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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

VANILLA

UPOV Code VANIL_PLAN

Vanilla planifolia Jacks.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Mexico

to be considered by the

Technical Working Party for Fruit Crops at its forty-third session,
to be held in Beijing, from July 30 to August 3, 2012

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Vanilla planifolia Jacks.	Vanilla	Vanillier	Vanille	Vainilla, Xanath

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

TABLE OF CONTENTS PAGE

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Vainilla planifolia* Jacks. and interspecific hybrids.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it 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 and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of plants.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

10 plants.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

3.1.1 The minimum duration of tests should normally be two independent growing cycles. In particular, it is essential that the plants produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.2 The growing cycle is considered to be the period ranging from the beginning of active vegetative growth or flowering, continuing through active vegetative growth or flowering and fruit development and concluding with the harvesting of fruit.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination. In particular, it is essential that the plants produce a satisfactory crop of fruit in the main fruiting period in each of the two growing years, since the species may have waves of fruiting within a year.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 10 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 2.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement of a group of plants or parts of plants
MS: measurement of a number of individual plants or parts of plants
VG: visual assessment by a single observation of a group of plants or parts of plants
VS: visual assessment by observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

“Visual” observation (V) is an observation made on the basis of the expert’s judgment. For the purposes of this document, “visual” observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, “G” provides a single record per variety and it is not

possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 10 plants, one off-type is allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

(a) Stem: color (Characteristic 1)
(b) Leaf blade: color (Characteristic 11)
(c) Leaf blade: shape (Characteristic 19)
(d) Fruit: color (Characteristic 26)
(e) Fruit: length (Characteristic 28)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	Note
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	Note
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

(*) Asterisked characteristic – see Chapter 6.1.2

QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

MG, MS, VG, VS – see Chapter 4.1.5

(a)-(c) See Explanations on the Table of Characteristics in Chapter 8.1
(+) See Explanations on the Table of Characteristics in Chapter 8.2

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

		English français deutsch español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**VG**	**Stem: color**		
QN	**(a)**	light	Acamaya	1
		medium	Oreja de Burro, Princesa, Totonaku	2
		dark	Amarela, Espada	3
2.	**VG**	**Stem: shape**		
QN	**(a)**	round	Acamaya, Totonaku	1
		roud to angular		2
		angular		3
3.	**VG/ MG**	**Stem: diameter**		
QN	**(a)**	small	Acamaya, Princesa	3
		medium	Totonaku	5
		large	Amarela	7
4.	**VG/ MG**	**Stem: internode length**		
QN	**(a)**	short	Acamaya, Princesa	3
		medium	Amarela, Totonaku	5
		long	Oreja de Burro	7
5.	**VG**	**Stem: surface**		
QN	**(a)**	smooth	Acamaya, Totonaku	1
		medium	Amarela	2
		rough		3
6.	**VG**	**Stem: spots**		
QL	**(a)**	absent	Princesa, Totonaku	1
		present		9
7. (*) (+)	**VG**	**Leaf blade: conspicuouness of main vein**		
PQ	**(a)**	weakly visible	Princesa, Totonaku	1
		slighly visible		2
		clearly visible		3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
8. **(*)** **(+)**	**VG**	**Leaf blade: shape of apex**					
PQ	**(a)**	obtuse				Princesa, Totonaku	1
		acute				Acamaya, Oreja de Burro	2
		acuminate				Espada	3
9.	**VG**	**Leaf: petiole length**					
QN	**(a)**	short				Princesa	3
		medium				Acamaya, Totonaku	5
		long					7
10. **(+)**	**VG**	**Leaf blade: base**					
QL	**(a)**	clasping				Oreja de Burro, Totonaku	1
		tapering				Acamaya, Princesa	2
11. **(*)**	**VG**	**Leaf blade: color**					
PQ	**(a)**	yellow white				Acamaya	1
		light green				Oreja de Burro	2
		medium green				Acamaya, Totonaku	3
		dark green				Amarela	4
12. **(+)**	**VG**	**Leaf blade: variegation**					
QL	**(a)**	absent				Oreja de Burro, Totonaku	1
		present				Acamaya	9
13.	**VG/ MS**	**Leaf blade: lenght**					
QN	**(a)**	short				Acamaya	3
		medium				Princesa, Totonaku	5
		long				Oreja de Burro	7
14.	**VG/ MS**	**Leaf blade: width**					
QN	**(a)**	narrow				Acamaya	3
		medium				Princesa, Totonaku	5
		broad				Oreja de Burro	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15.	**VG/ MS**	**Leaf blade: length/width ratio**					
QN	**(a)**	moderately elongated				Espada	3
		medium				Oreja de Burro, Totonaku	5
		moderately compressed				Amarela	7
16.	**VG**	**Leaf blade: symmetry**					
QN	**(a)**	symmetric or slightly asymmetric				Princesa, Totonaku	1
		moderately asymmetric				Espada	2
		strongly asymmetric					3
17.	**VG/ MS**	**Leaf: thicknes**					
QN	**(a)**	thin				Acamaya	3
		medium				Princesa, Totonaku	5
		thick				Oreja de Burro	7
18.	**VG**	**Leaf blade: transversal section**					
QN	**(a)**	flat or slightly concave				Acamaya, Totonaku	1
		moderately concave				Espada	2
		strongly concave				Oreja de Burro	3
19. (*) (+)	**VG**	**Leaf blade: shape**					
PQ	**(a)**	narrow ovate				Espada	1
		medium ovate					2
		elliptic				Princesa	3
		obovate				Oreja de Burro	4
		oblong				Acamaya, Totonaku	5
20.	**MG**	**Inflorescence: number of flowers**					
QN	**(b)**	few				Acamaya	3
		medium				Oreja de Burro, Princesa	5
		many				Totonaku	7

		English / français / deutsch / español	Example Varieties / Exemples / Beispielssorten / Variedades ejemplo	Note/ Nota
21.	**VG**	**Flower: rostelum width**		
QN	**(b)**	narrower than stigma		1
		as large as stigma	Oreja de burro, Totonaku	2
		wider than stigma		3
22.	**VG**	**Flower: color of tepals**		
PQ	**(b)**	whitish		1
		green yellow	Oreja de burro, Totonaku	2
		yellow		3
		yellow orange		4
23. **(+)**	**VG/ MS**	**Flower: labelum length**		
QN	**(c)**	short		3
		medium	Totonaku	5
		long		7
24. **(+)**	**VG/ MS**	**Flower: length of gynandrium**		
QN	**(b)**	short		3
		medium		5
		long		7
25.	**VG/ MS**	**Flower: length of petals**		
QN	**(c)**	short		3
		medium	Oreja de Burro, Totonaku	5
		long		7
26. **(*)**	**VG**	**Fruit: color**		
PQ	**(c)**	dark green	Amarela	1
		medium green	Princesa, Totonaku	2
		green yellow		3
		yellow		4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
27.	**VG**	**Fruit: shape**					
PQ	**(c)**	trullate					1
		oblong				Totonaku	2
		obovate				Amarela	3
28. **(*)**	**VG/** **MS**	**Fruit: length**					
QN	**(c)**	short					3
		medium					5
		long				Amarela, Totonaku	7
29.	**VG**	**Fruit: texture of surface**					
PQ	**(c)**	smooth				Amarela, Totonaku	1
		medium					2
		rough					3
30.	**VG**	**Fruit: grooves**					
QN	**(c)**	absent or slightly visible				Oreja de Burro, Princesa, Totonaku	1
		visible					2
		very visible					3

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

(a) Stem and leaf: All observations on stem and fully developed leaves should be, when the first fruit is fully developed. The observations on stem should be taken at midway the length of stem.

(b) Inflorescence and flower: Observations which should be on fully expanded inflorescence.

(c) Fruit: Observations which should be on fruit at physiological maturity.

8.2 Explanations for individual characteristics

Ad. 7: Leaf blade: conspicuousness of main vein

1
weakly visible

2
slightly visible

3
clearly visible

Ad. 8: Leaf blade: shape of apex

1
obtuse

2
acute

3
acuminate

Ad. 10: Leaf blade: base

1
clasping

2
tapering

Ad. 12: Leaf blade: variegation

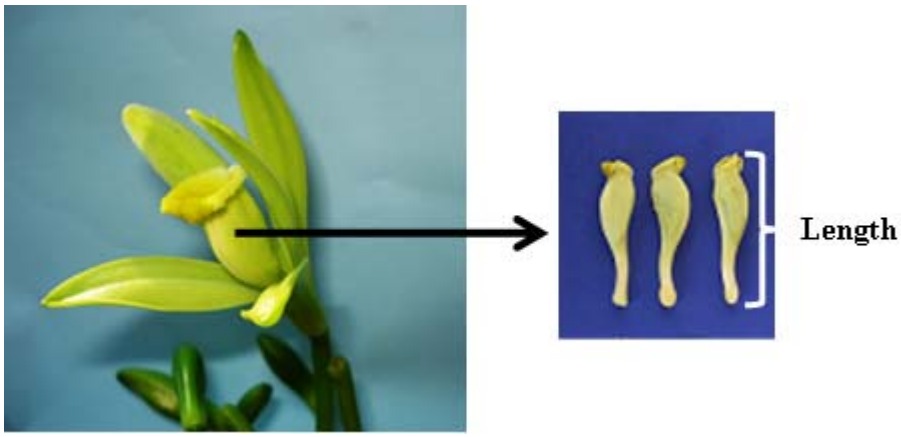
1
absent

9
present

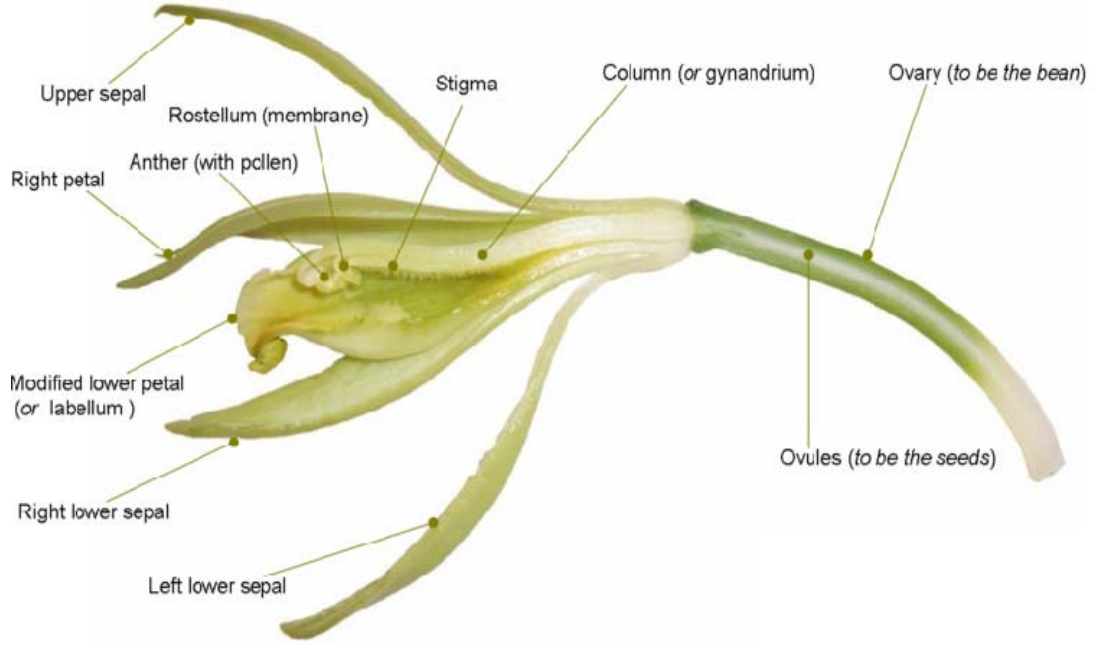
Ad. 19: Leaf blade: shape

		< broadest part >			
		(below middle)		at middle	(above middle)
< lateral outline >	flat parallel sides			 5 oblong	
	rounded	 1 narrow ovate	 2 medium ovate	 3 elliptic	 4 obovate

Ad. 23: Flower: labelum length



Ad. 24. Flower: length of gynandrium



9. Literature

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10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Vanilla planifolia* Jacks.
1.2 Common name	Vanilla

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]
(please state parent varieties)

(……..……..) x (……..……..)
female parent male parent

(b) partially known cross [ ]
(please state known parent variety(ies))

(……..……..) x (……..……..)
female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(please provide details)

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

(a) Self-pollination [ ]
(b) Cross-pollination
(i) population [ ]
(ii) synthetic variety [ ]
(c) Hybrid [ ]
(d) Other [ ]
(please provide details)

4.2.2 Vegetative propagation

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(c) grafting [ ]

(d) other (state method) [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

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

	Characteristics	Example Varieties	Note
5.1 (1)	**Stem: color**		
	light	Acamaya	1[ ]
	medium	Oreja de Burro, Princesa, Totonaku	2[ ]
	dark	Amarela, Espada	3[ ]
5.2 (11)	**Leaf blade: color**		
	yellow white	Acamaya	1[ ]
	light green	Oreja de Burro	2[ ]
	medium green	Acamaya, Totonaku	3[ ]
	dark green	Amarela	4[ ]
5.3 (19)	**Leaf blade: shape**		
	narrow ovate	Espada	1[ ]
	medium ovate		2[ ]
	elliptic	Princesa	3[ ]
	obovate	Oreja de Burro	4[ ]
	oblong	Acamaya, Totonaku	5[ ]
5.4 (26)	**Fruit: color**		
	dark green	Amarela	1[ ]
	medium green	Princesa, Totonaku	2[ ]
	green yellow		3[ ]
	yellow		4[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Characteristics	Example Varieties	Note
5.5 (28)	**Fruit: length**		
	very short		1[ ]
	very short to short		2[ ]
	short		3[ ]
	short to medium		4[ ]
	medium		5[ ]
	medium to long		6[ ]
	long	Amarela, Totonaku	7[ ]
	long to very long		8[ ]
	very long		9[ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
		e.g. note 1	*e.g. note 4*
Example	*Fruit: color*	*e.g. dark green*	*e.g. yellow*

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

[#]7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color image of the variety should accompany 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 (b) is yes, please attach a copy of the authorization.

[#] Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a)	Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes [ ]	No [ ]
(b)	Chemical treatment (e.g. growth retardant, pesticide)	Yes [ ]	No [ ]
(c)	Tissue culture	Yes [ ]	No [ ]
(d)	Other factors	Yes [ ]	No [ ]

Please provide details for where you have indicated “yes”.

……

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[Annex follows]

ANNEX

OBSERVATIONS AND COMMENTS TO DOCUMENT TG/VANIL(PROJ.2)

Number of paragraph or characteristic	Reads	Suggestion	Comment	Country
Front page box	(*Vainilla planifolia* Jacks.)	(*Vainilla planifolia* Jacks. and interspecific hybrids)		France
Front page *Botanical name*	*Vainilla planifolia* Jacks.	*Vainilla planifolia* Jacks. and interspecific hybrids		France
Front page *German*	Vanille	Vanille-Pflanze		France
1. Subject of these Test Guidelines	These Test Guidelines apply to all varieties of *Vainilla planifolia* Jacks. and interspecific hybrids.		Which species are concerned by these interspecific hybrids ?	France
New after Char. 1		Stem: variegation absent 1 present 9		France
			We need example variety. And to check if is correlated to leaf variegation.	Mexico
Char. 2 Stem: shape	angular 3		Is there any variety with angular shape?	France
Char. 11 Leaf blade color Char. 12. Leaf blade variegation		To combine and to have Char. 11 with state 5 variegated		France
			Not to change since variegation is not a color	Mexico
Char. 19 Leaf blade: shape		To include orbicular and to have a drawing to express the level. To change narrow ovate for lanceolate To change medium ovate for ovate To change oblong for linear		France
			Orbicular is a synonym of circular shape. We don´t have a circular variety. Can Israel supply an example variety? We don't agree to change the names of the states	Mexico

New after Char. 22		Flower: color of label white 1 green 2 yellow 3 orange 4 purple 5		France
New after Char. 22		Flower: papillae of label tip smooth 1 medium 2 rough 3		France
New after Char. 25		Flower: width of petal narrow 3 medium 5 long 7		France
New after Char. 27		Fruit: section shape circular or elliptic ovate or trullate triangular	Do you have drawings to express these levels?	France
			Does it mean Fruit: cross section shape?	Mexico
New		Fruit: vanillin content low medium high		France
		Fruit: content in 4-hydroxybenzyl alcohol low medium high		France
		Fruit: content in vanillic acid low medium high		France
		Fruit: content in 4-hydroxybenzaldehyde low medium high		France
		Fruit: content in anisic alcohol low medium high		France
		Fruit: content in anisic acid low medium high		France

		Fruit: content in 4-hydroxybenzoic acid low medium high		France
NEW Ad. 31 to 37. Vanillin and other aromatic molecules contents. Proposed protocol for the analysis of aroma compounds in vanilla green pods 1. Sample collection At least five mature pods (about 8 month post pollination, green/yellow color) collected on 5 distinct vines are collected from the vines and analyzed separately. The pods are weighted before storage at -80°C. They are then freeze-dried and weighted again in order to evaluate the water content. 2. Extraction Five hundred milligrams of dry powder is suspended in 10 mL of water. After addition of 0.5 mL of sulfuric acid (18 M), the suspension is thoroughly mixed and placed in a steam bath at 60 °C for 2 h. The mixture is cooled to room temperature and 1mL KOH (9.4 M) is added to neutralize the mixture. Ethanol (20 mL) is added, and the mixture is thoroughly mixed and macerated for 4 hours. Subsequently, the mixture is poured through a sintered filter and the filtrate collected in a 50 mL flask. The filter cake is washed with ethanol until the total volume of filtrate and washings came up to 50 mL. The ethanolic solution is then extracted exhaustively with diethyl ether/pentane (1:1; total volume = 100 mL) and dried over anhydrous sodium sulfate prior to GC analysis. 3. GC analysis Each extract is subjected to triple measurement using Gas Chromatography. Quantification of the compounds (vanillin, 4-hydroxybenzyl alcohol, vanillic acid, 4-hydroxybenzaldehyde, anisic alcohol, anisic acid and 4-hydroxybenzoic acid) can be for instance as in Kaunzinger et al. (1997).				France
9. Literature Kaunzinger, A., Juchelka, D., Mosandl, A., 1997. Progress in the Authenticity Assessment of Vanilla. 1. Initiation of Authenticity Profiles. J. Agric. Food Chem. 45, 1752-1757. Lepers-Andrzejewski, S., Brunschwig, C., Collard, F.-X., and Dron, M. 2010. Morphological, Chemical, Sensory and Genetic Specificities of Tahitian Vanilla. null SV - null DO - doi:10.1201/EBK1420083378-c13 ed. In "Vanilla" (E. Odoux, and M. Grisoni, Eds.), Vol. 47, pp. 205-228 SE -. CRC Press, Boca Raton, FL (USA). Odoux, E. 2010. Developing the Aromatic Quality of Cured Vanilla Beans (Vanilla planifolia G. Jackson). null SV - null DO - doi:10.1201/EBK1420083378-c12 ed. In "Vanilla" (E. Odoux, and M. Grisoni, Eds.), Vol. 47, pp. 189-204 SE -. CRC Press, Boca Raton, FL (USA). Van Dyk, S. , McGlasson, W.B., William, M., Gair, C. , 2010. Influence of curing procedures on sensory quality of vanilla beans. Fruits, 65,387–399				France

[End of Annex and of document]