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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

FREESIA

UPOV Code(s): FREES

Freesia Eckl. ex Klatt

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Freesia</i> Eckl. ex Klatt	Freesia	Freesia	Freesie	Freesia

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.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Freesia* Eckl. ex Klatt.

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 corms able to produce plants to show all the characteristics in the first year of examination.
- 2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:
- 30 corms
- 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*

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

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*

- 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.
- 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. The color chart and version used should be specified in the variety description.

3.4 *Test Design*

- 3.4.1 Each test should be designed to result in a total of at least 20 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 or 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 of plants taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

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 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 These Test Guidelines have been developed for the examination vegetatively propagated varieties. For varieties with other types of propagation the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species", Section 4.5 "Testing Uniformity" should be followed.
- 4.2.3 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 20 plants, 1 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) Plant: height (characteristic 1)
- (b) Spike: length (characteristic 11)
- (c) Flower: type (characteristic 19)
- (d) Perianth: main color of inner side of outer segment (characteristic 35)
with the following groups
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: yellow orange
 - Gr. 4: orange
 - Gr. 5: pink
 - Gr. 6: red
 - Gr. 7: violet
 - Gr. 8: blue violet
 - Gr. 9: blue
- (e) Perianth: main color of inner side of inner segment (characteristic 43)
with the following groups
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: yellow orange
 - Gr. 4: orange
 - Gr. 5: pink
 - Gr. 6: red
 - Gr. 7: violet
 - Gr. 8: blue violet
 - Gr. 9: blue

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

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7	
		Name of characteristics in English	Nom du caractère en français	Name des Merkmals auf Deutsch	Nombre del carácter en español		
		states of expression	types d'expression	Ausprägungsstufen	tipos de expresión		

- 1 Characteristic number
- 2 (*) Asterisked characteristic – see Chapter 6.1.2
- 3 Type of expression
 QL Qualitative characteristic – see Chapter 6.3
 QN Quantitative characteristic – see Chapter 6.3
 PQ Pseudo-qualitative characteristic – see Chapter 6.3
- 4 Method of observation (and type of plot, if applicable)
 MG, MS, VG, VS – see Chapter 4.1.5
- 5 (+) See Explanations on the Table of Characteristics in Chapter 8.2
- 6 (a)-(e) See Explanations on the Table of Characteristics in Chapter 8.1
- 7 Not applicable

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

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	QN	MG/MS/VG	(+)			
	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
	short	basse	niedrig	baja	Fragrant Sunburst	3
	medium	moyenne	mittel	media	Golden Passion	5
	tall	haute	hoch	alta	Algarve	7
2. (*)	QN	MG/MS/VG	(a)			
	Leaf: length	Feuille : longueur	Blatt: Länge	Hoja: longitud		
	short	courte	kurz	corta	Grumpy	3
	medium	moyenne	mittel	media	Anouk	5
	long	longue	lang	larga	Pink Devotion	7
3.	QN	MG/MS/VG	(a)			
	Leaf: width	Feuille : largeur	Blatt: Breite	Hoja: anchura		
	narrow	étroite	schmal	estrecha	Lovely Lake	3
	medium	moyenne	mittel	media	Golden Passion	5
	broad	large	breit	ancha	Clementine	7
4.	QN	VG	(a)			
	Leaf: intensity of green color	Feuille : intensité de la couleur verte	Blatt: Intensität der Grünfärbung	Hoja: intensidad del color verde		
	light	claire	hell	claro		1
	medium	moyenne	mittel	medio	Pink Passion	2
	dark	foncée	dunkel	oscuro	White Pearl	3
5. (*)	QN	VG	(a)			
	Leaf: attitude of distal part	Feuille : port de la partie distale	Blatt: Haltung des distalen Teils	Hoja: porte de la parte distal		
	erect	dressée	aufrecht	erecta	Golden Passion	1
	horizontal	horizontale	waagrecht	horizontal	Red Passion	2
	drooping	retombante	überhängend	colgante	Hofuni	3
6. (*)	QN	MG/MS/VG	(+)			
	Peduncle: length	Pédoncule : longueur	Blütenstandsstiel: Länge	Pedúnculo: longitud		
	short	court	kurz	corto	Vapogom	3
	medium	moyen	mittel	medio	Golden Passion	5
	long	long	lang	largo	Red Mountain	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7.	QN	MG/MS/VG	(+)			
	Peduncle: thickness	Pédoncule : épaisseur	Blütenstandsstiel: Dicke	Pedúnculo: grosor		
	thin	mince	dünn	fino	Vapogom	1
	medium	moyen	mittel	medio	Golden Passion	2
	thick	épais	dick	grueso	Moon River	3
8. (*)	QN	MG/MS/VG	(+)			
	Peduncle: number of branches	Pédoncule : nombre de rameaux	Blütenstandsstiel: Anzahl Triebe	Pedúnculo: número de ramas		
	few	petit	wenige	bajo		1
	medium	moyen	mittel	medio		2
	many	grand	viele	alto		3
9.	QN	VG				
	Peduncle: rugosity	Pédoncule : rugosité	Blütenstandsstiel: Blasigkeit	Pedúnculo: rugosidad		
	absent or weak	absente ou très faible	fehlend oder gering	ausente o leve	Corvette	1
	medium	moyenne	mittel	media	Zafretweet	2
	strong	forte	stark	intensa	Lovely Romance	3
10. (*)	QN	VG	(+)			
	Spike: angle with peduncle	Épi : angle par rapport au pédoncule	Ähre: Winkel mit dem Blütenstandsstiel	Espiga: ángulo con el pedúnculo		
	small	petit	klein	pequeño		3
	medium	moyen	mittel	medio	Yellow Passion	5
	large	grand	groß	grande	Corvette	7
11. (*)	QN	MG/MS/VG	(+)			
	Spike: length	Épi : longueur	Ähre: Länge	Espiga: longitud		
	short	court	kurz	corta		3
	medium	moyen	mittel	media	Yellow Passion	5
	long	long	lang	larga	Clementine	7
12. (*)	QN	MG/MS/VG				
	Spike: number of flowers and buds	Épi : nombre de fleurs et boutons	Ähre: Anzahl Blüten und Knospen	Espiga: número de flores y botones		
	few	petit	wenige	bajo		3
	medium	moyen	mittel	medio	Golden Passion	5
	many	grand	viele	alto	Zantrechat	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13. (*)	QN	MG/VG	(+)			
	Spike: length of rachis between first and second flower	Épi : longueur du rachis entre la première et la deuxième fleur	Ähre: Länge der Spindel zwischen erster und zweiter Blüte	Espiga: longitud del raquis entre la primera flor y la segunda		
	short	courte	kurz	corto	Fragrant Sunburst	1
	medium	moyenne	mittel	medio	Golden Passion	2
	long	longue	lang	largo	Pink Attraction	3
14.	QN	MG/VG	(+)			
	Spike: length of rachis between second and third flower	Épi : longueur du rachis entre la deuxième et la troisième fleur	Ähre: Länge der Spindel zwischen zweiter und dritter Blüte	Espiga: longitud del raquis entre la segunda flor y la tercera		
	short	courte	kurz	corto	Fragrant Sunburst	1
	medium	moyenne	mittel	medio	Golden Passion	2
	long	longue	lang	largo	Clementine	3
15. (*)	QN	VG	(+)			
	Spike: degree of zig-zag	Épi : degré du zig-zag	Ähre: Zickzack-Ausprägung	Espiga: grado de zigzag		
	weak	faible	gering	débil	Sunsett River	1
	medium	moyen	mittel	medio	Clementine	2
	strong	fort	stark	fuerte	Zafretweet	3
16. (*)	QN	VG	(+)			
	Spike: curvature of distal part	Épi : courbure de la partie distale	Ähre: Krümmung des distalen Teils	Espiga: curvatura de la parte distal		
	absent or weak	nulle ou faible	fehlend oder gering	ausente o débil	Zafretweet	1
	medium	moyenne	mittel	media	Lovely River	2
	strong	forte	stark	fuerte		3
17.	QN	VG	(+)			
	Spike: angle between the rows of flowers	Épi : angle entre les rangs de fleurs	Ähre: Winkel zwischen den Blütenreihen	Espiga: ángulo entre las hileras de flores		
	absent or small	nul ou petit	fehlend oder klein	nulo o pequeño	Clementine	1
	medium	moyen	mittel	medio	Zafretweet	2
	large	grand	groß	grande	White Floret	3
18. (*)	QN	MG/VG	(+)			
	Flower bud: ratio length/width	Bouton floral : rapport longueur/largeur	Blütenknospe: Verhältnis Länge/Breite	Botón floral: relación longitud/anchura		
	low	petit	klein	baja	Lovely Romance	1
	medium	moyen	mittel	media	Lovely River	2
	high	grand	groß	alta	Purple Velvet	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19. (*)	QN VG	(+) (b)				
	Flower: type	Fleur : type	Blüte: Typ	Flor: tipo		
	single	simple	einfach	simple	Golden Passion	1
	semi-double	semi-double	halbgefüllt	semidoble	Clementine	2
	double	double	gefüllt	doble	Zafrevil	3
20.	QN VG					
	Flower: fragrance	Fleur : parfum	Blüte: Duft	Flor: fragancia		
	absent or weak	absent ou faible	fehlend oder gering	ausente o débil	Delta River	1
	medium	moyen	mittel	media	Gold River	2
	strong	fort	stark	fuerte	Belleville	3
21.	QN MG/MS/VG	(b)				
	Bract: length	Bractée : longueur	Deckblatt: Länge	Bráctea: longitud		
	short	courte	kurz	corta	Moon River	1
	medium	moyenne	mittel	media	Gold River	2
	long	longue	lang	larga		3
22.	QN VG	(b)				
	Bract: intensity of green color	Bractée : intensité de la couleur verte	Deckblatt: Intensität der Grünfärbung	Bráctea: intensidad del color verde		
	light	claire	hell	claro	Lovely River	1
	medium	moyenne	mittel	medio	Red River	2
	dark	foncée	dunkel	oscuro	Zafreblos	3
23.	QN VG	(b)				
	Bract: anthocyanin coloration	Bractée : pigmentation anthocyanique	Deckblatt: Anthocyanfärbung	Bráctea: pigmentación antociánica		
	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Avalanche	1
	medium	moyenne	mittel	intermedia	Zanmunimba	2
	strong	forte	stark	fuerte	Zafrecost	3
24. (*)	QN MG/MS/VG	(b)				
	Perianth tube: length	Tube du périanthe : longueur	Röhre der Blütenhülle: Länge	Tubo del perianto: longitud		
	short	court	kurz	corto		1
	medium	moyen	mittel	medio	Lovely River	2
	long	long	lang	largo	Golden Passion	3
25. (*)	PQ VG	(b)				
	Perianth tube: main color	Tube du périanthe : couleur principale	Röhre der Blütenhülle: Hauptfarbe	Tubo del perianto: color principal		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*)	QN	MG/MS/VG	(b)			
	Perianth throat: length	Gorge du périanthe : longueur	Schlund der Blütenhülle: Länge	Garganta del perianto: longitud		
	short	courte	kurz	corta	Anouk	1
	medium	moyenne	mittel	media	Zapogrum	2
	long	longue	lang	larga	White River	3
27. (*)	QN	MG/VG	(b)			
	Perianth throat: width of distal part	Gorge du périanthe : largeur de la partie distale	Schlund der Blütenhülle: Breite des distalen Teils	Garganta del perianto: anchura de la parte distal		
	narrow	étroite	schmal	estrecha	Zafretweet	1
	medium	moyenne	mittel	media	Corvette	2
	broad	large	breit	ancha	Clementine	3
28.	PQ	VG	(b)			
	Perianth throat: main color of outer side	Gorge du périanthe : couleur principale de la face extérieure	Schlund der Blütenhülle: Hauptfarbe der Außenseite	Garganta del perianto: color principal de la cara externa		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
29. (*)	PQ	VG	(b)			
	Perianth throat: main color of inner side	Gorge du périanthe : couleur principale de la face intérieure	Schlund der Blütenhülle: Hauptfarbe der Innenseite	Garganta del perianto: color principal de la cara interna		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
30. (*)	QN	VG	(+)	(b)		
	Perianth throat: number of stripes on inner side	Gorge du périanthe : nombre de stries sur la face intérieure	Schlund der Blütenhülle: Anzahl Streifen auf der Innenseite	Garganta del perianto: número de rayas en la cara interna		
	few	petit	wenige	bajo	Sunsett River	3
	medium	moyen	mittel	medio	Red Passion	5
	many	grand	viele	alto	Clementine	7
31. (*)	QN	MG/VG	(b), (c)			
	Perianth: length of outer segment	Périanthe : longueur du segment extérieur	Blütenhülle: Länge des Außensegments	Perianto: longitud del segmento exterior		
	short	courte	kurz	corto	Red Passion	3
	medium	moyenne	mittel	medio	Golden Passion	5
	long	longue	lang	largo	Hofuni	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32. (*)	QN MG/VG	(b), (c)				
	Perianth: width of outer segment	Périanthe : largeur du segment extérieur	Blütenhülle: Breite des Außensegments	Perianto: anchura del segmento exterior		
	narrow	étroits	schmal	estrecho	Fragrant Sunburst	3
	medium	moyens	mittel	medio	Golden Passion	5
	broad	larges	breit	ancho	Zafremijou	7
33.	QN MG/VG	(+) (b), (c)				
	Perianth: ratio length/width of outer segment	Périanthe : rapport longueur/largeur du segment extérieur	Blütenhülle: Verhältnis Länge/Breite des Außensegments	Perianto: relación longitud/anchura del segmento exterior		
	low	petit	klein	baja		1
	medium	moyen	mittel	media		2
	high	grand	groß	alta		3
34. (*)	QN VG	(b), (c)				
	Perianth: position of broadest part of outer segment	Périanthe : position de la partie la plus large du segment extérieur	Blütenhülle: Position des breitesten Teils des Außensegments	Perianto: posición de la parte más ancha del segmento exterior		
	towards base	vers la base	zur Basis hin	hacia la base		1
	at middle	au milieu	in der Mitte	en el medio	Lovely Lake	2
	towards apex	vers le sommet	zur Spitze hin	hacia el ápice	Boulevard	3
35. (*)	PQ VG	(b), (c), (d)				
	Perianth: main color of inner side of outer segment	Périanthe : couleur principale de la face intérieure du segment extérieur	Blütenhülle: Hauptfarbe der Innenseite des Außensegments	Perianto: color principal de la cara interna del segmento exterior		
	RHS colour chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
36. (*)	PQ VG	(b), (c), (d)				
	Perianth: secondary color of inner side of outer segment (if present)	Périanthe : couleur secondaire de la face intérieure du segment extérieur (si elle est présente)	Blütenhülle: Sekundärfarbe der Innenseite des Außensegments (falls vorhanden)	Perianto: color secundario de la cara interna del segmento exterior (si existe)		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
37. (*)	PQ VG	(+) (b), (c)				
	Perianth: distribution of secondary color of inner side of outer segment	Périanthe : distribution de la couleur secondaire de la face intérieure du segment extérieur	Blütenhülle: Verteilung der Sekundärfarbe der Innenseite des Außensegments	Perianto: distribución del color secundario de la cara interna de los segmentos exterior		
	at base	à la base	an der Basis	en la base	Lovely Lake	1
	flushed	traces diffuses	flächig	difuso	Boulevard	2
	along veins	le long des nervures	entlang der Adern	a lo largo de los nervios	Zafremijou	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
38. (*)	QN MG/VG	(b), (c)				
	Perianth: length of inner segment	Périanthe : longueur du segment intérieur	Blütenhülle: Länge des Innensegments	Perianto: longitud del segmento interior		
	short	court	kurz	corto	Port Salut	3
	medium	moyen	mittel	medio	Lovely Romance	5
	long	long	lang	largo	Red Mountain	7
39. (*)	QN MG/VG	(b), (c)				
	Perianth: width of inner segment	Périanthe : largeur du segment intérieur	Blütenhülle: Breite des Innensegments	Perianto: anchura del segmento interior		
	narrow	étroit	schmal	estrecho	Festival	3
	medium	moyen	mittel	medio	Zapogrum	5
	broad	large	breit	ancho	Zafrebini	7
40. (*)	QN MG/VG	(+) (b), (c)				
	Perianth: ratio length/width of inner segment	Périanthe : rapport longueur/largeur du segment intérieur	Blütenhülle: Verhältnis Länge/Breite des Innensegments	Perianto: relación longitud/anchura del segmento interior		
	low	petit	klein	baja		1
	medium	moyen	mittel	media		2
	high	grand	groß	alta		3
41. (*)	QN VG	(b), (c)				
	Perianth: position of broadest part of inner segment	Périanthe : position de la partie la plus large du segment intérieur	Blütenhülle: Position des breitesten Teils des Innensegments	Perianto: posición de la parte más ancha del segmento interior		
	towards base	vers la base	zur Basis hin	hacia la base	Lovely Lake	1
	at middle	au milieu	in der Mitte	en el medio	Zafrevil	2
	towards apex	vers le sommet	zur Spitze hin	hacia el ápice		3
42. (*)	QN VG	(+) (b), (c)				
	Perianth: attitude of inner segment	Périanthe : port du segment intérieur	Blütenhülle: Haltung des Innensegments	Perianto: porte del segmento interior		
	semi-erect	demi-dressé	halbaufrecht	semierecto	Lovely White	1
	horizontal	horizontal	waagrecht	horizontal	Golden Passion	2
	reflexed	réfléchi	gebogen	recurvado		3
43. (*)	PQ VG	(b), (c), (d)				
	Perianth: main color of inner side of inner segment	Périanthe : couleur principale de la face intérieure du segment intérieur	Blütenhülle: Hauptfarbe der Innenseite des Innensegments	Perianto: color principal de la cara interna del segmento interior		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

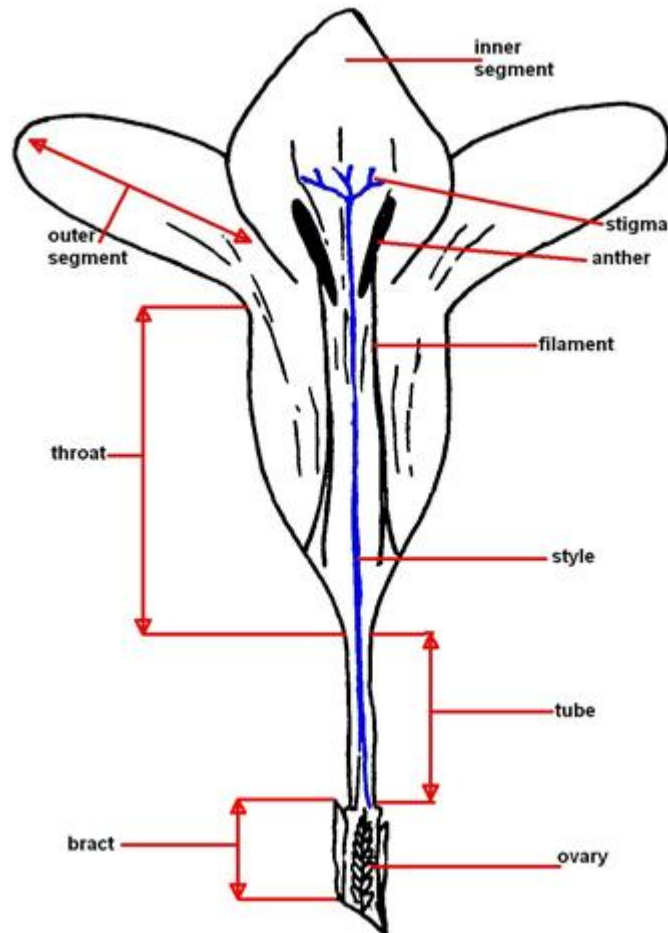
	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
44. (*)	PQ VG	(b), (c), (d)				
	Perianth: secondary color of inner side of inner segment	Périanthe : couleur secondaire de la face intérieure du segment intérieur	Blütenhülle: Sekundärfarbe der Innenseite des Innensegments	Perianto: color secundario de la cara interna del segmento interior		
	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
45. (*)	PQ VG	(+) (b), (c)				
	Perianth: distribution of secondary color of inner side of inner segment	Périanthe : distribution de la couleur secondaire de la face intérieure du segment intérieur	Blütenhülle: Verteilung der Sekundärfarbe der Innenseite des Innensegments	Perianto: distribución del color secundario de la cara interna del segmento interior		
	at base	à la base	an der Basis	en la base	Lovely Lake	1
	flushed	traces diffuses	flächig	difuso	Pink Attraction	2
	along veins	le long des nervures	entlang der Adern	a lo largo de los nervios	Zafrepapil	3
46.	QN VG	(+) (b), (c)				
	Perianth: area of secondary color at base of inner side of inner segment	Périanthe : surface de la couleur secondaire à la base de la face intérieure du segment intérieur	Blütenhülle: Fläche der Sekundärfarbe an der Basis der Innenseite des Innensegments	Perianto: superficie del color secundario en la base de la cara interna del segmento interior		
	small	petite	klein	pequeña		3
	medium	moyenne	mittel	media		5
	large	grande	groß	grande		7
47. (*)	PQ VG	(b), (e)				
	Filament: main color	Filet : couleur principale	Staubfaden: Hauptfarbe	Filamento: color principal		
	white	blanc	weiß	blanco	Clementine	1
	yellow	jaune	gelb	amarillo	Yellow Passion	2
	blue	bleu	blau	azul		3
48. (*)	QL VG	(+) (b), (e)				
	Anther: main color	Anthère : couleur principale	Anthere: Hauptfarbe	Antera: color principal		
	white	blanche	weiß	blanco	Golden Passion	1
	violet	violette	violett	violeta	Red Passion	2
49. (*)	PQ VG	(b), (d), (e)				
	Style: main color	Style : couleur principale	Griffel: Hauptfarbe	Estilo: color principal		
	white	blanc	weiß	blanco	Golden Passion	1
	yellow	jaune	gelb	amarillo	Vancouver	2
	blue	bleu	blau	azul	Purple Velvet	3

	English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
50.	QN	VG	(+)	(b), (e)				
	Stigma: position in relation to anthers		Style : position par rapport aux anthères		Griffel: Stellung im Verhältnis zu Antheren	Estigma: posición en relación con las anteras		
	below		en dessous		unterhalb	por debajo	Clementine	1
	same level		au même niveau		in gleicher Höhe	al mismo nivel	Golden Passion	2
	above		au-dessus		oberhalb	por encima	Red Passion	3
51. (*)	QN	MG/VG	(+)	(b), (e)				
	Stigma: length of lobes		Stigmate : longueur des lobes		Narbe: Länge der Lappen	Estigma: longitud de los lóbulos		
	short		courts		kurz	cortos		1
	medium		moyens		mittel	medios	Vancouver	2
	long		longs		lang	largos	Clementine	3
52.	QN	VG	(+)	(b), (e)				
	Stigma: appearance of lobes		Stigmate : aspect des lobes		Narbe: Aussehen der Lappen	Estigma: aspecto de los lóbulos		
	fine		fin		fein	finos	Pink Devotion	1
	medium		moyen		mittel	intermedios	Clementine	2
	coarse		grossier		grob	grosseros		3
53.	QN	VG	(+)	(b), (e)				
	Stigma: color in relation to upper part of style		Stigmate : couleur par rapport à la partie supérieure de style		Narbe: Farbe im Verhältnis zum oberen Teil des Griffels	Estigma: color en relación con la parte superior del estilo		
	lighter		plus claire		heller	más claro	Fragrant Sunburst	1
	same		identique		gleich	igual	Golden Passion	2
	darker		plus foncée		dunkler	más oscuro	Red Passion	3

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Observations should be made when 50% of the flowers on a spike have opened.



Characteristics containing the following key should be examined as indicated below:

- (a) Observations on leaves should be made on the longest fully expanded leaves.
- (b) Observations on bracts and flower should be made on fully open flowers of the main spike.
- (c) Observations on the inner and outer segments should be made on the largest segment of the flowers of the main spike
- (d) The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color. In cases where the areas of the secondary and tertiary color are approximately the same, the darker color is considered to be the secondary color.
- (e) Observations on filament, anther, style and stigma should be made on single and semi-double flowers only.

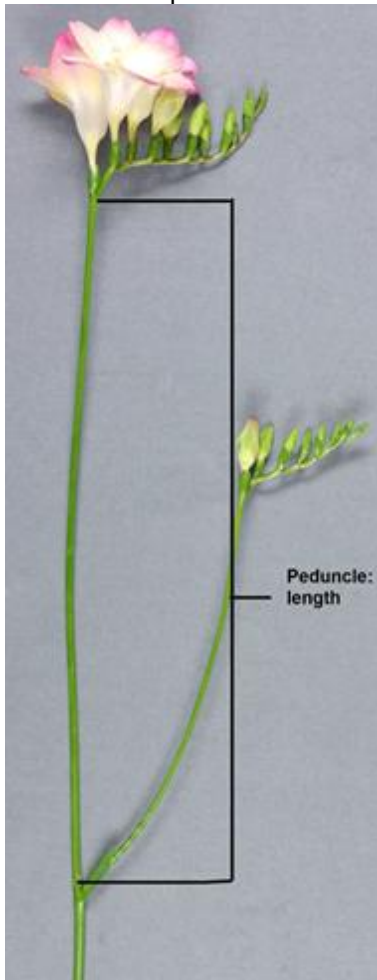
8.2 *Explanations for individual characteristics*

Ad. 1: Plant: height



Ad. 6: Peduncle: length

Peduncle length should be observed from the point of attachment of the upper lateral branch to the first flower of the spike



Ad. 7: Peduncle: thickness

Peduncle thickness should be observed at the middle third of the peduncle

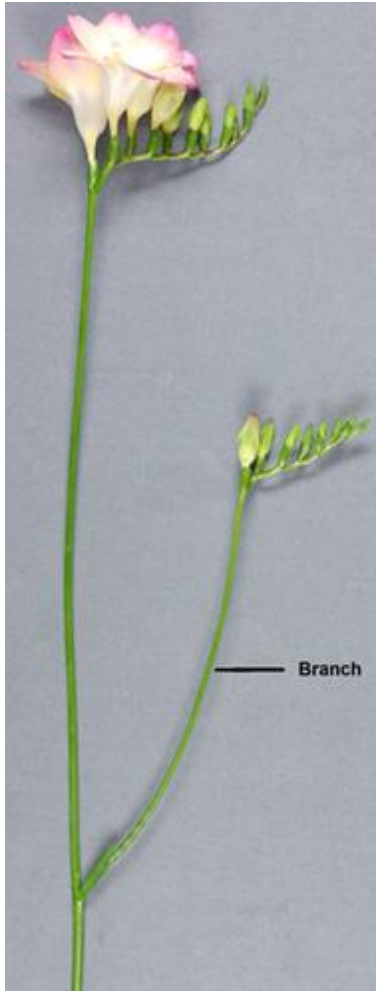
Ad. 8: Peduncle: number of branches

The total number of branches of the peduncle should be observed.

Note 1 (few): < 3 branches

Note 2 (medium): 3 – 5 branches

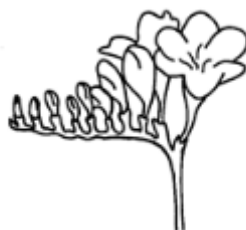
Note 3 (many): > 5 branches



Ad. 10: Spike: angle with peduncle



3
small

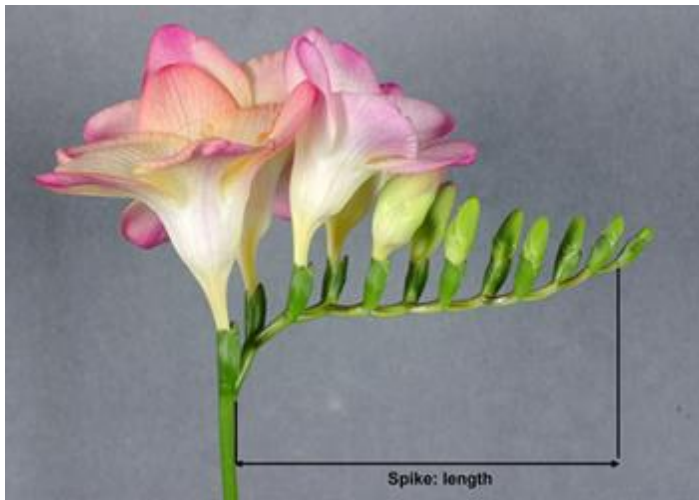


5
medium



7
large

Ad. 11: Spike: length



Ad. 13: Spike: length of rachis between first and second flower



Ad. 14: Spike: length of rachis between second and third flower



Ad. 15: Spike: degree of zig-zag



1
weak



2
medium



3
strong

Ad. 16: Spike: curvature at distal part



1
absent or weak



2
medium



3
strong

Ad. 17: Spike: angle between the rows of flowers



1
absent or small



2
medium



3
large

Ad. 18: Flower bud: ratio length/width

Observations on bud should be made on the first flower of the main spike just before opening of the bud.



1
low



2
medium



3
high

Ad. 19: Flower: type

Single flowers have up to 6 tepals. Semi-double flowers have between 7 and 9 tepals. Double flowers have more than 9 tepals.



1
single



2
semi-double



3
double

Ad. 30: Perianth throat: number of stripes on inner side



Ad. 33: Perianth: ratio length/width of outer segment



1
low



2
medium



3
high

Ad. 37: Perianth: distribution of secondary color of inner side of outer segment



1
at base



2
flushed

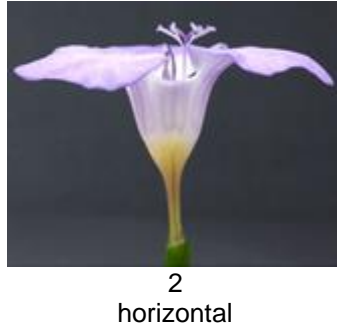
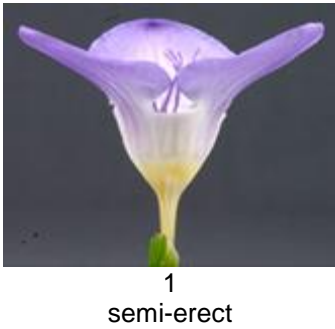


3
along veins

Ad. 40: Perianth: ratio length/width of inner segment



Ad. 42: Perianth: attitude of inner segment



Ad. 45: Perianth: distribution of secondary color of inner side of inner segment

See Ad. 37

Ad. 46: Perianth: area of secondary color at base of inner side of inner segment



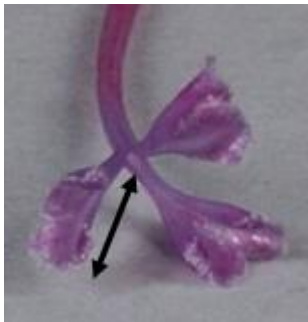
Ad. 48: Anther: main color

Observations on the color should be made just before dehiscence of the anther.

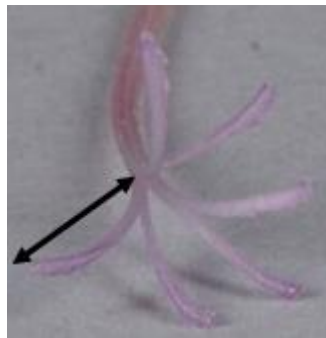
Ad. 50: Stigma: position in relation to anthers

Observations on the position of the stigma should be made just before dehiscence of the anthers.

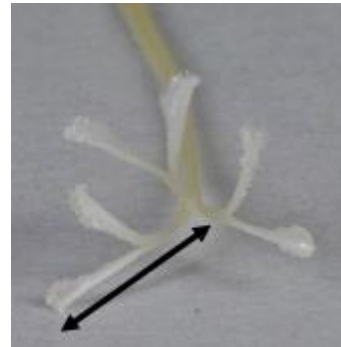
Ad. 51: Stigma: length of lobes



1
short



2
medium



3
long

Ad. 52: Stigma: appearance of lobes



1
fine



2
medium



3
coarse

Ad. 53: Stigma: color in relation to upper part of style

Observation on color of upper part of style should be made just before dehiscence of the anthers.

9. Literature

Bryan, John. E., 2002: Bulbs. Timber Press. Portland, Oregon, US, pp. 233 to pp. 235

Chittenden, Fred J., 1977: Dictionary of Gardening. Clarendon Press, Oxford, UK, pp. 836 to 837

Synge, Patrick M., 1961: Collins Guide to Bulbs. R & R Clark LTD, Edinburgh, UK, pp. 126 to 127

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	<input type="text" value="Freesia Eckl. ex Klatt"/>
1.2	Common name	<input type="text" value="Freesia"/>
2. Applicant		
	Name	<input type="text"/>
	Address	<input type="text"/>
	Telephone No.	<input type="text"/>
	Fax No.	<input type="text"/>
	E-mail address	<input type="text"/>
	Breeder (if different from applicant)	<input type="text"/>
3. Proposed denomination and breeder's reference		
	Proposed denomination (if available)	<input type="text"/>
	Breeder's reference	<input type="text"/>

#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)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

- (a) Self-pollination []
- (b) Hybrid []
- (c) Other (please provide details) []

4.2.2 Vegetative propagation

- (a) Corms []
- (b) Other (state method) []

4.2.3 Other (Please provide details) []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
5.1 Plant: height (1)		
very short		1 []
very short to short		2 []
short	Fragrant Sunburst	3 []
short to medium		4 []
medium	Golden Passion	5 []
medium to tall		6 []
tall	Algarve	7 []
tall to very tall		8 []
very tall		9 []
5.2 Spike: length (11)		
very short		1 []
very short to short		2 []
short		3 []
short to medium		4 []
medium	Yellow Passion	5 []
medium to long		6 []
long	Clementine	7 []
long to very long		8 []
very long		9 []
5.3 Flower: type (19)		
single	Golden Passion	1 []
semi-double	Clementine	2 []
double	Zafrevil	3 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.4 (i) Perianth: main color of inner side of outer segment (35)		
RHS colour chart (indicate reference number)		
5.4 (ii) Perianth: main color of inner side of outer segment (35)		
white		1 []
yellow		2 []
yellow orange		3 []
orange		4 []
pink		5 []
red		6 []
violet		7 []
blue violet		8 []
blue		9 []
5.5 (i) Perianth: main color of inner side of inner segment (43)		
RHS Colour Chart (indicate reference number)		
5.5 (ii) Perianth: main color of inner side of inner segment (43)		
white		1 []
yellow		2 []
yellow orange		3 []
orange		4 []
pink		5 []
red		6 []
violet		7 []
blue violet		8 []
blue		9 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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
<i>Example</i>	<i>Plant: height</i>	<i>short</i>	<i>medium</i>
Comments:			

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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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 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 photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (<http://www.upov.int/tgp/en/>).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

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:
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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. 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

[End of document]