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ESSENTIAL OILS (GRADING AND MARKING) RULES, 1954

CONTENTS

- 1. Short title and application
- 2. Grade designation
- 3. <u>Definition of quality</u>
- 4. Grade designation marks
- 5. Method of marking
- 6. Special conditions of certificate of authorisation

SCHEDULE 1:- SCHEDULE

SCHEDULE 2:- SCHEDULE

SCHEDULE 3:- SCHEDULE

SCHEDULE 4:- SCHEDULE

SCHEDULE 5:- SCHEDULE

SCHEDULE 6:- SCHEDULE

SCHEDULE 7:- SCHEDULE

SCHEDULE 8:- SCHEDULE

SCHEDULE 9:- SCHEDULE

SCHEDULE 10:- SCHEDULE

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 Gowniment 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 in 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 lebel bearing a design consisting of an outline map of India with the word "AGMARK" and thefigure 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 thefollowing 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 f	or Essential	Oils -							
Grade des Lemongra	•	d definitions of Qua	ality of East	Indian Lemong	rass oil (Cochin						
	Physico-Che	mical characteristics	S								
Grade					Description and						
desig	Specific	Optical Refractive	Total al-	Solubility	appearance						
nation	gravity at	rotation index at	dehyde	in 70 per cent							
	30°/30°C*	30°C**	(Citral)	(byvolume)							
			content	ethyl alcohol							
			(deter								
			mined by								
			bisulphite								
			method)*								
1	2	3 4	5	6	7						
Special	. 0.888 to#	+1° to 1.4786 to	Not less	Soluble in	The East Indian Lemon-						
	0.898	-3° 1.4846	than 80	2 to 3	grass oil shall be the red						
			per cent	volumes	dish yellow to brown						
Grade A	. 0.888 to	+1° to 1.4786 to	Not less	do.	mobile essential oil						
	0.898	-3° 1.4846	than 76		obtained by the process						
			percent		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.						
						It shall have a lemon- like					
						odour and shall be clear,					
						free from any sediment,					
						and suspended matter. It					
						shall be dry.					
@ The sp	ecifications a	are based on the Inc	dian Standa	rd Specification	for lemongrass oil (IS :						
327-1952	2)										
*The corr	rection factor	for specific gravity	for each de	egree centigrade	rise in temperature shall						
be () 0.00	0079.										
**The correction factor for refractive index for each degree centigrade rise in temperature shall											
**The co	mechon racio	i for remactive mac	ex ioi cacii i		a mo mo mo componacano oman						

#The actual citral content shall be suitably indicated.

SCHEDULE 2 SCHEDULE

(See rule 6) (a) An authorised packer shall have suitable anangements for filteration, 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

Grado do	cianations and	definitions of Qua	lity of East In	dian Lemonar	acc oil (Cochin La	mongrass oil)
Grade de		nical characteristic		didir Ecilioligi	d33 on (Cocilii Ec	
Grade	Thysico cher	incar characteristic				Description and
desig	Specific	Optical	Refractive	Total al-	Solubility	appearance
nation	gravity at	rotation	index at	dehyde	in 70 per cent	арреалинее
idelon	30°/30°C*	Totation	30°C**	(Citral)	(byvolume)	_
	30 /30 C		30 0	content	ethyl alcohol	
				(deter	caryr arconor	
				mined by		
				bisulphite		
				method)#		_
L	2	3	4	5	6	7
Special	. 0.888 to#	+1° to	1.4786 to	Not less	Soluble in	The East Indian Lemon-
реста	0.898	-3°	1.4846	than 80	2 to 3	grass oil shall be the red
	0.030		1.1010	per cent	volumes	dish yellow to brown
Grade A	. 0.888 to	+ 1° to +1 to	1.4786 to	Not less	do.	mobile essential oil
orduc /t	0.898	-3°	1.4846	than 76	401	obtained by the process
	0.030	1	11.10.10	percent		of steam distilla
	+			p 0. 00c		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.
						It shall have a lemon-like
						odour and shall be clear,
			1			free from any sediment,
			1			and suspended matter. It
	1		1			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 4 SCHEDULE

(See rule 2 and rule 3)	
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(See rule 2 and	u rule 3)												
Grade designa	ation and defin	ition of qua	lity of East Ind	dian Sandalwo	od Oil								
Physico-hemical characteristics													
Grade	Grade Description and												
designation	Specific	Optical	appearance										
	gravity at	rotation	index at	hol (San-	in 70 per								
	30°/30°C*		at 30°C**	talol) con	cent (by								
				tent	volume)								
	ethyl alcohol 1												
		I											

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).

 st The correction factor for specific gravity for each degree centigrade rise in temperature shall

be () 0.00070.

 $\hbox{"The correction factor for refractive index for each degree centigrade rise in temperature shall}\\$

be () 0.00030.

SCHEDULE 5 SCHEDULE

Grade desig	gnation and definitions of Quality of East Indian Oil of Palmarosa												
0.440 400.9			characteris	_		<u> </u>							
Grade	11175100	cricimical	Characteris										
designation	Specific	Optical	Refractive	Acid value	Percentage	Ester	Total	Solubility	Description and appearance				
	gravity	rotation	index	not exceed	of caster	value	alcohols	in 70 per					
	at 30°		30°C"	ing percent	(as geranyl)	after	(geraniol)	cent (by					
	per cent/				acetate	acety-	content	volume ethyl)					
	30°C*					lation	Not less	alcohol					
							than per cer	it					
1	2	3	4	5	6	7	8	9	10				
Special	0.874	(-) 2 to	1.4690	3	3 to 12	266 to	92	Soluble	Indian Oil of Palmarosa is the				
	to	(+)3°	to			280		in 2	yellowish essential				
	0.886		1.4735					volumes	oil obtained by steam o wan				
									distillation of partially dried leave				
									flowers and upper third of the stems CM				
									after flowering, of Cymbopogon martii				
									stapf, Var, Motta. It shall be free ficn				
									admixture with any other oil (
									substance. It shall be clear, free froi				
									bynotes sediment suspended matter ai				
									possess the characteristics sweet rose				

Grade A.	0.874	(-)2°	1.4690	3	3 to 12	266	90	Soluble	like odour.
	to	to	to			280		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 desig					an Ginger-	yassoil			
	Physico-	Chemical	characteris	stics					
Grade		1	Γ	T	ı	ı	ı	T	T
designation	Specific	Optical	Refractive	Acid	Saponifi-	Saponifi-	Solubility	Total	Description and appearance
	gravity	rotation	index at	value not	cation value	cation	in 70 per	alcohol	
	at 30		30°C"	exceeding		value after	cent (by	(geraniol)	
	per cent/			percent		acety-	volume)	content not	
	30°C					lation	ethyl	less than	
							alcoholS	per cent	
1	2	3	4	5	6	7	8	9	10
Grade A.	0.896	(-)14°	1.4740	6	13.5 to	140 to	Soluble	36	Indian gingergrass oil is the brownish
	to	to	to		34(5 to	180	in 2 to 3		yellow to brownish red essential a
	0.925 (+)54° 1.4890		1.4890		12 per cent		volumes		obtained by steam or water distillatio
					of esters				of partially dried leaves flowers and u
					as geranyl				per third of stems, after flowering of
					acetate)				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 charactere
									sharp but pleasant odour.

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

SCHEDULE 7 SCHEDULE

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

^{&#}x27;The correction factor for specific gravity for each degree centigrade rise in temperature is () 0.00073.

[&]quot;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.

Special	0.897 to	(-)5°to	1.4548 to	Soluble in	70	Indian eucalyptus oil is the
	0.904	(+) 10°	1.4656	equal volume		colourless pale yellow essential oil obtained by
						water or steam distillation of fresh leaves of
						Eucalyptus Globulus, Labill, or from
Grade A	0.897 to	(-)5 to	1.4548 to	Soluble in	60	othercineole containing species of Eucalyptus
	0.904	(+) 10°	1.4656	equal volume		(family Myrtaces) and rectified. It shall be tn
						from admixture, with any other oil or substanc
						It shall be clear, free from sediment m
						suspended matter and possess the characterinn
						aromatic cainphoiaceous Taste, followed b
						sensation of cold. The eucalyptus oil shall satist
						the test requirements for the limits of aldehyd
						(1) and phellandrene (2).

- @ "The specifications are based on the Indian Standard Specification for Eucalyptus oil(IS: 328-1957)
- * The correction factor for specific gravity for each degree centigrade rise in temperature is () 0.00084.
- **The correction factor for refractive index for each degree centigrade rise in temperature is () 0.00044.
- 1. The volume of semi-normal potassium hydroxide required to neutralise acids liberated from $10\,$ ml. of the eucalyptus oil treated with $4\,$ ml. of a $35\,$ per cci

alcoholic hydroxylamine hydrochloride and 5 ml of benezene, shall not exceeo 2 ml.

2. Phellandrene shall be taken, to be absent when no crystalline precipitate is formed in the petroleum layer, within 10 minutes, on mixing one ml. o

eucalyptus oil with 5 ml. of light petroleum, 2 ml. of saturated sodium nitrite solution and 2 ml. of glacial acetic acid.

SCHEDULE 8 SCHEDULE

(See rules 2	(See rules 2 and 3) Grade designations and defintions of quality of Oil of Vetiver (Khus) (North Indian Oil of Vetiver)													
Grade desig	nations a	nd definti	ons of qua	ality of Oil o	of Vetiver (Khus) (No	rth India	n Oil of \	/etiver)					
	Physico-	chemical	characteris	stics										
Grade														
designation	Specific	Optical	Refracive	Acid-	Sapo	Saponifi-	Total	Total	Solubility	Description and				
	gravity	rotation	index at	value	nification	cation	alcohol	ketone	in 80 per cer	it appearance				
	at 30°/		30°C+	maximum	value	value	as veti-	content	(by volume)					
	30°C**			2.5 gm of the sample)	(using 2 to 5 gm of the	(using 4 to after acety-	verol (C H O) 24	as (C H O) percent	ethyl alcohol					
					sample)	lation	percent	by wt.						
							by wt. min.	min.						
1	2	3	4	5	6	7	8	9		10				
Grade A	0.9900	-50°	1.512	40	25 to	145 to	70	24	one to	Oil of Vetiver (Khus) shall he				
	to	to	to		80	200			two	obtained bysteamer hydro				
	1.0320	-130°	1.523						volumes	distrillation of clean, fresh air				
										dry of dry roots of Vetiveria				
										Zi- zaniodes (Linn) Nas. The				
										oil shall be				

					clear, free
					from sediment, suspended matter
					separated water and adultte-
					rants. It shall have characte-
					ristic aroma and persistent
					odour of khus roots and shall
					be light brown to deep brown
					sometimes greenish in
					 colour.

^{*} The specifications are based on the Indian Standards Specifications for Vetiver (Khus) Oil. (IS: 11771957).

SCHEDULE 9 SCHEDULE

SCHEDULE										
(See rules 2 and 3)										
Grade designations and definitions of quality of oil ofVetiver-roots (cultivated)										
	Physico-chemical characteristics									
Grade										
designation	·	Optical	Refractive		Sapo-	Saponi-	Carbo-	Solubility	Description and	
	gwvity	rotation	index at	value	nification	fication	nyi value	in 80	appearance	
	30°/30°C			30°C+	maximum	value	value	(using 3g. per cent		
				(using	(using	after	of the	(by volume)		
				2 to 2.5	4 to 5 gm	acetyla-	sample)	ethyl alcohol		
				g. of the	of the	tion				
				sample)	sample)					
1	2	3	4	5	6	7	8	9	10	
Grade A	0.9920	+10°to	1.516	35	25 to	125 to	55 to	one to	Oil of Vetiver roots (culti	
	to	+25°	to		50	155	70	two	vated) shall be obtained by	
	1.0150		1.530					volumes	steam or hydrodistillation	
									of clean, fresh or air dry	
									roots of the cultivated	
									plant called Vetwena Ziza-	
									modes (Linn.) fain. Gram	
									neae. The oil shall be clear,	
									free from sediment suspen-	
									ded matter, separated	
									water and adulterants.	
									shall have	

^{**} 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 () 0.00039.

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

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

SCHEDULE 10

CHEDULE								
		d definition	ons of quali	ty of Oil of	Himatayan Ced	arwood		
(See rules 2								
(Physico-che Grade	Specific	1	cs) Refractive	Acid	Canonification	Saponification	Colubility	
		Ориса	Refractive	value	Saponincation	Saponincation	Solubility	
Designation	gravity	rotation	index at	maximum	value	value after	in 90 per	Description and
	at 30 °		30° C#			acetylation	cent (by	appearance
	30° C						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-
	to	to	to				volumes	wood shall be obtained
	0.9573	+62°	1.5120					primarily by the distill
								ation 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. I shall
								have heavy balsamic
								odour and shall be of
								light yellow to reddish
						for Oil of Hima		brown in colour.

^{*}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 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.

