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**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**  
GENEVA

**TECHNICAL WORKING PARTY  
FOR  
ORNAMENTAL PLANTS AND FOREST TREES**

**Thirty-Fifth Session  
Quito, November 18 to 22, 2002**

**WORKING PAPER ON DRAFT TECHNICAL GUIDELINES FOR PETUNIA  
(PETUNIA JUSS.)**

*Prepared by experts from Germany*

The attached document TG/PETUNI(proj.1) already incorporates the standard wording of document TGP/7.2, which was adopted by the Technical Committee at its thirty-eighth session in April 2002, and includes some additional standard wording from document TGP/7.1 Draft 1, also agreed at that session.

[Document TG/PETUNI(proj.1) follows]




 UPOV

**INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS**

GENEVA

PETUNIA  <i>Petunia</i> Juss.	*
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**GUIDELINES**
**FOR THE CONDUCT OF TESTS**
**FOR DISTINCTNESS, UNIFORMITY AND STABILITY**

Alternative Names: \*

Latin	English	French	German	Spanish
<i>Petunia</i> Juss.	Petunia			

**ASSOCIATED DOCUMENTS**

These guidelines should be read in conjunction with document TG/1/3, "General Introduction to the Examination of Distinctness, Uniformity and Stability and the Development of Harmonized Descriptions of New Varieties of Plants" (hereinafter referred to as the "General Introduction") and its associated "TGP" documents.

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\* 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](http://www.upov.int)), for the latest information.]

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## 1. SubjectoftheseGuidelines

1.1 These Test Guidelines apply to all varieties of the genus *Petunia* Juss. of the family Solanaceae.

## 2. MaterialRequired

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 rooted cuttings or seeds.

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

–for vegetatively propagated varieties: 35 rooted cuttings;

–for seed propagated varieties: 600 seeds in 6 portions.

2.4 In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority. In cases where the seed is to be stored, the germination capacity should be as high as possible and should be stated by the applicant. The germination capacity should be at least 60%.

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

2.6 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. MethodofExamination

### 3.1 *DurationofTests*

The minimum duration of tests should normally be as single growing cycle.

### 3.2 *TestingPlace*

The tests should normally be conducted at one place. If any characteristics of the variety, which are relevant for the examination of DUS, cannot be seen at that place, the variety may be tested at an additional place.

### 3.3 *ConditionsforConductingtheExamination*

3.3.1 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, unless otherwise stated, all observations should be made at the time of full flowering.

3.3.2 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

### 3.4 *Test Design*

3.4.1 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.

3.4.2 In the case of vegetatively propagated varieties, each test should be designed to result in a total of at least 20 plants.

3.4.3 In the case of seed propagated varieties, each test should be designed to result in a total of at least 40 plants.

### 3.5 *Number of Plants/Parts of Plants to be Examined*

3.5.1 Unless otherwise indicated, all observations on vegetatively propagated varieties determined by measuring or counting should be made on 10 plants or part taken from each of 10 plants.

3.5.2 Unless otherwise indicated, all observations on seed propagated varieties determined by measuring or counting should be made on 20 plants or part taken from each of 20 plants.

### 3.6 *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 minimum duration of tests recommended in section 3.1 reflects, in general, the need to ensure that any differences in a characteristic are sufficiently consistent.

#### 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.

#### 4.2 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 vegetatively propagated varieties, the acceptable number of off-types tolerated in a sample size of 20 plants is 1 on the basis of a population standard of 1% and an acceptance probability of 95%.

4.2.3 For the assessment of uniformity of seed-propagated varieties, the recommendations in the General Introduction for cross-pollinated or hybrid varieties should be followed, as appropriate.

#### 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 tested, either by growing a further generation, or by testing a new seed or plant stock to ensure that it exhibits the same characteristics as those shown by the previous materials 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 is 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 others 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 trials so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Leafblade: variegation (characteristic 11)
- (b) Flower: type (characteristic 20)
- (c) Flower: number of colors of upper side (flower tube excluded) (characteristic 23)
- (d) Flower: main color of upper side (characteristic 24)
- (e) Flower: conspicuousness of vein on upper side (characteristic 27)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

## 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*

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.

### 6.3 *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*

- (\*) Asterisk characteristic –seeSection6.1.2
- (QL) Qualitativecharacteristic –seeSection6.3
- (QN) Quantitativecharacteristic –seeSection6.3
- (PQ) Pseudo-Quantitativecharacteristic –seeSection6.3
- (+) SeeExplanationsontheTableofCharacteristicsinChapter8.

7. TableofCharacteristics/Tableaudecaractères/Merkmalstabelle/Tabladecaracteres

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedadesejemplo	Note/ Nota
<b>1. Plant: growth habit</b>		<b>Pflanze: Wuchsform</b>			
erect		aufrecht			1
creeping		kriechend			2
<b>2. Plant: height (*)</b>		<b>Pflanze: Höhe</b>			
short		niedrig			3
medium		mittel			5
tall		hoch			7
<b>3. Shoot: length (*)</b>		<b>Trieb: Länge</b>			
short		kurz			3
medium		mittel			5
long		lang			7
<b>4. Shoot: thickness (in lower third)</b>		<b>Trieb: Dicke (im unteren Drittel)</b>			
thin		dünn			3
medium		mittel			5
thick		dick			7
<b>5. Petiole: presence</b>		<b>Blattstiel: Vorhandensein</b>			
absent		fehlend			1
present		vorhanden			9
<b>6. Petiole: length</b>		<b>Blattstiel: Länge</b>			
short		kurz			3
medium		mittel			5
long		lang			7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>7. Leafblade:length</b>		<b>Blattspreite:Länge</b>			
(*)					
short		kurz			3
medium		mittel			5
long		lang			7
<b>8. Leafblade:width</b>		<b>Blattspreite:Breite</b>			
(*)					
narrow		schmal			3
medium		mittel			5
broad		breit			7
<b>9. Leafblade:shape</b>		<b>Blattspreite:Form</b>			
(*)					
(+)					
circular		rundlich			1
elliptic		elliptisch			2
ovate		eiförmig			3
obovate		verkehrteiförmig			4
rhombic		rautenförmig			5
<b>10. Leafblade:shape of apex</b>		<b>Blattspreite:Form der Spitze</b>			
narrow acute		schmal spitz			1
broad acute		breit spitz			2
obtuse		stumpf			3
<b>11. Leafblade: variegation</b>		<b>Blattspreite: Panaschierung</b>			
(*)					
absent		fehlend			1
present		vorhanden			9

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedadesejemplo	Note/ Nota
<hr/>					
<b>12. <u>Varieties without</u> (* <u>variegation only:</u> Leafblade: green color of upper side</b>		<b><u>Nur Sorten ohne</u> <u>Panaschierung:</u> <u>Blattspreite:</u> <u>Grünfärbung der</u> <u>Oberseite</u></b>			
light		hell			3
medium		mittel			5
dark		dunkel			7
<hr/>					
<b>13. Leafblade: blistering</b>		<b>Blattspreite: Blasigkeit</b>			
absent		fehlend			1
present		vorhanden			9
<hr/>					
<b>14. Pedicel: length</b>		<b>Blütenstiel: Länge</b>			
short		kurz			3
medium		mittel			5
long		lang			7
<hr/>					
<b>15. Pedicel: thickness</b>		<b>Blütenstiel: Dicke</b>			
thin		dünn			3
medium		mittel			5
thick		dick			7
<hr/>					
<b>16. Sepal: length (* )</b>		<b>Kelchblatt: Länge</b>			
short		kurz			3
medium		mittel			5
long		lang			7
<hr/>					
<b>17. Sepal: width (* ) (broadest part which is not fused)</b>		<b>Kelchblatt: Breite (breiteste, nicht verwachsene Stelle)</b>			
narrow		schmal			3
medium		mittel			5
broad		breit			7

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>18. Sepal:shape</b>		<b>Kelchblatt:Form</b>			
(+)					
linear		linear			1
lanceolate		lanzettlich			2
ovate		eiförmig			3
elliptic		elliptisch			4
obovate		verkehrtelförmig			5
spatulate		spatelförmig			6
rhombic		rautenförmig			7
<b>19. Sepal:anthocyanin coloration</b>		<b>Kelchblatt: Anthocyanfärbung</b>			
absent		fehlend			1
present		vorhanden			9
<b>20. Flower:type</b>		<b>Blüte:Typ</b>			
(*)					
single		einfach			1
double		gefüllt			2
<b>21. Flower:diameter</b>		<b>Blüte:Durchmesser</b>			
(*)					
(+)					
small		klein			3
medium		mittel			5
large		groß			7
<b>22. Flower:shape</b>		<b>Blüte:Form</b>			
(+)					
salvershaped		tellerförmig			1
funnelshaped		trichterförmig			2

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<hr/>					
<b>23. Flower: number of (* color of upper side (flower tube excluded)</b>		<b>Blüte: Anzahl Farben der Oberseite (ohne Blütenröhre)</b>			
one		eine			1
two		zwei			2
more than two		mehrer als zwei			3
<hr/>					
<b>24. Flower: main color (* of upper side (as for 23.)</b>		<b>Blüte: Hauptfarbe der Oberseite (wie bei 23.)</b>			
RHS Colour Chart (indicate reference number)		RHS-Farbkarte Nummer angeben			
<hr/>					
<b>25. <u>Formulticolored</u> (* <u>varieties only</u> : Flower: secondary color of upper side (as for 23)</b>		<b><u>Nur für mehrfarbige</u> <u>Sorten</u>: Blüte: Sekundärfarbe der Oberseite (wie bei 23)</b>			
RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
<hr/>					
<b>26. <u>Formulticolored</u> (* <u>varieties only</u> : (+) Flower: distribution of secondary color (as for 23)</b>		<b><u>Nur für mehrfarbige</u> <u>Sorten</u>: Blüte: Verteilung der Sekundärfarbe (wie bei 23)</b>			
along transition to throat		am Übergang zum Schlund			1
along midrib		entlang der Mittelrippe			2
at margin		am Rand			3
<hr/>					

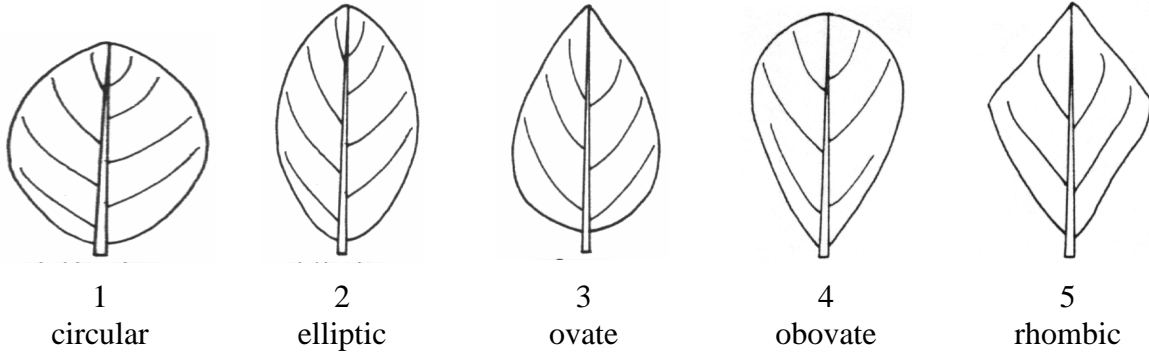
English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<hr/>					
<b>27. Flower: (* ) conspicuousness of vein on upper side (as for 23)</b>		<b>Blüte: Stärke der Aderung der Oberseite (wie bei 23 )</b>			
absent or very weak		fehlend oder sehr gering			1
weak		gering			3
medium		mittel			5
strong		stark			7
very strong		sehr stark			9
<hr/>					
<b>28. Flower: undulation of margin</b>		<b>Blüte: Wellung des Randes</b>			
absent or very weak		fehlend oder sehr gering			1
weak		gering			3
medium		mittel			5
strong		stark			7
very strong		sehr stark			9
<hr/>					
<b>29. Flower tube: length (+)</b>		<b>Blütenröhre: Länge</b>			
short		kurz			3
medium		mittel			5
long		lang			7
<hr/>					
<b>30. Flower tube: main (* ) color of inner side</b>		<b>Blütenröhre: Hauptfarbe der Innenseite</b>			
RHS Colour Chart (indicator reference number)		RHS-Farbkarte Nummer angeben			
<hr/>					

English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>31. Flowertube: conspicuousness of vein on inner side</b>		<b>Blütenröhre: Stärke der Aderung der Innenseite</b>			
absent or very weak		fehlend oder sehr gering			1
weak		gering			3
medium		mittel			5
strong		stark			7
very strong		sehr stark			9
<b>32. Anther: color (* )</b>		<b>Staubbeutel: Farbe</b>			
light grey		hellgrau			1
yellowish white		gelblichweiß			2
yellow		gelb			3
light brown		hellbraun			4
light blue		hellblau			5
medium blue		mittelblau			6
violet		violett			7

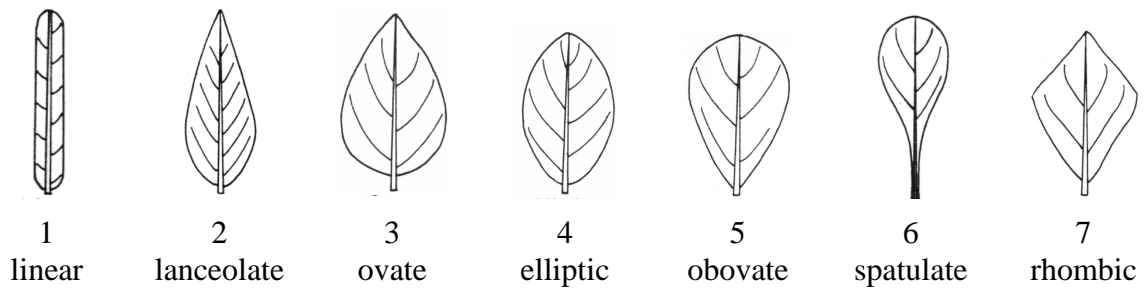


8. ExplanationsontheTableofCharacteristics

Ad.9:Leafblade:shape



Ad.18:Sepal:shape



Ad.21:Flower:di ameter



Ad.22:Flower:shape

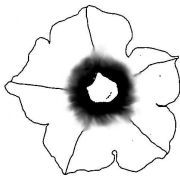


1  
salvershaped

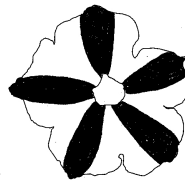


2  
funnelshaped

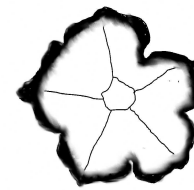
Ad.26:Flower:distributionofsecondarycolor



1  
alongtransitiontothroat

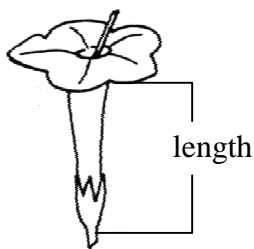


2  
alongmidrib



3  
atmargin

Ad.29:Flowertube:length



9. Literature

10. TechnicalQuestionnaire

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
		Applicationdate: (nottobefilledinbytheapplicant)
TECHNICALQUESTIONNAIRE tobecompletedin connectionwithanapplicationforplantbreeders'rights		
1. SubjectoftheTechnicalQuestionnaire		
1.1 Genus		
1.1.1 <i>LatinName</i>	<input type="text" value="Petunia Juss."/>	
1.1.2 CommonName	<input type="text" value="PETUNIA"/>	
1.2 Species(pleasecomplete)		
1.2.1 <i>LatinName</i>	<input type="text"/>	
1.2.2 CommonName	<input type="text"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
TelephoneNo.	<input type="text"/>	
FaxNo.	<input type="text"/>	
E-mailaddress	<input type="text"/>	
Breeder(ifdifferentfromapplicant)	<input type="text"/>	

TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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3. Proposeddenominationandbreeder'sreference

Proposeddenom ination   
(ifavailable)

Breeder'sreference

4. Informationonthebreedingschemeandpropagationofthevariety

4.1 BreedingScheme

4.1.1 Varietyresultingfrom:

- (a) controlledcross   
(pleasestateparentvarieties)
- (b) partiallyunknowncross   
(pleasestateknownparentvariety(ies))
- (c) totallyunknowncross

4.1.2 Mutation   
(pleasestateparentvariety)

4.1.3 Discovery   
(pleasestatewhere,whenandhowdeveloped)

4.1.4 Other   
(pleaseprovidedetai ls)

4.2 MethodofPropagatingtheVariety

- (a) cuttings
- (b) *invitro* propagation
- (c) seed
- (d) other(providedetails)

TECHNICALQUESTIONNAIRE	Page {x} of {y}	ReferenceNumber:
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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
<b>5.1</b>	<b>Leafblade:variegation</b>		
<b>(11)</b>			
	absent		1[]
	present		9[]
<b>5.2</b>	<b>Flower:type</b>		
<b>(20)</b>			
	single		1[]
	double		2[]
<b>5.3</b>	<b>Flower:diameter</b>		
<b>(21)</b>			
	small		3[]
	medium		5[]
	large		7[]
<b>5.4</b>	<b>Flower:numberofcolorsofupperside</b>		
<b>(23)</b>	<b>(flowertubeexcluded)</b>		
	one		1[]
	two		2[]
	morethantwo		3[]
<b>5.5(i)</b>	<b>Flower:maincolorofupperside</b>		
<b>(24)</b>	<b>(flowertubeexcluded )</b>		
	RHS Colour Chart(indicator referencenumber)	.....	

TECHNICALQUESTIONNAIRE	Page { x } of { y }	ReferenceNumber:
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**5.5(ii) Flower:maincolorofupperside  
 (24) (flowertubeexcluded)**

- white 1[]
- yellow 2[]
- red 3[]
- bluishpink 5[]
- bluered 6[]
- purplered 7[]
- purple 8[]
- violet 9[]
- blueviolet 10[]
- othercolor(indicate) .....

**5.6 Flower:conspicuousnessofveinsonupperside  
 (27) (flowertubeexcluded)**

- absentorveryweak 1[]
- weak 3[]
- medium 5[]
- strong 7[]
- verystrong 9[]





TECHNICALQUESTIONNAIRE	Page{x}of{y}	ReferenceNumber:
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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 Special conditions for the examination of the variety

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

Yes  No

7.2.2 If yes, please give details:

7.3 Other information

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.

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

Applicant's name

Signature

Date

[End of document]