

## **ESSENTIAL OILS (GRADING AND MARKING) RULES, 1954**

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## **ESSENTIAL OILS (GRADING AND MARKING) RULES, 1954**

In exercise of the powers conferred by sec. 3 of the Agricultural Produce (Grading and Marking) Act, 1937 (1 of 1937), the Central Government hereby makes the following rules, the same having been previously published as required by the said section, namely:

### **1. Short title and application :-**

- (i) These rules may be called the Essential Oils (Grading and Marking) Rules, 1954.
- (ii) They shall apply to essential oils produced in India.

### **2. Grade designation :-**

Grade designations to indicate the quality of essential oils produced in India shall be as set out in column 1 of Schedules III to X annexed to the rules. "Provided that the Agricultural Marketing Adviser to the Government of India may, for purposes of export, against a firm order from a foreign buyer, permit essential oils (i) for which definitions of quality have not been mentioned in the said Schedules, or (ii) for which definitions of quality have been mentioned in the said schedules but the definitions do not satisfy the specifications of such buyers, to be designated as 'X' grade, subject to such conditions as may be laid down by him from time to time."

### **3. Definition of quality :-**

The quality indicated by the grade designations shall be as set out against such designations in Schedules III to X annexed to these rules.

### **4. Grade designation marks :-**

The grade designation mark shall consist of a label bearing a design consisting of an outline map of India with the word "AGMARK" and the figure of the rising sun with the words "Produce of India" resembling that set out in schedule I specifying the names of the essential oils, the grade designation and in colours specified in the aforesaid Schedule.

### **5. Method of marking :-**

- (i) The grade designation mark shall be securely applied to each container in the manner approved by the Agricultural Marketing Adviser to the Government of India and the following particulars shall be marked on the container or the label :

(a) Name of packer;

(b) Place of packing;

(c) Date of packing; and

(d) Lot number.

(ii) An authorised packer may after obtaining the previous approval of the Agricultural Marketing Adviser to the Government of India, mark his private trade mark on a container in a manner approved by the said officer.

Provided that the private trade mark does not represent quality or grade of essential oil different from that indicated by the grade designation mark affixed on the container in accordance with the said Rules.

(iii) Only clean containers which shall be securely closed and sealed in a manner approved by the Agricultural Marketing Adviser to the Government of India shall be used for packing.

**6. Special conditions of certificate of authorisation :-**

In addition to the conditions specified in rule 4 of the General Gradings and Marking Rules, 1973, the conditions set out in Schedule II, shall also be the conditions subject to which a Certificate of Authorisation is issued for the purposes of rules.

**SCHEDULE 1**

**SCHEDULE**

(See rule 4) (a) Grade designation mark for Essential Oils .					
Grade designations and definitions of Quality of East Indian Lemongrass oil (Cochin Lemongrass oil)					
Physico-Chemical characteristics					Description and appearance
Grade					
desig nation	Specific gravity at 30°/30°C*	Optical Refractive rotation index at 30°C**	Total al- dehyde content (Cital)	Solubility in 70 per cent ethyl alcohol (byvolume)	
			(deter mined by bisulphite method)*		
1	2	3 4	5	6	7
Special	. 0.888 to# 0.898	+1° to 1.4786 to -3° 1.4846	Not less than 80 per cent	Soluble in 2 to 3 volumes do.	The East Indian Lemon- grass oil shall be the red dish yellow to brown mobile essential oil obtained by the process of steam distilla tion and or water distilla tion of clean Cymbo- pogon flexuosus (D.C.) Stapf. plants and shall be free from admix- ture with any other oil or substance.
Grade A	. 0.888 to 0.898	+1° to 1.4786 to -3° 1.4846	Not less than 76 percent		
					It shall have a lemon- like odour and shall be clear, free from any sediment, and suspended matter. It shall be dry.
@ The specifications are based on the Indian Standard Specification for lemongrass oil (IS : 327-1952)					
*The correction factor for specific gravity for each degree centigrade rise in temperature shall be ( ) 0.00079.					
**The correction factor for refractive index for each degree centigrade rise in temperature shall be ( ) 0.00044.					

#The actual citral content shall be suitably indicated.

**SCHEDULE 2**

**SCHEDULE**

(See rule 6) (a) An authorised packer shall have suitable arrangements for filtration, blending and storage of essential oils. (b) If an authorised packer handles more than one essential oil in the same premises, adequate precaution shall be taken to avoid the mixing of different oils. (c) An authorised packer shall make such arrangements for testing essential oils as may be prescribed and a duplicate sample from each lot of essential oil to be graded shall be forwarded to such Control Laboratory as may be notified from time to time by the Agricultural Marketing Adviser to the Government of India. (d) All instructions regarding the methods of sampling, analysis, packing etc., which may from time to time be issued by the Agricultural Marketing Adviser to the Government of India, consistent with the provisions of the Act and the rules made thereunder shall be strictly observed.

**SCHEDULE 3**

**SCHEDULE**

(See rule 2 and rule 3)

**Grade designations and definitions of Quality of East Indian Lemongrass oil (Cochin Lemongrass oil)**

Physico-Chemical characteristics						
Grade						Description and appearance
design	Specific gravity at	Optical rotation	Refractive index at	Total aldehyde (Citral) content	Solubility in 70 per cent ethyl alcohol	
nation	30°/30°C*		30°C**	(determined by bisulphite method)#		
1	2	3	4	5	6	7
Special	. 0.888 to 0.898	+1° to -3°	1.4786 to 1.4846	Not less than 80 per cent	Soluble in 2 to 3 volumes do.	The East Indian Lemongrass oil shall be the red dish yellow to brown mobile essential oil obtained by the process of steam distillation and or water distillation of clean Cymbopogon flexuosus (D.C.) Stapf. plants and shall be free from admixture with any other oil or substance. It shall have a lemon-like odour and shall be clear, free from any sediment, and suspended matter. It shall be dry.
Grade A	. 0.888 to 0.898	+ 1° to -3°	1.4786 to 1.4846	Not less than 76 percent		

@ The specifications are based on the Indian Standard Specification for lemongrass oil (IS : 327-1952)

\*The correction factor for specific gravity for each degree centigrade rise in temperature shall be ( ) 0.00079.

\*\*The correction factor for refractive index for each degree centigrade rise in temperature shall be ( ) 0.00044.

#The actual citral content shall be suitably indicated.

**SCHEDULE 4**

**SCHEDULE**

(See rule 2 and rule 3)

**Grade designation and definition of quality of East Indian Sandalwood Oil**

Physico-chemical characteristics						
Grade						Description and appearance
designation	Specific gravity at	Optical rotation	Refractive index at	Free alcohol (Santalol) content	Solubility in 70 per cent (by volume) ethyl alcohol	
	30°/30°C*		at 30°C**			
1						

1	2	3	4	5	6	7
Grade A	0.962 to	-15° to	1.4990 to	Not less	Soluble in	The East Indian Sandal
	0.976	-20°	1.5060	than 90	5 volumes	wood oil shall be the pale
				per cent		yellow or nearly colour
						less essential oil obtai
						ned by steam distilla
						tion and or water distilla
						tion of Sanialum album,
						Linn, only and shall
						be free from admixture
						with any other oil or
						substance.
						It shall be clear, free
						from sediment and sus
						pended matter. It shall
						be dry and shall have the
						characteristic faint but
						persistent odour and
						unpleasant taste.

@ The specifications are based on the Indian Standard Specification for Sandalwood oil (IS : 329-1952).

\* The correction factor for specific gravity for each degree centigrade rise in temperature shall be ( ) 0.00070.

"The correction factor for refractive index for each degree centigrade rise in temperature shall be ( ) 0.00030.

SCHEDULE 5  
SCHEDULE

(See rules 2 and 3)									
Grade designation and definitions of Quality of East Indian Oil of Palmarosa									
Physico-chemical characteristics									
Grade designation	Specific gravity	Optical rotation	Refractive index	Acid value	Percentage of ester	Ester value	Total alcohol content	Solubility	Description and appearance
	at 30°		30°C"	not exceed	(as geranyl)	after	(geraniol)	in 70 per cent (by volume ethyl alcohol)	
	per cent/30°C*				acetate	acetylation	Not less than per cer		
1	2	3	4	5	6	7	8	9	10
Special	0.874 to 0.886	(-) 2 to (+)3°	1.4690 to 1.4735	3	3 to 12	266 to 280	92	Soluble in 2 volumes	Indian Oil of Palmarosa is the yellowish essential oil obtained by steam or water distillation of partially dried leaves of flowers and upper third of the stems of Cymbopogon martii Stapf, Var, Motta. It shall be free from admixture with any other oil or substance. It shall be clear, free from sediment and suspended matter and shall possess the characteristics of sweet rose

Grade A.	0.874	(-)2°	1.4690	3	3 to 12	266 to 280	90	Soluble	like odour.
	to	to	to					in 2	
	0.886	(+)3°	1.4735					volumes	

@ The specifications are based on the Indian Standard Specification for Palmarosa (IS : 526-1954)

\*The correction factor for specific gravity for each degree centigrade rise in temperature is ( ) 0.00073.

\*\*The correction factor for refractive index for each degree centigrade rise in temperature is ( ) 0.00040.

#### SCHEDULE 6

#### SCHEDULE

(See rules 2 and 3)									
Grade designations and definitions of Quality of Indian Ginger-yassoil									
Physico-Chemical characteristics									
Grade									
designation	Specific gravity	Optical rotation	Refractive index at 30°C"	Acid value exceeding	Saponification value	Saponification value after acetylation	Solubility in 70 per cent ethyl alcohol	Total alcohol content not less than	Description and appearance
	at 30°C		30°C"	percent			per cent (by volume)	(geraniol)	
1	2	3	4	5	6	7	8	9	10
Grade A.	0.896	(-)14°	1.4740	6	13.5 to 34(5 to 180	140 to 180	Soluble in 2 to 3 volumes	36	Indian gingergrass oil is the brownish yellow to brownish red essential a obtained by steam or water distillatio of partially dried leaves flowers and u per third of stems, after flowering of Cymbopogon mattini stapf. Var Sofia. shall be free from admixture with < other oil or substance. It shall be cli free from sediment and suspent matter and possess the caractere sharp but pleasant odour.

@ The specifications are based on the Indian Standard Specification for ginger-grass (IS : 526-1954)

'The correction factor for specific gravity for each degree centigrade rise in temperature is ( ) 0.00073.

"The correction factor for refractive index for each degree centigrade rise in temperature is (+) 0.00040.

\$ The solution of ginger-grass oil in ethyl alcohol, 70 per cent by volume, occasionally turns palescent of turbid with the further addition of alcohol.

#### SCHEDULE 7

#### SCHEDULE

(See rules 2 and 3)						
Grade designations and definitions of quality of Indian Eucalyptus oil						
Physico-chemical characteristics						
Grade						
designation	Specific gravity at 30°/30°C*	Optical rotation	Refractive index at 30°C**	Solubility in 80 per cent ethyl alcohol	Cineole content not less than	Description and appearance
					per cent	
1	2	3	4	5	6	7





									characteristic and persistent aroma with
									pleasant woody character
									and shall be light brown to
									reddish brown, sometimes
									greenish in colour.

\* The specifications are based on the Indian Standards Specifications for Oil of Vetiver roots (Cultivated) (IS: 1614 1960).

\*\* The correction factor for specific gravity for each degree centigrade rise in temperature is ( ) 0.00071.

**SCHEDULE 10**

**SCHEDULE**

Grade designation and definitions of quality of Oil of Himatayan Cedarwood								
(See rules 2 and 3)								
(Physico-chemical characteristics)								
Grade	Specific gravity	Optical rotation	Refractive index	Acid value	Saponification value	Saponification value after acetylation	Solubility in 90 per cent (by volume) ethyl alcohol	Description and appearance
Designation	at 30 ° 30° C		at 30° C#	maximum	value	value after acetylation	in 90 per cent (by volume) ethyl alcohol	
1	2	3	4	5	6	7	8	9
Grade A	0.9323	+20°	1.5038	5	10 to 25	25 to 45	10 to 15	Oil of Himalayan Cedar-wood shall be obtained primarily by the distillation of the waste saw dust, chips and wood-shavings of the heart-wood of the deodar tree, Cedrus deodara, Loud; fam, Pinaceae. The oil shall be clear, free from sediment, suspended matter, separated water and adulterants. It shall have heavy balsamic odour and shall be of light yellow to reddish brown in colour.
	to	to	to				volumes	
	0.9573	+62°	1.5120					

\*The specifications are based on the Indian Standards Specifications for Oil of Himalayan Cedarwood (IS:16151960).

\*\*The correction factor for specific gravity for each degree centigrade rise in temperature is ( ) 0.00071.

# The correction factor for refractive index for each degree centigrade rise in temperature is ( ) 0.00040.

