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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

ALSTROEMERIA*

UPOV Code(s): ALSTR

Alstroemeria L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from the Netherlands
to be considered by the
Technical Committee
at its fifty-fifth session, to be held in Geneva,
from 2019-10-28 to 2019-10-29

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Alstroemeria L.	Alstroemeria, Herb Lily	Alstroemère, Lis des Incas	Inkalilie	Alstromeria

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 *Alstroemeria* L..

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 young plants.

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

8 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

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

Each test should be designed to result in a total of at least 8 plants.

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 7 plants or parts of plants taken from each of 7 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 of 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 8 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) Leaf blade: variegation (characteristic 8)
(c) Flower: main color (characteristic 13)

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)-(d) 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**	**(+) (a)**				
		Plant: height	**Plante : hauteur**	**Pflanze: Höhe**	**Planta: altura**		
		short	basse	niedrig	baja	Alsdun01, Tesnoram	3
		medium	moyenne	mittel	media	Konaribean, Tesrome	5
		tall	haute	hoch	alta	Konplatina, Zalsabri	7
2.	**(*)**	**QN MG/MS/VG**	**(+) (a)**				
		Stem: thickness	**Tige : épaisseur**	**Stiel: Dicke**	**Tallo: grosor**		
		thin	fine	dünn	delgado	Alsdun01, Tesmoonli	3
		medium	moyenne	mittel	medio	Kongrenday, Zalsabri	5
		thick	épaisse	dick	grueso	Konplatina, Zalsatista	7
3.		**QN VG**		**(a)**			
		Stem: anthocyanin coloration	**Tige : pigmentation anthocyanique**	**Stiel: Anthocyanfärbung**	**Tallo: pigmentación antociánica**		
		absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil		1
		weak	faible	gering	débil		3
		medium	moyenne	mittel	media		5
		strong	forte	stark	fuerte		7
4.		**PQ VG**		**(a)**			
		Stem: distribution of anthocyanin coloration	**Tige : répartition de la pigmentation anthocyanique**	**Stiel: Verteilung der Anthocyanfärbung**	**Tallo: distribución de la pigmentación antociánica**		
		at base only	à la base uniquement	nur an der Basis	solo en la base	Konantarct	1
		basal half only	moitié basale uniquement	nur basale Hälfte	solo en la mitad inferior	Konalegria	2
		basal and apical part	partie basale et apicale	basaler und apikaler Teil	en la zona inferior y apical	Zanalsron	3
		throughout	partout	überall	en la totalidad	Staqueen	4
5.	**(*)**	**QN MG/MS/VG**	**(+) (a), (b)**				
		Leaf: length	**Feuille : longueur**	**Blatt: Länge**	**Hoja: longitud**		
		short	courte	kurz	corta	Konaribean, Zalsabri	3
		medium	moyenne	mittel	media	Alsdun01, Tesmars	5
		long	longue	lang	larga	Konplatina, Zanalsron	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	**(*)**	**QN MG/MS/VG**	**(+) (a), (b)**				
		Leaf: width	**Feuille : largeur**	**Blatt: Breite**	**Hoja: anchura**		
		narrow	étroite	schmal	estrecha	Konplatina, Zanalsron	3
		medium	moyenne	mittel	media	Konaribean, Zalsabri	5
		broad	large	breit	ancha	Alsdun01, Tesnoram	7
7.		**QN VG**	**(+) (a), (b)**				
		Leaf blade: attitude	**Limbe : port**	**Blattspreite: Haltung**	**Limbo: porte**		
		semi-erect	demi-dressé	halbaufrecht	semierecto		3
		horizontal	horizontal	waagerecht	horizontal		5
		semi-drooping	demi-retombant	halbüberhängend	semicolgante		7
8.	**(*)**	**QL VG**	**(+) (a), (b)**				
		Leaf blade: variegation	**Limbe : panachure**	**Blattspreite: Panaschierung**	**Limbo: variegación**		
		absent	absente	fehlend	ausente		1
		present	présente	vorhanden	presente	Alsdun01	9
9.	**(*)**	**QL VG**	**(+) (a), (b)**				
		Leaf blade: greyish colored longitudinal stripes	**Limbe : bandes longitudinales grisâtres**	**Blattspreite: gräulich gefärbte Längsstreifen**	**Limbo: estrías longitudinales de color grisáceo**		
		absent	absentes	fehlend	ausentes		1
		present	présentes	vorhanden	presentes		9
10.	**(*)**	**QN MG/MS/VG**	**(+) (a)**				
		Umbel: length of ray	**Ombelle : longueur des rayons**	**Dolde: Länge der Zungenblüte**	**Umbela: longitud de los radios**		
		short	courts	kurz	cortos	Alsdun01, Konaribean	3
		medium	moyens	mittel	medios	Konplatina, Tesmars	5
		long	longs	lang	largos	Konswitch	7
11.	**(*)**	**QN MG/MS/VG**		**(a)**			
		Umbel: number of rays	**Ombelle : nombre de rayons**	**Dolde: Anzahl der Zungenblüten**	**Umbela: número de radios**		
		few	faible	gering	bajo	Tesmoonli, Zapriliarange	3
		medium	moyen	mittel	medio	Konplatina, Zalsabri	5
		many	élevé	groß	alto	Alsdun01, Konaribean	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12.	**(*)**	**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: length of pedicel	**Fleur : longueur du pédicelle**	**Blüte: Länge des Blütenstiels**	**Flor: longitud del pedicelo**		
		short	court	kurz	corto	Alsdun01, Zalsabri	3
		medium	moyen	mittel	medio	ESM T122, Konplatina	5
		long	long	lang	largo	Tesmars, Tesnoram	7
13.	**(*)**	**PQ VG**		**(a), (c), (d)**			
		Flower: main color	**Fleur : couleur principale**	**Blüte: Hauptfarbe**	**Flor: color principal**		
		white	blanche	weiß	blanco	Konantarct, Tesmoonli	1
		yellow green	vert jaune	gelbgrün	verde amarillento	Kongrenday	2
		light yellow	jaune clair	hellgelb	amarillo claro	Gataran, Konwpearls	3
		medium yellow	jaune moyen	mittelgelb	amarillo medio	Konaribean	4
		orange	orange	orange	naranja	ESM T122, Staqueen	5
		light pink	rose clair	hellrosa	rosa claro	Tesnoram	6
		medium pink	rose moyen	mittelrosa	rosa medio	Zalsabri	7
		blue pink	bleu rose	blaurosa	rosa azulado	Konswitch	8
		orange red	rouge orangé	orangeroot	rojo anaranjado	Zalsance, Zapriliarange	9
		red	rouge	rot	rojo	Alsdun01	10
		purple red	rouge pourpre	rotpurpurn	rojo púrpura	Konalegria, Tesrome	11
		light purple	pourpre clair	hellpurpurn	púrpura claro	Tesmars	12
		medium purple	pourpre moyen	mittelpurpurn	púrpura medio	Konplatina	13
		dark purple	pourpre foncé	dunkelpurpurn	púrpura oscuro	Zalsatista	14
14.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: length in frontal view	**Fleur : longueur en vue de face**	**Blüte: Länge in Vorderansicht**	**Flor: longitud en vista frontal**		
		short	courte	kurz	corta	Konwpearls	3
		medium	moyenne	mittel	media	Alsdun01, Kongrenday	5
		long	longue	lang	larga	Gataran, Zalsatista	7
15.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: width in frontal view	**Fleur : largeur en vue de face**	**Blüte: Breite in Vorderansicht**	**Flor: anchura en vista frontal**		
		narrow	étroite	schmal	estrecha	Konwpearls	3
		medium	moyenne	mittel	media	Tesmoonli, Zalsabri	5
		broad	large	breit	ancha	Gataran, Zalsatista	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: ratio length/width	**Fleur : rapport longueur/largeur**	**Blüte: Verhältnis Länge/Breite**	**Flor: relación longitud/anchura**		
		low	bas	klein	baja	Tespale	3
		medium	moyen	mittel	media	Gataran, Tesrome	5
		high	élevé	groß	alta	Konswitch	7
17.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: length	**Fleur : longueur**	**Blüte: Länge**	**Flor: longitud**		
		short	courte	kurz	corta		3
		medium	moyenne	mittel	media		5
		long	longue	lang	larga		7
18.	**(*)**	**PQ VG**	**(+) (a), (c)**				
		Outer tepal: shape of blade	**Tépale externe : forme du limbe**	**Äußeres Perigonblatt: Form der Spreite**	**Tépalo externo: forma del limbo**		
		circular	circulaire	kreisförmig	circular		1
		broad elliptic	elliptique large	breit elliptisch	elíptica ancha	Konwpearls	2
		medium elliptic	elliptique moyen	mittel elliptisch	elíptica media	Zalsance	3
		broad obovate	obovale large	breit verkehrt eiförmig	oboval ancha	Alsdun01, Zalsatista	4
		medium obovate	obovale moyen	mittel verkehrt eiförmig	oboval media	Kongrenday	5
19.		**QN VG**	**(+) (a), (c)**				
		Outer tepal: emargination	**Tépale externe : échancrure**	**Äußeres Perigonblatt: Kerbung**	**Tépalo externo: emarginación**		
		shallow	peu profonde	flach	poco profundo	Alsdun01, Konplatina	3
		medium	moyenne	mittel	medio	Konswitch, Tesmoonli	5
		deep	profonde	tief	profundo	Tesrome, Zalsabri	7
20.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Outer tepal: main color of outer side	**Tépale externe : couleur principale de la face externe**	**Äußeres Perigonblatt: Hauptfarbe der Außenseite**	**Tépalo externo: color principal del lado exterior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
21.	**(*)**	**QN VG**	**(+) (a), (c)**				
		Outer tepal: area of green color of outer side	**Tépale externe : surface occupée par la couleur verte sur la face externe**	**Äußeres Perigonblatt: Fläche der grünen Farbe der Außenseite**	**Tépalo externo: zona de color verde del lado exterior**		
		absent or very small	nulle ou très petite	fehlend oder sehr klein	ausente o muy pequeña	Alsdun01, ESM T122	1
		small	petite	klein	pequeña	Tesmoonli, Zalsabri	2
		medium	moyenne	mittel	media	Tesmars, Zalsanebli	3
		large	grande	groß	grande	Gataran	4
22.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Outer tepal: main color of central zone of inner side	**Tépale externe : couleur principale de la zone centrale de la face interne**	**Äußeres Perigonblatt: Hauptfarbe der mittleren Zone der Innenseite**	**Tépalo externo: color principal de la zona central del lado interior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
23.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Outer tepal: main color of top zone of inner side (green area excluded)	**Tépale externe : couleur principale de la zone supérieure de la face interne (surface verte exclue)**	**Äußeres Perigonblatt: Hauptfarbe der oberen Zone der Innenseite (grün Fläche ausgeschlossen)**	**Tépalo externo: color principal de la zona superior del lado interior (excluida la zona verde)**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
24.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Outer tepal: main color of lateral zone of inner side	**Tépale externe : couleur principale de la zone latérale de la face interne**	**Äußeres Perigonblatt: Hauptfarbe der lateralen Zone der Innenseite**	**Tépalo externo: color principal de la zona lateral del lado interior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
25.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Outer tepal: main color of basal zone of inner side	**Tépale externe : couleur principale de la zone basale de la face interne**	**Äußeres Perigonblatt: Hauptfarbe der lateralen Zone der Innenseite**	**Tépalo externo: color principal de la zona inferior del lado interior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.	**(*)**	**QN**	**VG**	**(+)**	**(a), (c)**				
		Outer tepal: small stripes on marginal part of lateral zone of inner side		**Tépale externe : petites stries sur la partie marginale de la zone latérale de la face interne**		**Äußeres Perigonblatt: kleine Streifen am Rand der lateralen Zone der Innenseite**	**Tépalo externo: estrías pequeñas en la parte marginal de la zona lateral del lado interior**		
		absent or very few		aucune ou très peu		fehlend oder sehr wenige	ausentes o muy pocas	Alsdun01, Konplatina	1
		few		peu		wenige	pocas	Kongrenday	3
		medium		moyennement nombreuses		mittel	medias	Zalsatista	5
		many		nombreuses		viele	abundantes		7
27.	**(*)**	**QN**	**VG**	**(+)**	**(a), (c)**				
		Outer tepal: large stripes on inner side (marginal zone excluded)		**Tépale externe : larges stries sur la face interne (zone marginale exclue)**		**Äußeres Perigonblatt: große Streifen an der Innenseite (Randzone ausgeschlossen)**	**Tépalo externo: estrías anchas en el lado interior (excluida la zona marginal)**		
		absent or very few		aucune ou très peu		fehlend oder sehr wenige	ausentes o muy pocas	Alsdun01, Konplatina	1
		few		peu		wenige	pocas	ESM T122	2
		medium		moyennement nombreuses		mittel	medias		3
		many		nombreuses		viele	abundantes		4
		very many		très nombreuses		sehr viele	muy abundantes		5
28.	**(*)**	**PQ**	**VG**	**(+)**	**(a), (c)**				
		Inner lateral tepal: shape		**Tépale interne latéral : forme**		**Inneres laterales Perigonblatt: Form**	**Tépalo lateral interno: forma**		
		medium elliptic		elliptique moyen		mittel elliptisch	elíptica media	Tespolar, Zalsabri	1
		narrow elliptic		elliptique étroit		schmal elliptisch	elíptica estrecha	Kongrenday	2
		medium obovate		obovale moyen		mittel verkehrt eiförmig	oboval media	Zapriliarange	3
		narrow obovate		obovale étroit		schmal verkehrt eiförmig	oboval estrecha	Konwpearls	4
29.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of central zone of inner side		**Tépal interne latéral : couleur principale de la zone centrale de la face interne**		**Inneres laterales Perigonblatt: Hauptfarbe der mittleren Zone der Innenseite**	**Tépalo lateral interno: color principal de la zona central del lado interior**		
		RHS Colour Chart (indicate reference number)		Code RHS des couleurs (indiquer le numéro de référence)		RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of apical zone of inner side		**Tépale interne latéral : couleur principale de la zone apicale de la face interne**		**Inneres laterales Perigonblatt: Hauptfarbe der apikalen Zone der Innenseite**	**Tépalo lateral interno: color principal de la zona apical del lado interior**		
		RHS Colour Chart (indicate reference number)		Code RHS des couleurs (indiquer le numéro de référence)		RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
31.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of basal zone of inner side		**Tépale interne latéral : couleur principale de la zone basale de la face interne**		**Inneres laterales Perigonblatt: Hauptfarbe der basalen Zone der Innenseite**	**Tépalo lateral interno: color principal de la zona inferior del lado interior**		
		RHS Colour Chart (indicate reference number)		Code RHS des couleurs (indiquer le numéro de référence)		RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
32.	**(*)**	**QN**	**MG/VG**	**(+)**	**(a), (c)**				
		Inner lateral tepal: number of stripes on inner side		**Tépale interne latéral : nombre de stries sur la face interne**		**Inneres laterales Perigonblatt: Anzahl der Streifen auf der Innenseite**	**Tépalo lateral interno: número de estrías en el lado interior**		
		absent or very few		aucune ou très peu		fehlend oder sehr gering	ausentes o muy bajo	Tesmars	1
		few		peu		gering	bajo	Alsdun01	3
		medium		moyennement nombreuses		mittel	medio	Konplatina, Zalsabri	5
		many		nombreuses		groß	alto	ESM T122, Gataran	7
		very many		très nombreuses		sehr groß	muy alto	Zalsatista	9
33.	**(*)**	**QN**	**VG**	**(+)**	**(a), (c)**				
		Inner lateral tepal: area of striped zone on inner side		**Tépale interne latéral : surface occupée par la zone striée sur la face interne**		**Inneres laterales Perigonblatt: Fläche der gestreiften Zone auf der Innenseite**	**Tépalo lateral interno: superficie de la zona estriada en el lado interior**		
		small		petite		klein	pequeña	Tesmars	3
		medium		moyenne		mittel	media	Alsdun01, Zalsabri	5
		large		grande		groß	grande	Konplatina	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34.	**(*)**	**QN MG/MS/VG**	**(+) (a), (c)**				
		Inner lateral tepal: length of stripes on inner side	**Tépale interne latéral : longueur des stries sur la face interne**	**Inneres laterales Perigonblatt: Länge der Streifen auf der Innenseite**	**Tépalo lateral interno: longitud de las estrías en el lado interior**		
		very short	très courtes	sehr kurz	muy cortas		1
		short	courtes	kurz	cortas	Alsdun01, Tesmars	3
		medium	moyennes	mittel	medias	Konaribean, Konplatina	5
		long	longues	lang	largas	Tesnoram, Zapriliarange	7
		very long	très longues	sehr lang	muy largas		9
35.	**(*)**	**QN MG/VG**	**(+) (a), (c)**				
		Inner lateral tepal: width of stripes on inner side	**Tépale interne latéral : largeur des stries sur la face interne**	**Inneres laterales Perigonblatt: Breite der Streifen auf der Innenseite**	**Tépalo lateral interno: anchura de las estrías en el lado interior**		
		very narrow	très étroites	sehr schmal	muy estrechas		1
		narrow	étroites	schmal	estrechas	Alsdun01, Konaribean	3
		medium	moyennes	mittel	medias	Konplatina, Tesmoonli	5
		broad	larges	breit	anchas	Konantarct, Zalsatista	7
		very broad	très larges	sehr breit	muy anchas		9
36.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Inner median tepal: main color of inner side	**Tépale interne médian : couleur principale de la face interne**	**Inneres laterales Perigonblatt: Hauptfarbe der Innenseite**	**Tépalo medio interno: color principal del lado interior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		
37.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Inner median tepal: secondary color of inner side	**Tépale interne médian : couleur secondaire de la face interne**	**Inneres laterales Perigonblatt: Sekundärfarbe der Innenseite**	**Tépalo medio interno: color secundario del lado interior**		
		RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indicar número de referencia)		

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
38.	**(*)**	**QN MG/VG**	**(a), (c)**				
		Inner median tepal: number of stripes on inner side	**Tépale interne médian : nombre de stries sur la face interne**	**Inneres laterales Perigonblatt: Anzahl der Streifen auf der Innenseite**	**Tépalo medio interno: número de estrías en el lado interior**		
		absent or very few	aucune ou très peu	fehlend oder sehr gering	ausentes o muy bajo	Alsdun01, Tesmars	1
		few	peu	gering	bajo	Tesrome, Zalsabri	3
		medium	moyennement nombreuses	mittel	medio	ESM T122, Zanalsron	5
		many	nombreuses	groß	alto	Zalsatista	7
39.	**(*)**	**PQ VG**	**(+) (a), (c)**				
		Anther: color	**Anthère : couleur**	**Anthere: Farbe**	**Antera: color**		
		greenish	verdâtre	grünlich	verdoso	Konplatina, Tesmoonli	1
		yellowish	jaunâtre	gelblich	amarillento	Zalsabri	2
		orange	orange	orange	naranja	Alsdun01, Konaribean	3
		purplish	violacée	purpurn	purpúreo	Tespolar, Zalsanebli	4
		blue	bleue	blau	azul	Gataran, Konswitch	5
		brownish	brunâtre	bräunlich	pardusco		6
		medium grey	gris moyen	mittelgrau	gris medio		7
		dark grey	gris foncé	dunkelgrau	gris oscuro		8
40.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		Filament: main color	**Filet : couleur principale**	**Staubfaden: Hauptfarbe**	**Filamento: color principal**		
		white	blanc	weiß	blanco	Konantarct, Zalsabri	1
		yellow	jaune	gelb	amarillo	ESM T122, Gataran	2
		orange	orange	orange	naranja	Konaribean	3
		orange red	rouge orangé	orangerot	rojo anaranjado	Alsdun01, Zalsance	4
		red	rouge	rot	rojo	Tesronto, Zaprikate	5
		pink	rose	rosa	rosa	Kongrenday, Tesnoram	6
		red purple	rouge pourpre	rotpurpurn	púrpura rojizo	Konalegria, Tesrome	7
		light purple	violet clair	hellpurpurn	púrpura claro	Konplatina, Tesmoonli	8
		medium purple	violet moyen	mittelpurpurn	púrpura medio	Tesmars, Zalsatista	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41.	**(*)**	**QN VG**	**(+) (a), (c)**				
		Filament: spots	**Filet : taches**	**Staubfaden: Flecken**	**Filamento: manchas**		
		absent or very few	aucune ou très peu	fehend oder sehr wenige	ausentes o muy pocas		1
		few	peu	wenige	pocas		2
		medium	moyennement nombreuses	mittel	medias		3
		many	nombreuses	viele	abundantes		4
		very many	très nombreuses	sehr viele	muy abundantes		5
42.	**(*)**	**QL VG**	**(+) (a), (c)**				
		Stigma: spots	**Stigmate : taches**	**Narbe: Flecken**	**Estigma: manchas**		
		absent	absentes	fehlend	ausentes		1
		present	présentes	vorhanden	presentes		9
43.	**(*)**	**QN VG**	**(+) (a), (c)**				
		Ovary: extent of anthocyanin coloration	**Ovaire : étendue de la pigmentation anthocyanique**	**Fruchtknoten: Ausdehnung der Anthocyanfärbung**	**Ovario: extensión de la pigmentación antociánica**		
		absent or very small	absente ou très petite	fehlend oder sehr klein	ausente o muy pequeña	Konswitch, Tesmoonli	1
		small	petite	klein	pequeña	Konplatina, Zalsabri	3
		medium	moyenne	mittel	media	Alsdun01, Zalsatista	5
		large	grande	groß	grande	Konaribean, Tesmars	7
		very large	très grande	sehr groß	muy grande	Tespale	9

8. Explanations on the Table of Characteristics

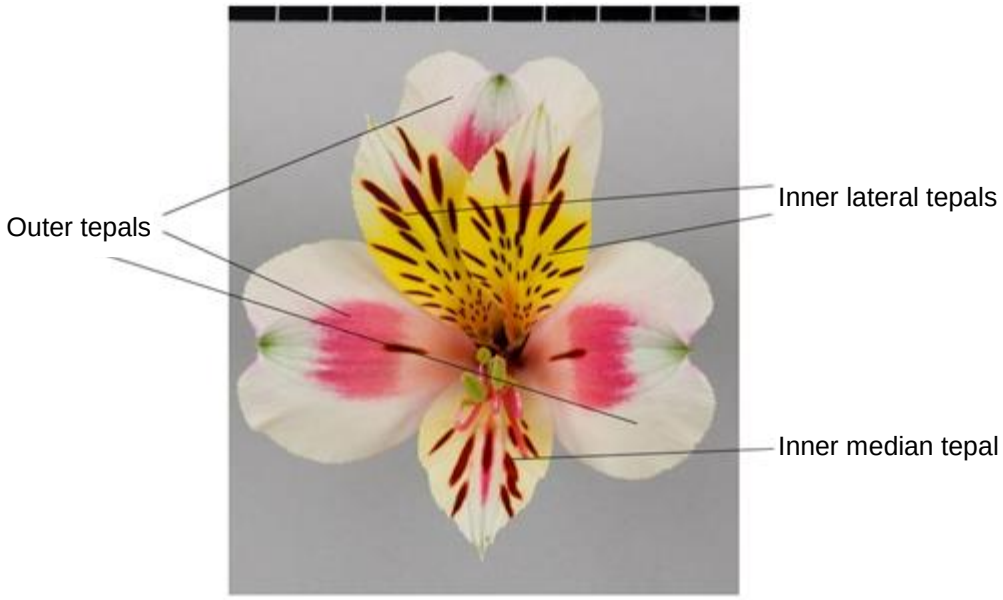
8.1 Explanations covering several characteristics

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

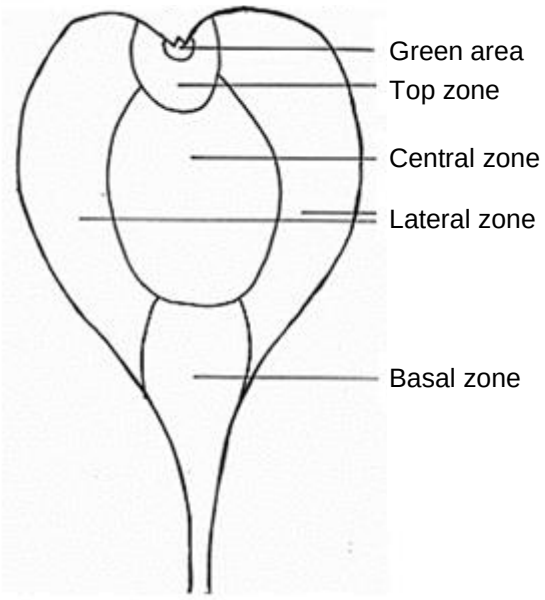
(a) Unless otherwise indicated, all observations should be made on the first fully developed stem when 50% of the flowers are open.

(b) Observations on the leaves should be made on leaves taken from the middle third of the stem.

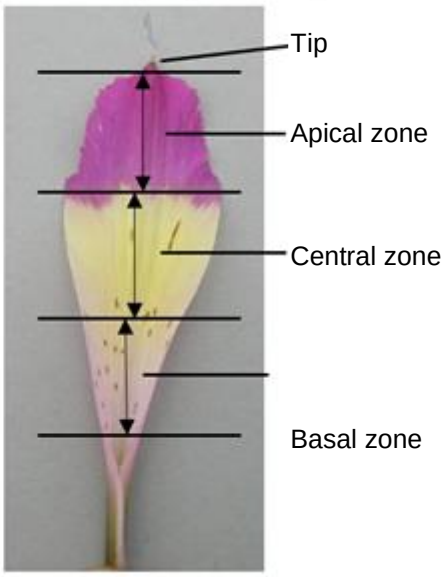
(c) Observations on the flower should be made at the time of dehiscence of the first anther in an individual flower.



Outer tepal (inner side)



Inner lateral tepal (inner side)



(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 surface area, the darker color is considered to be the main color.

8.2 Explanations for individual characteristics

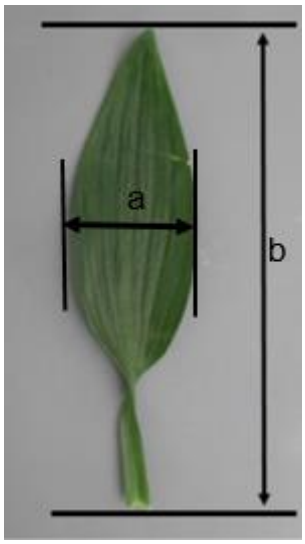
Ad. 1: Plant: height

Plant height should be observed from soil level to the top of the plant, including the flowers.

Ad. 2: Stem: thickness

The thickness of the stem should be assessed at the middle third of the stem.

Ad. 5: Leaf: length



a = Leaf: width
b = Leaf: length

Ad. 6: Leaf: width

See Ad. 5

Ad. 7: Leaf blade: attitude

3
semi-erect

5
horizontal

7
semi-drooping

Ad. 8: Leaf blade: variegation

For observing the number of colors, the greyish colored stripe should be excluded.

a = outer side

a = greyish colored stripe

1
absent

9
present

Ad. 9: Leaf blade: greyish colored longitudinal stripes

1
absent

9
present

Ad. 10: Umbel: length of ray

Ad. 12: Flower: length of pedicel

Ad. 14: Flower: length in frontal view

Ad. 15: Flower: width in frontal view

Ad. 16: Flower: ratio length/width

3
low

5
medium

7
high

Ad. 17: Flower: length

Ad. 18: Outer tepal: shape of blade

relative width	← broadest part →	
	at middle	above middle
narrow	 3 medium elliptic	 5 medium obovate
medium	 2 broad elliptic	 4 broad ovate
broad	 1 circular	

Ad. 19: Outer tepal: emargination

3
shallow

5
medium

7
deep

Ad. 21: Outer tepal: area of green color of outer side

1
absent or very small

2
small

3
medium

4
large

Ad. 26: Outer tepal: small stripes on marginal part of lateral zone of inner side

1
absent or very few

3
few

5
medium

7
many

Ad. 27: Outer tepal: large stripes on inner side (marginal zone excluded)

1	2	3	4
absent or very few	few	medium	many

Ad. 28: Inner lateral tepal: shape

relative width	← broadest part →	
	at middle	above middle
narrow	 2 narrow elliptic	 4 narrow obovate
medium	 1 medium elliptic	 3 medium obovate

Ad. 32: Inner lateral tepal: number of stripes on inner side

1	3	5	7	9
absent or very few	few	medium	many	very many

Ad. 33: Inner lateral tepal: area of striped zone on inner side

3	5	7
small	medium	large

Ad. 34: Inner lateral tepal: length of stripes on inner side

Observations should be made on the longest stripes, excluding the stripe on the central vein.

1	3	5	7	9
very short	short	medium	long	very long

Ad. 35: Inner lateral tepal: width of stripes on inner side

Observations should be made on the widest stripes, excluding the stripe on the central vein.

1	3	5	7	9
very narrow	narrow	medium	broad	very broad

Ad. 39: Anther: color

To be observed just before dehiscence.

Ad. 41: Filament: spots

1
absent or very few

2
few

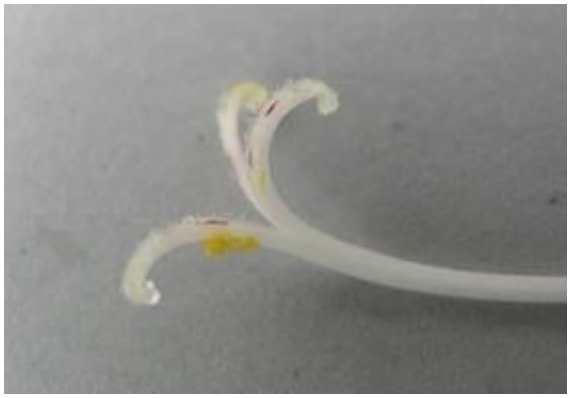
3
medium

4
many

5
very many

Ad. 42: Stigma: spots

1
absent



9
present

Ad. 43: Ovary: extent of anthocyanin coloration

1
absent or very small

3
small

5
medium

7
large

9
very large

9. Literature

Grunert, Ch., 1980: Das Blumenzwiebelbuch. Verlag Eugen Ulmer. Stuttgart, DE, x pp.

The Royal General Bulbgrowers' Association, 1991: International Checklist for Hyacinths and Miscellaneous Bulbs. Koninklijke Algemeene Vereeniging voor Bloembollencultuur. Hillegom, NL, pp. 15 to 47

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	*Alstroemeria* L.
1.2	Common name	Alstroemeria, Herb Lily
1.3	Species:	

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 [ ]

4.2.2 Vegetative propagation

(a) *In vitro* propagation [ ]
(b) Division [ ]
(c) Other (state method) [ ]

4.2.3 Other [ ]
(Please provide details)

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)	**Plant: height**		
	very short		1 [ ]
	very short to short		2 [ ]
	short	Alsdun01, Tesnoram	3 [ ]
	short to medium		4 [ ]
	medium	Konaribean, Tesrome	5 [ ]
	medium to tall		6 [ ]
	tall	Konplatina, Zalsabri	7 [ ]
	tall to very tall		8 [ ]
	very tall		9 [ ]
5.2 (8)	**Leaf blade: variegation**		
	absent		1 [ ]
	present		9 [ ]
5.3 (13)	**Flower: main color**		
	white	Konantarct, Tesmoonli	1 [ ]
	yellow green	Kongrenday	2 [ ]
	light yellow	Gataran, Konwpearls	3 [ ]
	medium yellow	Konaribean	4 [ ]
	orange	ESM T122, Staqueen	5 [ ]
	light pink	Tesnoram	6 [ ]
	medium pink	Zalsabri	7 [ ]
	blue pink	Konswitch	8 [ ]
	orange red	Zalsance, Zapriliarange	9 [ ]
	red	Alsdun01	10 [ ]
	purple red	Konalegria, Tesrome	11 [ ]
	light purple	Tesmars	12 [ ]
	medium purple	Konplatina	13 [ ]
	dark purple	Zalsatista	14 [ ]

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
Example	*Plant: height*	*short*	*medium*

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 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:

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]