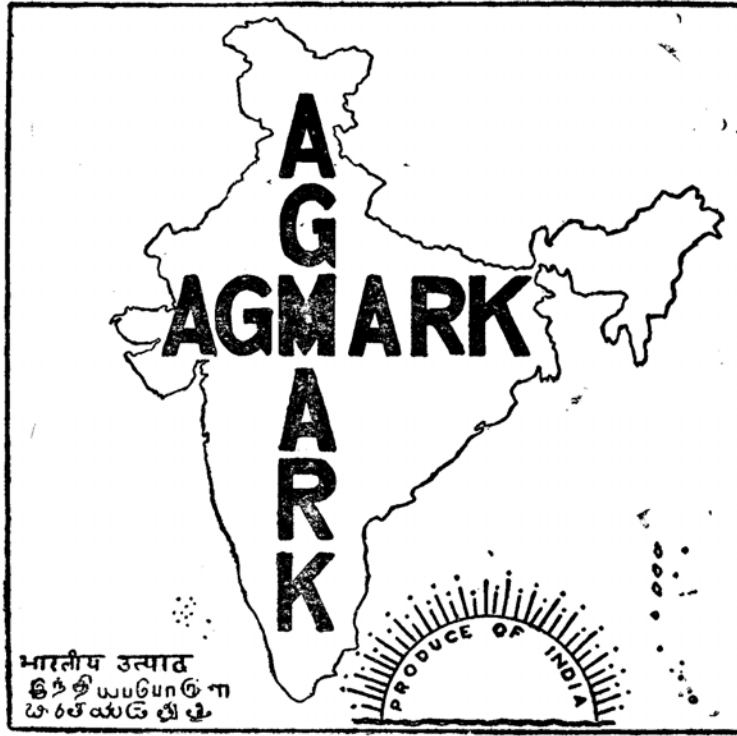


VEGETABLE OIL CAKES (EXPRESSED OR SOLVENT EXTRACTED) GRADING AND MARKING RULES

1. **Short title and application** – These rules may be called Vegetable Oil Cakes (Expressed or Solvent Extracted) Grading and Marking Rules, 1979.
2. **Definition.** – In these rules,-
 - (a) “Agricultural Marketing Adviser” means the Agricultural Marketing Adviser to the Government of India;
 - (b) “Schedule” means a Schedule appended to these rules.
3. **Grade designations.**-The grade designations to indicate the quality of oil cakes (expressed or solvent extracted) shall be as set out in column (1) of Schedule II-A to IXB.
4. **Definition of quality.**- The quality indicated by the grade designation shall be as set out against each grade designation in Schedule II-A to IX-B.
5. **Grade designation marks.**- The grade designation mark shall consist of a label bearing the design set out in Schedule I and specifying the grade designation, the name of cake and whether it is expressed or solvent extracted.
6. **Method of marking** – (1) The grade designation mark shall be securely affixed or stenciled on each container in a manner approved by the Agricultural Marketing Adviser and shall as indicate the number of the Certificate of Authorisation issued to the packer by the Agricultural Marketing Adviser.
 - (2) In addition, on every container the following particulars shall clearly and indelibly be marked :-
 - (a) Lot number,
 - (b) Name of packer,
 - (c) Date of packing,
 - (d) Place of packing.
 - (3) The authorised packer may, after obtaining the prior approval of the Agricultural Marketing Adviser, mark his private trade mark on the container in a manner approved by the said officer, provided that the private trade mark does not represent quality or grade of the oil cake different from that indicated by the grade designation mark affixed to the container in accordance with these rules.
7. **Method of packing** – (i) The oil cake shall be packed only in container made of jute or other material approved by the Agricultural Marketing Adviser from time to time.
 - (ii) Each container shall be securely closed and sealed and shall contain oil cake of one trade description and of one grade designation only.
8. **Special conditions of Certificate of Authorisation-** In addition to the conditions specified in Rule 4 of the General Grading and Marking Rules, 1937, the following conditions shall also be the conditions of every Certificate of Authorisation issued for the purpose of these rules, namely:-
 - (i) Each authorised packer shall take all precautions to avoid admixture of oil cakes with castor seeds and castor cake
 - (ii) If an authorised packer handles more than one type of oil cake in the same premises adequate precaution shall be taken by him to avoid mixing of different oil cakes. The premises should be clean and hygienic and should be subjected to prophylactic treatment at an interval no more than three weeks. The stock should be fumigated as and when any insect infestation is noticed.
 - (iii) The authorised packer shall make such arrangements for testing oil cakes as may be specified from time to time by the Agricultural Marketing Adviser and shall also maintain proper records of analysis of the samples.
 - (iv) All instructions regarding methods of sampling and analysis, packing and marking and maintenance of record, which may be issued from time to time by the Agricultural Marketing Adviser shall be observed
 - (v) A sample of oil cake drawn in the manner prescribed by the Agricultural Marketing Adviser from each lot, shall be forwarded to such control laboratory as may be notified from time to time.

SCHEDULE -I
(See Rule 5)
Grade designation mark



SCHEDULE -IIA

(See rules 3 and 4)

Grade designations and definitions of quality of ground nut oil cake- expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre, per cent by weight (Maximum)	Total ash, per cent by weight (Maximum)	Acid insoluble ash per cent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	8.0	50.0	8.0	9.0	7.0	1.5	Nil	<ol style="list-style-type: none"> 1. Oil cake of good and fair grade shall be the products of decorticated groundnut alone obtained after the extraction of oil by power driven machinery. 2. Ghani oil cake shall be the product of decorticated ground nut alone obtained after the extraction of oil by animal driven ghani or chakki. 3. The material shall be of firm texture. 4. It shall be free from harmful constituents and castor cake or husk 5. It shall be free from rancidity adulterant, insect or fungus infestation and from fermented musty or other objectionable odour. 6. It shall be free from dirt and extraneous matter.
Fair	8.0	50.0	5.0	9.0	7.0	2.0	Nil	
Ghanicake	10.0	45.0	10.0	9.0	7.0	2.5	Nil	

Note : The values specified in columns 3 to 7 are calculated on moisture free basis Adopted from the Indian Standards Specification for decorticated groundnut oil cake as Livestock feed (IS : 1713-1960).

SCHEDULE II-B

(See Rules 3 and 4)

Grade designations and definitions of quality of groundnut oil cake – solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fiber, per cent by weight (Maximum)	Acid insoluble ash, percent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8
Good Fair	10.0 10.0	51.0 47.0	1.0 1.5	10.0 12.0	2.5 2.5	Nil Nil	1. The solvent extracted groundnut oil cake (meal) shall be obtained by extraction of oil by means of a solvent from the expeller or ghani pressed groundnut oil cake. The meal may also be obtained directly from groundnut seeds after a preliminary treatment. The expeller or ghani pressed groundnut oil cake used for extraction shall have been obtained by pressing clean and sound groundnut (<i>Arachis hypogaea</i> L). The meal shall have been subjected to heat and steam treatment under controlled and regulated conditions so as to prevent denaturation of the protein and removal of traces of solvent. The material shall be in the form of either flakes or powder and shall be free from harmful constituents and castor cake or husk or both or mahua cake. It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.

Note :

1. The values specified in columns 3 to 6 are calculated on moisture free basis. Adopted from the Indian Standards Specification for solvent extracted oil cake (meal) as Livestock feed (IS: 3441-1966).
2. Solvent for extraction : Only Food grade solvent shall be used for the purpose of extraction. The requirements of the solvent shall be as follows :
Boiling range 63⁰C.to 71⁰C. Aromatic content maximum 1 per cent. Non-volatile content, Maximum 0.001 g/100 ml.

SCHEDULE III-A

(See Rules 3 and 4)

Grade designations and definitions of quality of decorticated cotton seed oil cake expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre per cent by wt. (max.)	Total ash per cent by weight (max.)	Acid insoluble ash per weight (max.)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	8.0	40.0	8.0	10.0	7.0	1.5	Nil	1. Shall be the product of clean cotton seed only, composed principally of the kernel with such un-avoidable portions of the hull and fibre as may be left in the course of manufacture of oil. 2. The material shall be firm but not flinty in texture. 3. It shall be free from harmful constituents and castor cake or husk. 4. It shall be free from rancidity, adulterants, insects or fungus infestation and from fermented, musty or other objectionable odour. 5. It shall be free from dirt and extraneous matter
Fair	8.0	41.0	5.0	12.0	8.0	2.0	Nil	
No.2	8.0	37.0	5.0	14.0	9.0	2.5	Nil	

Note :

The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from the Indian Standards specification for cotton seed oil cake as Livestock feed (IS: 1712-1960).

SCHEDULE III-B

(See Rules 3 and 4)

Grade designations and definitions of quality of undecorticated cotton seed oil cake expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein Nitrogen x 6.25 per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre, per cent by weight (Maximum)	Total ash per cent by weight (Maximum)	Acid insoluble ash per cent by weight (Maximum)	Castor husk	General Characteristics
1	2	3	4	5	6	7	8	9
Good	10.0	24.0	7.0	24.0	9.0	2.5	Nil	1. Shall be the product resulting from the whole clean and whenever necessary delinted (especially in the case of fuzzy seeds) cotton seed only after the expression of oil 2. The material shall be firm but not flinty in texture. 3. It shall be free from harmful constituents and castor cakes or husk. 4. It shall be free from rancidity, adulterants, insects or fungus infestation and from fermented, musty or other objectionable odour. 5. Shall be free from dirt and extraneous matter.
Fair	10.0	24.0	7.0	28.0	9.0	2.5	Nil	

Note :

The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from Indian Standards Specification for Cotton seed oil cake as livestock feed (IS:1712-1960).

SCHEDULE III-C

(See Rules 3 and 4)

Grade designations and definitions of quality of decorticated cotton seed oil cake (meal) – solvent extracted

Grade designation	Moisture per cent by weight (maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (minimum)	Crude fat or ether extract per cent by weight (maximum)	Crude fibre per cent by weight (maximum)	Acid in soluble ash per cent by weight (maximum)	General characteristics
1	2	3	4	5	6	7
Good	8.0	42.0	1.5	12.0	2.0	The solvent extracted cotton seed oil cake (meal) shall be obtained by extraction of oil by means of a solvent from decorticated cotton seed oil cake. The meal may also be obtained directly from decorticated cotton seed after a certain preliminary treatment. Cotton seed oil cake used for extraction shall have been obtained by pressing clean and should decorticated cotton seed. The meal shall have been subjected to heat and steam treatment under controlled and regulated conditions so as to remove traces of solvent. The material shall be in the form of either flakes or powder and shall be free from harmful constituents and castor cake or husk or both or mahua cake. It shall be free from musty odour.
Fair	8.0	40.0	2.0	24.0	2.5	

Note :-

1. The values specified in columns 3 to 6 are calculated on moisture free basis. Adopted from Emergency Indian Standard Specifications for solvent extracted cotton seed oil cake (Meal) as Livestock feed (IS :3592E-1966).

2. Solvent for extraction : only hexane-food grade solvent be used for the purpose of extraction. Therequirements of the solvent shall be as follows :-

Boiling range 63⁰C to 71⁰C.

Aromatic content Max 1 per cent.

Non-volatile content- Max- 0.001gm/100ml.

SCHEDULE IV-A

(See Rules 3 and 4)

Grade designation and definitions of quality of Linseed oil cake (Meal) expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre per cent by weight (Maximum)	Total ash per cent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	10.0	29.0	8.0	10.0	8.0	1.5	Nil	<ol style="list-style-type: none"> 1. Oil cake of good and fair grades shall be the product obtained after the extraction of oil from Linseed by power driven machinery. 2. Ghani oil cake shall be the product obtained after the extraction of oil from the linseed by animal driven ghani. 3. The material shall be free from harmful constituents and castor cake on husk. 4. It shall be free from rancidity, adulterants, insect or fungus infestations, and from fermented, musty or other objectionable odour, 5. It shall be free form dirt and extraneous matter.
Fair	10.0	29.0	5.0	10.0	8.0	1.5	Nil	
Ghani cake	10.0	26.0	15.0	6.0	9.0	2.5	Nil	

The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from the Indian standard specification for Linseed oil cake as live-stock feed (IS : 1935-1961).

SCHEDULE IV-B

(See Rules 3 and 4)

Grade designations and definitions of quality of Linseed oil cake solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fibre per cent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	10.0	33.0	1.0	9.0	2.5	The solvent extracted linseed oil cake (Meal) shall be obtained by extraction of oil, by means of solvent from the expeller or ghani pressed linseed oil cake. The meal may also be obtained directly from linseeds after a certain preliminary treatment. The extraction shall have been obtained by pressing clean and sound linseed (<i>Linum-usitissimum</i> L.). The meal shall have been subjected to heat and steam treatment under controlled and regulated conditions so as to prevent denaturation of the protein and to remove trace of solvent. The material shall be in the form of either flakes or powder and shall be free from harmful constituents and castor cakes or husks or both or mahua cake, It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.
Fair	10.0	29.0	1.5	11.0	2.5	

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- Note.**—1. The values specified in columns 3 to 6 are calculated on moisture free basis. Adopted from the Indian Standards Specification for solvent extracted linseed oil cake (meal) as livestock feed (IS : 3440-1966).
2. Solvent for extraction : Only hexane food grade solvent shall be used for the purpose of extraction. The requirements of the solvent shall be as follows :-
Boiling range 63⁰C to 71⁰C.
Aromatic content max. 1 per cent.
Non-volatile content, max 0.001 gm/100ml.

SCHEDULE V-A

(See Rules 3 and 4)

Grade designations and definitions of quality of Mustard oil cake – expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre per cent by weight (Maximum)	Total ash per cent by weight (Maximum)	Acid insoluble ash per cent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	10.0	35.0	8.0	9.0	8.0	1.5	Nil	<ol style="list-style-type: none"> 1. Oil cake of good and fair grades shall be the product obtained after the extraction of oil from mustard seed* by power-driven machinery. 2. Ghani oil cake shall be the product obtained after the extraction of oil from mustard seed* by animal driven ghani or kolhu. 3. The material shall be free from harmful constituents including argemone and castor cake or husk. 4. It shall be free from rancidity, adulterants, insects or fungus infestation and from fermented musty or other objectionable odour. 5. It shall be free from dirt and extraneous matter.
Fail	10.0	37.0	5.0	10.0	9.0	2.0	Nil	
Ghani cake	12.0	33.0	12.0	7.0	8.0	2.5	Nil	

Note :- *The term mustard seed includes Rai (*Brassica Juncea* coss), Sarson (*Brassica campestris* Va. Sarson), toria *Brassica compestris* Var. Toria) and taramira (*Eruca Sativa*), The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from the Indian Standards Specifications for mustard and range rape oilcake as livestock feed (IS : 1932:1961).

SCHEDULE V-B

(See Rules 3 and 4)

Grade designations and definitions of quality of mustard oil-cake- solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fibre per cent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	10.0	45.0	1.0	11.0	1.8	The solvent extracted mustard oil cakes (Meal) shall be obtained by extraction of oil by means of a solvent from the hydraulic expeller or rotary pressed oilcake. The meal may also be obtained directly from sound mustard seed (<i>rai Brassica Juncea</i> , <i>toria-Brassica campestris</i> and <i>taramira Eruca sativa</i>) after a preliminary treatment. The meal shall have subjected to heat and steam treatment under controlled and regulated conditions so as to prevent denaturation of the protein and to remove traces of solvent. The material shall be in the form of either flakes or powder and shall be free from harmful constituents and castor cake or husk or both or mahua cake or argemone cake. It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.
Fair	10.0	43.0	1.5	12.0	2.3	

Note:

(1)*The values specified in columns 3 to 6 are calculated on moisture free basis. Not adopted from Indian Standards Institution specifications.

(2)Solvent for extraction : Only hexane food grade solvent shall be used for the purpose of extraction. The requirements of the solvent shall be as follows:-

Boiling range 63⁰ C to 71⁰ C.

Aromatic content max.- 1 per cent.

Non-volatile content “maximum” 0.001 gm/100ml

SCHEDULE VI-A

(See Rules 3 and 4)

Grade designations and definitions of quality of Sesamum (til) oil cake-expressed

Grade designation	Moisture percent by weight (Maximum)	Crude protein (Nitrogen x 6.25) percent by weight (Minimum)	Crude fat or ether extract percent by weight (Minimum)	Crude fiber per cent by weight (Maximum)	Total ash per cent by weight (Maximum)	Acid in soluble ash per cent by (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	10.0	37.0	8.0	7.0	13.0	1.5	Nil	1. Oil cakes of good and fair grades, shall be the products obtained after the extraction of oil from sesamum (til) by power driven machinery. 2. Ghani cake shall be the product obtained after the extraction of oil from sesamum (til) seeds by animal driven ghani. 3. The material shall be free from harmful constituents and castor cake or husk. 4. It shall be free from rancidity adulterants, insects or fungus infestation and from fermented musty or other objectionable odour. 5. It shall be free from dirt of extraneous matter.
Fair	10.0	37.0	5.0	7.0	13.0	2.0	Nil	
Ghani cake	10.0	36.0	14.0	7.0	13.0	2.0	Nil	

NOTE :- The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from the Indian Standards Specifications for sesamum (til) oil cake as Livestock feed (IS : 103 1934-1961).

SCHEDULE VI-B

(See Rules 3 and 4)

Grade designations and definitions of quality of Sesamum (til) oil cake - solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen E 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fiber per cent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	10.0	44.0	1.0	8.5	1.8	The solvent extracted sesamum (til) oil cake shall be obtained by extraction of oil by means of a solvent from the expeller or ghani pressed sesamum (til) oil cake. The oil cake may also be obtained directly from sesamum (til) after a certain preliminary treatment. The expeller or ghani pressed sesamum (til) seeds, oil cake used for extraction shall have been obtained by pressing clean and sound sesamum (til) seed. The oil cake shall have been subjected to heat and steam treatment under controlled and regulated conditions so as to prevent denaturation of protein and to remove traces of solvent. The material shall be in the form of either flakes or powder. It shall be free from harmful constituents and castor cake or husk or both or mahua cake. It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.
Fair	10.0	44.0	1.5	8.5	1.8	

Note :

1. The values specified in columns 3 to 6 are calculated on moisture free basis. Not adopted from Emergency Indian Standards specification as the same are not yet finalized.
2. Solvent for extraction : Only hexane food grade solvent shall be used for the purpose of extraction. The requirements of the solvent shall be as follows :-

Boiling range 63⁰C to 71⁰C

Aromatic content maximum 1 per cent.

Non-volatile content maximum 0.001 gms/100 ml.

SCHEDULE VII-A

(See Rules 3 and 4)

Grade designations and definitions of quality of coconut oil cake-expressed

Grade designation	Moisture percent by weight (Maximum)	Crude protein (Nitrogen x 6.25) percent by weight (Minimum)	Crude fat or ether extract percent by weight (Minimum)	Crude fiber percent by weight (Maximum)	Total ash percent by weight (Maximum)	Acid in soluble ash percent by (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	10.0	21.0	8.0	12.0	8.0	1.5	Nil	1. Coconut Oil cake of grade good shall be the products obtained after the extraction of oil from copra (dried coconut kernels) by power driven machinery.
Ghani	12.0	18.0	13.0	12.0	8.5	2.5	Nil	2. Ghani grade oil cake shall be the product obtained after the extraction of oil from copra(dried coconut kernels) by animal driven ghani or chakki. 3. The material shall be free from harmful constituents and castor cake or husk. 4. It shall be free from rancidity adulterants, insects or fungus infestation and from fermented musty and other objectionable odour. 5. It shall be free from dirt and extraneous matter.

NOTE :- The values specified in columns 3 to 7 are calculated on moisture free basis. Adopted from the Indian Standards Specifications for coconut oil cakes as Livestock feed (IS : 2154-1962).

SCHEDULE VII-B

(See Rules 3 and 4)

Grade designations and definitions of quality of coconut oil cake (meal)- solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen E 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fibre per cent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	10.0	23.0	1.0	14.0	1.5	The solvent extracted coconut oil cake (meal shall be obtained by extraction of oil by means of a solvent from the expeller ghani pressed coconut oil cake. The expeller or ghani pressed coconut oil cake used for extraction shall have been obtained by pressing clean and sound coconut. The meal shall have been subjected to heat and steam treatment un controlled and regulated conditions so as to remove traces of solvent. The material shall be in the form of either flakes or powder. It shall be free from harmful constituents and castor cake or husk or both and mahua cake. It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.
Fair	10.0	21.0	1.5	15.0	2.0	

Note :

1. The values specified in columns 3 to 6 are calculated on moisture free basis. Adopted from Emergency Indian Standards specification for a solvent extracted coconut oil cake (meal) as livestock feed (IS : 3591-E-1966)

1. Solvent for extraction : Only hexane food grade solvent shall be used for the purpose of extraction. The requirement of the solvent shall be as follows :-

Boiling range 63⁰C to 71⁰C

Aromatic content max : 1 per cent.

Non-volatile content max. 0.001 gms/100 ml.

SCHEDULE VIII-A

(See Rules 3 and 4)

Grade designations and definitions of quality of safflower (til) oil cake-expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Minimum)	Crude fibre per cent by weight (Maximum)	Total ash percent by weight (Maximum)	Acid in soluble ash percent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	8.0	41.0	8.0	13.0	8.0	1.0	Nil	1. Oil cake of good and fair grades shall be the product of safflower seeds (<i>Carthamus tinctorious</i> L) obtained after the extraction of oil from sound and clean seeds by power driven machinery. 2. Ghani oil cake shall be product obtained after the expression of oil from clean and sound safflower seeds (<i>Carthamus tinctorious</i> L.) by animal driven ghani or chakki. 3. The material shall be of firm texture. 4. It shall be free from harmful constituents and castor cake or husk. 5. It shall be free from rancidity adulterants and insects or fungus infestation and from fermented musty or other objectionable odour. 6. It shall be free from dirt and extraneous matter.
Fair	8.0	39.0	10.0	15.0	8.0	2.0	Nil	
Ghani cake	10.0	38.0	13.0	12.0	8.0	1.0	Nil	

Note :- The values specified in columns 3 to 7 are calculated on moisture free basis.

SCHEDULE VIII-B

(See Rule 3 and 4)

Grade designation and definitions of quality of safflower oil cake-solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Acid insoluble ash per cent by weight (Maximum)	Crude fiber per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	10.0	50.0	1.0	1.5	15.0	The solvent extracted safflower oil cake (meal) shall be obtained by extraction of oil by means of a solvent from the ghani or expeller pressed safflower oil cake. The ghani or expeller pressed safflower oil cake shall have been obtained by pressing clean and sound safflower seeds (<i>Carthamus tinctorius</i> L). The extracted oil cake (meal) shall have been subjected to heat and steam treatment under controlled and regulated condition so as to prevent denaturation of the protein and to remove traces of solvent. The material shall be in the form of either flakes or powder and shall be free from harmful constituents or castor cake or husk or both or mahua cake. It will be free from rancidity, adulterants, insect or fungus infestation and from musty odour.
Fair	10.0	47.0	1.0	2.5	18.0	

Note :

1. The values specified under columns 3 to 6 are on moisture free basis.
2. The specifications are at draft stage with the Indian Standards institution and not yet finalized.
3. Solvent for extraction : Only hexane food grade solvent shall be used for the purpose of extraction. The requirements of solvent shall be as follows :-
Boiling range 63⁰C to 71⁰C.
Aromatic content- max. 1 per cent.
Non-volatile content max. 0.001 gms./100ml.

SCHEDULE IX-A

(See Rules 3 and 4)

Grade designations and definition of quality of Niger seed oil cake –expressed

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) per cent by weight (Minimum)	Crude fat or ether extract per cent by weight (Maximum)	Crude fibre per cent by weight (Maximum)	Total ash percent by weight (Maximum)	Acid in soluble ash per cent by weight (Maximum)	Castor husk	General characteristics
1	2	3	4	5	6	7	8	9
Good	9.0	29.0	8.0	9.0	8.0	1.0	Nil	<p>1. Oil cake of good and fair grades shall be the product of Niger seeds (<i>Guizotia abyssinica</i> Cass) obtained after the extraction of oil from sound and clean niger seeds by power driven machinery.</p> <p>2. Ghani oil cake shall be product obtained after the extraction of oil from clean and sound niger seeds (<i>Guizotia abyssinica</i> Cass) by animal driven ghani or chakki.</p> <p>3. The material shall be in firm texture</p> <p>4. It shall be free from harmful constituents and castor cake or husk.</p> <p>5. It shall be free from rancidity adulterants, insects or fungus infestations and from fermented, musty or other objectionable odour.</p> <p>6. It shall be free from dirt and extraneous matter.</p>
Fair	9.0	23.0	10.0	12.0	8.0	2.0	Nil	
Ghani cake	10.0	27.0	13.0	9.0	8.0	1.0	Nil	

Note. – The values specified in columns 3 to 7 are calculated on moisture free basis.

SCHEDULE IX-B

(See Rules 3 and 4)

Grade designations and definitions of quality of Niger seed oil cake-solvent extracted

Grade designation	Moisture per cent by weight (Maximum)	Crude protein (Nitrogen x 6.25) percent by weight (Minimum)	Crude fat or ether extract percent by weight (Maximum)	Acid insoluble ash per cent by weight (Maximum)	Crude fiber ash per cent by weight (Maximum)	General characteristics
1	2	3	4	5	6	7
Good	9.0	35.0	1.0	1.5	12.0	The solvent extracted Niger oil cake (meal) shall be obtained by extraction of oil by means of a solvent from the ghani or expeller pressed. Niger seed oil cake shall have been obtained by pressing clean, sound niger seed (<i>Guizotia Abyssinica</i> Cass). The meal shall have been subjected to heat and steam treatment under controlled and regulated conditions so as to prevent denaturation of the protein and to remove traces of solvent. The material shall be free from harmful constituents of castor cake or husk or both or mahua cake. It shall be free from rancidity, adulterants, insects or fungus infestation and from musty odour.
Fair	9.0	29.0	1.0	2.5	15.0	

Note:

1. The values specified in columns 3 to 6 are on moisture free basis.
2. The specifications are at draft stage with Indian Standards Institution and not yet finalized.
3. Solvent for extraction: Only hexane food grade solvent shall be used for the purpose of extraction. The requirements or solvent shall be as follow :-

Boiling range 63⁰ C to 71⁰ C Aromatic content max: 1 per cent, Non-volatile content max: 0.001gms/100 ml.

1. Principal rules published as S.O. 3424 dated 22-9-1979 in Gazette of India, part-II, Section 3 (ii) dated 6-10-1979.
2. First amendment published as S.O. 2704 dated 7-6-1983 in the Gazette of India, part II, Section3 (ii) dated 25-6-1983.