fruits of F	oeniculum vu	lgare P Mil	ler.Var. Vulgar	e. of family	
(2) (3) (4) (5)	It shall have a It shall be free It shall be free	from mustine from added of e from mould	ss ,rancidity colouring matt	and other fore er and any oth	ign flavour; ier harmful su	bstance;		s and rodent	
(6)	It shall comp naturally occu the Food Saf Safety and S	shall be free from mould growth, insect infestation, living and dead insects, insect fragments and rodent contamination; shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, aturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food afety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.							
(7)	It shall compl	ly with rest curring toxic s	rictions in re substances, N	egard to Aflate Microbial load	oxins, Heavy or other food	Metals, Inse safety requir	ecticide or Pesti rements as spe		

# **Explanations:**

- (1) Defective seeds; means;
  - (a) "Broken damaged seeds" seeds which are broken or damaged;
  - (b) "Immature, shriveled, discoloured and blackened seeds" seeds which have not developed properly or which have been discoloured or blackened;
- (2) "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth.
- (3) "Organic extraneous matter" Such as chaff, stems, straw;
- (4) "Insect damaged matter"- The produce internally or partially bored or damaged by pest/insect

Note: The Volatile Oil content shall be determined immediately after grinding.

#### Schedule-XXIX

(See rule 4)

Grade designations and quality of Fennel Powder

Grade		Quality									
Designation											
	Special Characteristics (percent by mass)										
	Moisture	Total ash on	Ash insoluble	Volatile oil on	Crude fibre						
		dry basis	in Dil. HCl, on	dry basis per	on dry basis						
			dry basis	cent (v/w)							
	(Maximum)	(Maximum)	(Maximum)	(Minimum)	(Maximum)						
(1)	(2)	(3)	(4)	(5)	(6)						
Special	10.0	8.0	1.5	1.2	11.0						
Standard	12.0	9.0	2.0	1.0	15.0						

## **General Characteristics**

(7)

- (1) Fennel powder shall be obtained by grinding ripe fruit seeds of dried *Foeniculum vulgare P. Miller Var. Vulgare. of family Umbelliferae*;
- (2) It shall be ground to such a fineness that it shall pass completely through a 800 micron sieve;
- (3) It shall have all characteristic aromatic flavour, characteristic of the Fennel;
- (4) It shall be free from mustiness ,rancidity and off flavour;
- (5) It shall be free from added colouring matter, other foreign matter and any other harmful substances;
- (6) It shall be free from mould growth, insect infestation, living and dead insects, insect fragments and rodent contamination;
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (8) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XXX

(See rule 4)

Grade designations and quality of Fenugreek (Whole)

Grade					Quality				
Designati on									
OII			Spe	cial Character	ristics (perce	nt by mass)			
	Organic extraneo us matter	Inorganic extraneo us matter,	Damage d and insect bored seeds	Total ash on dry basis	Ash insoluble in Dil. HCl , on dry basis	Cold water soluble extract on dry basis	Crude fibre on dry basis	Edible Seeds other than Fenugreek	Moisture
	(Maximu- m)	(Maximu- m)	(Maximu- m)	(Maximum)	(Maximu- m)	(Minimum)	(Maximu- m)	(Maximu- m)	(Maximu- m)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Special	0.5	0.2	0.5	4.0	0.5	35.0	15.0	1.0	9.0
Standard	1.5	0.4	1.0	5.0	1.5	30.0	18.0	2.0	10.0
			(	l General Chara	cteristics				
					(11)				
(1)	Fenugreel	k (Whole) sh	all be whole	some dried ma	` '	Trigonella foenun	n graecum L c	f family <i>Faba</i>	ceae;
(2)	It shall hav	ve all charac	teristic flavou	ur and It shall b	e free from m	ustiness, any off-f	lavours and r	ancidity;	
(3)	It shall be	free from a	ny added col	ouring matter a	and any other	harmful substance	);		
(4)	It shall b		n mould gro	owth, insect in	nfestation, liv	ing and dead in	sects, insect	fragments a	and rodent
(5)	occurring and Stan (Food Pro	toxic substantants (Contiducts Stand	ances, Micro aminants, To ards and F	obial load or coxins and R	other food sa esidues) Reg s) Regulations	vy Metals, Insecti afety requirement gulations, 2011 a s, 2011 or any	s as specifients	ed in the Fo I Safety and	Standards
(6)	occurring	toxic substa	nces, Microb	•	er food safety	leavy Metals, Inse requirements as			•

# **Explanations:**

(a)	"Damaged and insect bored seeds"	Includes all seeds which are damaged or which have been bored or attacked by weevils or other insects;
(b)	"Inorganic extraneous matter"	Such as dust, dirt, stones and lumps of earth.
(c)	"Organic extraneous matter"	Such as chaff, stems, straw;

## Schedule-XXXI

#### (See rule 4)

## Grade designations and quality of Fenugreek Powder

Grade Designation	Quality										
Special Characteristics (percent by mass)											
	Moisture Total ash on As		Ash insoluble in Dil.	Crude fibre,	Cold water soluble						
		dry basis	HCl , on dry basis	on dry basis	extract on dry basis						
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)						
(1)	(2)	(3)	(4)	(5)	(6)						
Special	9.0	4.0	1.0	15.0	35.0						
Standard	10.0	5.0	1.5	18.0	30.0						

#### **General Characteristics**

(7)

- (1) Fenugreek Powder shall be obtained by grinding dried and ripened seeds of *Trigonella foenum graecum* L of family *Fabaceae*;
- (2) It shall be ground to such a fineness that it shall pass completely through a 1000 micron sieve;
- (3) It shall have all characteristic aromatic flavour of Fenugreek and it shall be free from off-flavour, mustiness and rancidity;
- (4) It shall be free from added colouring matter or any other harmful substance;
- (5) It shall be free from lumps, mould growth, insect infestation, living and dead insects, insect fragments and rodent contamination;
- (6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.
- (7) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.

# Schedule-XXXII

(See rule 4)

Grade designations and quality of Celery Seeds

Grade			Quality							
Designation										
Special Characteristics (percent by mass)										
	Organic	Inorganic	Moisture	Total Ash	Ash insoluble in	Volatile oil				
	extraneous	extraneous		on dry	Dil. HCl, on dry	content, (v/w),				
	matter	matter		basis,	basis	on dry basis				
	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Maximum)	(Minimum)				
(1)	(2)	(3)	(4)	(5)	(6)	(7)				
Special	0.4	0.1	9.0	10.0	2.0	2.0				
Standard	1.0	0.5	10.0	12.0	3.0	1.5				
General Characteristics										
(8)										
(1)	· /									
(2)	It shall be of uniform in colour and have characteristic of the Celery;									
(3)	It shall be free from moulds, insect infestation, living and dead insects, insect fragments and rodent contamination:									
(4)	lt shall be free from any added colouring matter and other harmful substance;									
(5)	Its shall have all characteristic aromatic flavour and shall be free from mustiness; rancidity and off flavour;									
(6) It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified in the Food Safety and Standards (Contaminants, Toxins and Residues) Regulations, 2011 and the Food Safety and Standards (Food Products Standards and Food Additives) Regulations, 2011 or any other Regulation notified under the Food Safety and Standards Act, 2006 for domestic trade.										
(7)	It shall comply with restrictions in regard to Aflatoxins, Heavy Metals, Insecticide or Pesticide residue, naturally occurring toxic substances, Microbial load or other food safety requirements as specified by the Codex Alimentarious Commission or importing Countries requirements for exports.									

# **Explanations.**-

(a) "Inorganic extraneous matter" Such as dust, dirt, stones and lumps of earth.

(b) "Organic extraneous matter" Such as chaff, stems, straw;

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