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INTERNATIONAL UNION
FOR THE PROTECTION
OF NEW VARIETIES OF
PLANTS

UNION INTERNATIONALE
POUR LA PROTECTION
DES OBTENTIONS
VÉGÉTALES

INTERNATIONALER
VERBAND ZUM SCHUTZ
VON PFLANZEN-
ZÜCHTUNGEN

UNIÓN INTERNACIONAL
PARA LA PROTECCIÓN
DE LAS OBTENCIONES
VEGETALES

DRAFT

**GUIDELINES
FOR THE CONDUCT OF TESTS
FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

THYME
(Thymus vulgaris L.)

These Guidelines should be read in conjunction with document TG/1/2, which contains explanatory notes on the general principles on which the Guidelines have been established.

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
I. Subject of these Guidelines	3
II. Material Required	3
III. Conduct of Tests	3
IV. Methods and Observations.....	4
V. Grouping of Varieties	4
VI. Characteristics and Symbols	4
VII. Table of Characteristics	5
VIII. Explanations on the Table of Characteristics	11
IX. Literature	12
X. Technical Questionnaire	13

I. Subject of these Guidelines

These Test Guidelines apply to all varieties of *Thymus vulgaris* L. of the family Labiatae (Lamiaceae).

II. Material Required

1. The competent authorities decide when, where and in what quantity and quality the plant material required for testing the variety is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities are complied with. As a minimum, the following quantity of material is recommended:

seed propagated varieties: 2 grams;
vegetatively propagated varieties: 20 rooted cuttings.

2. The material supplied should be visibly healthy, not lacking in vigor or affected by any important pests or diseases.

3. The plant material must not have undergone any treatment unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

III. Conduct of Tests

1. For seed propagated varieties, it is generally recommended that the growing trials are conducted over two independent growing cycles.

2. For vegetatively propagated varieties, a test should normally be conducted in a single growing cycle (if necessary, after the year of establishment in open field). If distinctness and/or uniformity cannot be sufficiently examined in a single growing cycle, the test should be extended to a second growing cycle.

3. The test should normally be conducted at one place. If any important characteristics of the variety cannot be seen at that place, the variety may be tested at an additional place.

4. The size of the plots should be such that plants or parts of plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the growing cycle. Each test should include a total of 20 plants for vegetatively propagated varieties which should be divided between two or more replicates and a total of 60 plants for seed propagated varieties arranged in three or more replicates. Separate plots for observation and measuring should only be used if they have been subject to similar environmental conditions.

5. Additional tests for special purposes may be established.

IV. Methods and Observations

1. All observations determined by measurement or counting should be made on 60 plants or parts taken from each of 60 plants for seed propagated varieties.
2. All the observations for vegetatively propagated varieties should be made on 20 plants or parts taken from each of 20 plants.
3. In the case of seed propagated varieties, the rules for uniformity for cross-pollinated varieties, as provided in the General Introduction, should be followed.
4. For the assessment of uniformity for vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, the maximum number of off-types allowed would be 1.
5. Unless otherwise indicated, all observations should be made on typical organs just before the time of full flowering.

V. Grouping of Varieties

1. The collection of varieties to be grown should be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety. Their various states of expression should be fairly evenly distributed throughout the collection.
2. It is recommended that the competent authorities use the following characteristics for grouping varieties:
 - (a) Leaf: variegation (characteristic 16)
 - (b) Leaf: main color (characteristic 17)
 - (c) Flower: color of petal (characteristic 20)
 - (d) Plant: male sterility (characteristic 25)

VI. Characteristics and Symbols

1. To assess distinctness, uniformity and stability, the characteristics and their states as given in the Table of Characteristics should be used.
2. Notes (numbers), for the purposes of electronic data processing, are given opposite the states of expression for each characteristic.
3. Legend:
 - (*) Characteristics that should be used on all varieties in every growing cycle over which examinations are made and always be included in the variety descriptions, except when the state of expression of a preceding characteristic or regional environmental conditions render this impossible.
 - (+) See Explanations on the Table of Characteristics in Chapter VIII.

VII. Table of characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. Plant: growth habit (*)	Plante: port à la floraison	Pflanze: Wuchsform	Planta: porte		
erect	dressé	aufrecht	erecto	Gambaru, Valdeyron	1
semi erect	demi-dressé	halbaufrecht	semierecto	Allemand	3
prostrate	horizontal	liegend	postrado	Heili, Savoie	5
2. Plant: height (*)	Plante: hauteur	Pflanze: Höhe	Planta: altura		
very short	très basse	sehr kurz	muy baja		1
short	basse	kurz	baja	Savoie	3
medium	moyenne	mittel	media	Passet, Heili	5
tall	haute	hoch	alta	Valdeyron	7
very tall	très haute	sehr hoch	muy alta	Gambaru, Ygor	9
3. Plant: diameter (*)	Plante: diamètre	Pflanze: Durchmesser	Planta: diámetro		
small	petit	gering	pequeño		3
medium	moyen	mittel	medio		5
large	grand	groß	grande		7
4. Foliage: density (*)	Feuillage: densité	Laub: Dichte	Follaje: densidad		
sparse	faible	locker	laxa	1.52	3
medium	moyenne	mittel	media	Allemand, Passet	5
dense	forte	dicht	densa	Pegase, Ygor	7
5. Stem: length (*)	Tige: longueur	Stiel: Länge	Tallo: longitud		
short	courte	kurz	corta	Pegase, Savoie	3
medium	moyenne	mittel	media	Heili, Ygor	5
long	longue	lang	larga	Gambaru, Passet	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. Stem: thickness	Tige: épaisseur	Stiel: Dicke	Tallo: espesor		
thin	mince	dünn	delgado	Gambaru, Heili	3
medium	moyenne	mittel	medio	Pegase	5
thick	épaisse	dick	grueso	Passet	7
7. (*) Stem: distribution of leaves	Tige: répartition des feuilles	Stiel: Verteilung der Blätter	Tallo: distribución de las hojas		
only at base	seulement à la base	nur an der Basis	sólo en la base	Escalin, Passet	1
only in middle	seulement au milieu	nur in der Mitte	sólo en la parte central	2.40	2
only in upper part	seulement au sommet	nur am oberen Teil	sólo en la parte superior	Pegase, Ygor	3
along whole stem	tout le long de la tige	am ganzen Stiel	a lo largo de todo el tallo	Gambaru, Valdeyron	4
8. (*) Stem: position of flowering part	Tige: position des inflorescences	Stiel: Lage des blühenden Teils	Tallo: posición de la parte en flor		
at tip	très terminale	an der Spitze	en la parte superior	1.44, 3.49	1
along upper quarter	terminale	am oberen Viertel	en el cuarto superior	Allemand, Escalin	2
along upper half	le long de la moitié supérieure	an der oberen Hälfte	en la mitad superior	1.52, Heili	3
along upper two thirds	le long des 2/3 supérieurs	an den oberen zwei Dritteln	en los dos tercios superiores	Gambaru	4
along whole stem	tout le long de la tige	am ganzen Stiel	en todo el tallo	Passet	5
9. Stem: density of flowers	Tige: densité des fleurs	Stiel: Dichte der Blüten	Tallo: densidad de las flores		
sparse	faible	locker	laxa	Gambaru, Ygor	3
medium	moyenne	mittel	media	Allemand, Escalin, Valdeyron	5
dense	forte	dicht	densa		7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. Stem: length of flowering part	Tige: longueur de la zone florifère	Stiel: Länge des blühenden Teils	Tallo: longitud de la parte en flor		
short	courte	kurz	corta	Allemand, Escalin, Valdeyron	3
medium	moyenne	mittel	media	Gambaru, Pegase, Ygor	5
long	longue	lang	larga	Passet	7
11. Leaf: shape (*)	Feuille: forme	Blatt: Form	Hoja: forma		
elliptic	elliptique	elliptisch	elíptica	2.40	1
ovate	ovale	eiförmig	oval	Savoie, Ygor	2
rhombic	rhomboïde	rautenförmig	romboica	Allemand, Gambaru	3
12. Leaf: length (*)	Feuille: longueur	Blatt: Länge	Hoja: longitud		
short	petite	kurz	corta	7.56	3
medium	moyenne	mittel	media	Heili, Passet, Pegase	5
long	grande	lang	larga	Allemand, Savoie	7
13. Leaf: width (*)	Feuille: largeur	Blatt: Breite	Hoja: anchura		
narrow	petite	schmal	estrecha	5.46.1	3
medium	moyenne	mittel	media	3.49	5
broad	grande	breit	ancha	Passet, Savoie	7
14. Leaf: ratio length/width	Feuille: rapport longueur/largeur	Blatt: Verhältnis Länge/Breite	Hoja: relación entre la largura y la anchura		
low	petit	gering	pequeña	5.46.1	3
medium	moyen	mittel	media	3.49	5
high	grand	groß	grande	Passet, Savoie	7

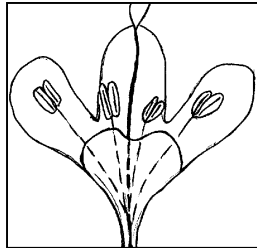
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. Leaf: prominence of veins on lower side	Feuille: proéminence des nervures sur la face inférieure	Blatt: Stärke der Adern an der Unterseite	Hoja: prominencia de los nervios en el envés		
weak	faible	schwach	débil	Escalin, Valdeyron, Ygor	3
medium	moyen	mittel	media	Allemand, Heili	5
strong	fort	stark	fuerte	3.07, 4.77, Savoie	7
16. Leaf: variegation (*)	Feuille: panachure	Blatt: Panachierung	Hoja: variegación		
absent	absente	fehlend	ausente	Valdeyron	1
present	presente	vorhanden	presente	Silver Posie	9
17. Leaf: main color (*)	Feuille: couleur principale	Blatt: Hauptfarbe	Hoja: color principal		
yellow green	vert-jaune	gelbgrün	verde amarillento		1
true green	vert vrai	echt grün	verde verdadero	Allemand, Escalin	2
blue green	vert-bleu	blaugrün	verde azulado	Passet, Ygor	3
grey green	vert-gris	graugrün	verde grisáceo	Pegase, Valdeyron	4
18. Leaf: intensity of main color (*)	Feuille: intensité de la couleur principale	Blatt: Intensität der Hauptfarbe	Hoja: intensidad del color principal		
light	claire	hell	claro		3
medium	moyenne	mittel	medio		5
dark	foncée	dunkel	oscuro		7
19. Flower: size (*)	Fleur: taille	Blüte: Größe	Flor: tamaño		
small	petite	klein	pequeña	Luberon, Passet	3
medium	moyenne	mittel	media	Allemand, Gambaru	5
large	grande	groß	grande	Heili, Ygor,	7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. Flower: color of petal (*)	Fleur: couleur du pétale	Blüte: Farbe des Blütenblattes	Flor: color del pétalo		
white or slightly pink	blanc ou légèrement rose	weiß oder leicht rosa	blanco o ligeramente rosado	Passet	1
medium pink	rose moyen	mittelrosa	rosa medio	Escalin, Ygor	2
light violet	mauve	hellviolett	violeta claro	4.77	3
medium violet	violacé	mittelviolett	violeta medio	Pegase, Valdeyron	4
21. Flower: length of style (*)	Fleur: longueur du style	Blüte: Länge des Griffels	Flor: longitud del estilo		
short	courte	kurz	corto		3
medium	moyenne	mittel	medio	3.07	5
long	longue	lang	largo	Gambaru, Escalin	7
22. Flower: main color of style	Fleur: couleur principale du style	Blüte: Hauptfarbe des Griffels	Flor: color principal del estilo		
white	blanc	weiß	blanco		1
pink	rose	rosa	rosa	Ygor	2
light violet	mauve	hellviolett	violeta claro		3
medium violet	violacé	mittelviolett	violeta medio	Escalin, Gambaru, Luberon	4
23. Style: presence of more intense colored zone	Style: présence d'une zone plus intensément colorée	Griffel: Vorhandensein einer intensiver gefärbten Zone	Estilo: presencia de una zona de color más intenso		
absent	absent	fehlend	ausente		1
present	présent	vorhanden	presente		9
24. Time of beginning of flowering (*)	Époque de début de floraison	Zeitpunkt des Blühbeginns	Fecha del inicio de la floración		
very early	très précoce	sehr früh	muy precoz	3.49, Ygor	1
early	précoce	früh	precoz	Allemand, Valdeyron	3
medium	moyenne	mittel	media	Luberon, Pegase	5
late	tardive	spät	tardía	Gambaru, Passet	7
very late	très tardive	sehr spät	muy tardía	Savoie	9

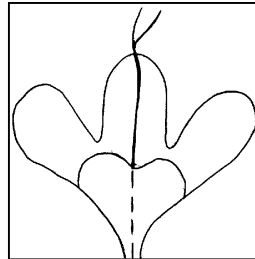
	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25.	Plant: male sterility	Plante: stérilité	Pflanze: männliche	Planta:		
(*)		mâle	Sterilität	androesterilidad		
(+)						
	absent	absent	fehlend	ausente	Heili, Ygor	1
	present	présent	vorhanden	presente	Escalin, Valdeyron	9

VIII. Explanations on the Table of Characteristics

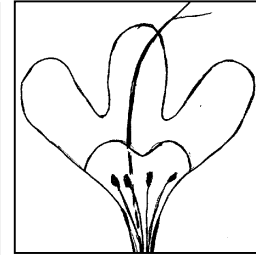
Ad. 25: Plant: male sterility



1
absent



flower without
stamen



9
present

flower with non-
functional stamen

IX. Literature

Le Thym, pp 105 à 116, in Série synthèses Bibliographiques N°2, APRIA-CDUIPA Massy (91) France, 161 pp

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GUYON, J., 1975. La culture des plantes aromatiques et médicinales dans le département de la Drôme, Université Claude Bernard Lyon (69) France 139 pp.

PARVIZ, Maghami, 1979. Le Thym (pages 157 à 160) in *Culture et cueillette de plantes médicinales*, Hachette

PASSET, J., 1979. La variabilité chimique chez le thym, ses manifestations, sa signification, parfums, cosmétiques, arômes, no. 29, juillet-août 1979

RICHARD, H., 1974. Quelques épices et aromates et leurs huiles essentielles

VERNET, P., 1977. Les variations de composition de l'essence de *Thymus vulgaris L.*, mode de transmission héréditaire de trois terpènes (le thymol, le carvacrol et le linalol). *Compte Rendu de l'Académie des Sciences de Paris*, t. 284., Série D 1289

VERNET, P., GOUYON Ph. Le polymorphisme chimique de *Thymus vulgaris*, parfums, cosmétiques, arômes. Novembre/décembre 1979

VERNET, P., GUILLERM, J.L., GOUYON, Ph., 1977. Le polymorphisme chimique de *Thymus vulgaris L.* Répartition des formes chimiques avec certains facteurs écologiques, *Oecol. Plant* 1977, 12 (2), 159-179

X. Technical Questionnaire

	Reference Number (not to be filled in by the applicant)
<p>TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights</p>	
1. Species	<p><i>Thymus vulgaris</i> L. THYME</p>
2. Applicant (name and address)	
3. Proposed denomination or breeder's reference	

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)

..... []

(b) Mutation (indicate parent variety)

..... []

(c) Discovery (indicate where and when)

..... []

(d) Other (specify)

..... []

4.2 Method of reproduction

– Seed []

– Cuttings []

– *In vitro* propagation []

– Other (specify) []

.....

4.3 Other information

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the state of expression which best corresponds).

Characteristics	Example Varieties	Note
5.1 Plant: growth habit (1)		
erect	Gambaru, Valdeyron	1[]
semi erect	Allemand	3[]
prostrate	Heili, Savoie	5[]
5.2 Stem: distribution of leaves (7)		
only at base	Escalin, Passet	1[]
only in middle	2.40	2[]
only in upper part	Pegase, Ygor	3[]
along whole stem	Gambaru, Valdeyron	4[]
5.3 Stem: position of flowering part (8)		
at tip	1.44, 3.49	1[]
along upper quarter	Allemand, Escalin	2[]
along upper half	1.52, Heili	3[]
along upper two thirds	Gambaru	4[]
along whole stem	Passet	5[]
5.4 Leaf: variegation (16)		
absent	Valdeyron	1[]
present	Silver Posie	9[]
5.5 Leaf: main color (17)		
yellow green		1[]
true green	Allemand, Escalin	2[]
blue green	Passet, Ygor	3[]
grey green	Pegase, Valdeyron	4[]

7. Additional information which may help to distinguish the variety

7.1 Resistance to pests and diseases

7.2 Special conditions for the examination of the variety

(i) Main use

- ornamental
- culinary
- essential oil
- other (specify)

7.3 Other information

A representative color photo of the variety should be included in the Technical Questionnaire.

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes No

(b) Has such authorization been obtained?

Yes No

If the answer to that question is yes, please attach a copy of such an authorization.

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