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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 Working Party for Ornamental Plants and Forest Trees
at its fifty-first session, to be held in Christchurch, New Zealand,
from 2019-02-18 to 2019-02-22

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.]

TABLE OF CONTENTS PAGE

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 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: number of colors on outer side (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					
		short				Alsdun01, Tesnoram	3
		medium				Konaribean, Tesrome	5
		tall				Konplatina, Zalsabri	7
2.	**(*)**	**QN MG/MS/VG**	**(+) (a)**				
		Stem: thickness					
		thin				Alsdun01, Tesmoonli	3
		medium				Kongrenday, Zalsabri	5
		thick				Konplatina, Zalsatista	7
3.		**QN VG**	**(a)**				
		Stem: anthocyanin coloration					
		absent or very weak					1
		weak					3
		medium					5
		strong					7
4.		**QN VG**	**(a)**				
		Stem: distribution of anthocyanin coloration					
		at base only				Konantarct	1
		basal half only				Konalegria	2
		basal and apical part				Zanalsron	3
		throughout				Staqueen	4
5.		**QN MG/MS/VG**	**(+) (a), (b)**				
		Leaf: length					
		short				Konaribean, Zalsabri	3
		medium				Alsdun01, Tesmars	5
		long				Konplatina, Zanalsron	7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.		**QN MG/MS/VG**	**(a), (b)**				
		Leaf: width					
		narrow				Konplatina, Zanalsron	3
		medium				Konaribean, Zalsabri	5
		broad				Alsdun01, Tesnoram	7
7.		**QN VG**	**(+) (a), (b)**				
		Leaf blade: attitude					
		semi-erect					3
		horizontal					5
		semi-drooping					7
8.	**(*)**	**QL VG**	**(+) (a), (b)**				
		Leaf blade: number of colors on outer side					
		one					1
		two					2
		more than two				Alsdun01	3
9.		**QL VG**	**(+) (a), (b)**				
		Leaf blade: "silvery" colored longitudinal stripes					
		absent					1
		present					9
10.	**(*)**	**QN MG/MS/VG**	**(+) (a)**				
		Umbel: length of ray					
		short				Alsdun01, Konaribean	3
		medium				Konplatina, Tesmars	5
		long				Konswitch	7
11.	**(*)**	**QN MG/MS/VG**	**(a)**				
		Umbel: number of rays					
		few				Tesmoonli, Zapriliarange	3
		medium				Konplatina, Zalsabri	5
		many				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					
		short				Alsdun01, Zalsabri	3
		medium				ESM T122, Konplatina	5
		long				Tesmars, Tesnoram	7
13.	**(*)**	**PQ VG**	**(a), (c), (d)**				
		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
14.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: length in frontal view					
		short				Konwpearls	3
		medium				Alsdun01, Kongrenday	5
		long				Gataran, Zalsatista	7
15.		**QN MG/MS/VG**	**(+) (a), (c)**				
		Flower: width in frontal view					
		narrow				Konwpearls	3
		medium				Tesmoonli, Zalsabri	5
		broad				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					
		low				Tespale	3
		medium				Gataran, Tesrome	5
		high				Konswitch	7
17.		**QN MG/MS/VG**	**(+)**	**(a), (c)**			
		Flower: height in side view					
		short					3
		medium					5
		long					7
18.	**(*)**	**PQ VG**	**(+)**	**(a), (c)**			
		Outer tepal: shape of blade					
		medium elliptic				Zalsance	1
		broad elliptic				Konwpearls	2
		round					3
		medium obovate				Kongrenday	4
		broad obovate				Alsdun01, Zalsatista	5
19.		**QN VG**	**(+)**	**(a), (c)**			
		Outer tepal: emargination					
		shallow				Alsdun01, Konplatina	3
		medium				Konswitch, Tesmoonli	5
		deep				Tesrome, Zalsabri	7
20.	**(*)**	**PQ VG**		**(a), (c), (d)**			
		Outer tepal: main color of outer side					
		RHS Colour Chart (indicate reference number)					
21.	**(*)**	**QN VG**	**(+)**	**(a), (c)**			
		Outer tepal: area of green color of outer side					
		absent or very small				Alsdun01, ESM T122	1
		small				Tesmoonli, Zalsabri	2
		medium				Tesmars, Zalsanebli	3
		large				Gataran	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Outer tepal: main color of central zone of inner side					
		RHS Colour Chart (indicate reference number)					
23.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Outer tepal: main color of top zone of inner side (green area excluded)					
		RHS Colour Chart (indicate reference number)					
24.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Outer tepal: main color of lateral zone of inner side					
		RHS Colour Chart (indicate reference number)					
25.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Outer tepal: main color of basal zone of inner side (green area excluded)					
		RHS Colour Chart (indicate reference number)					
26.	**(*)**	**QN** **VG**	**(+)** **(a), (c)**				
		Outer tepal: small stripes on marginal part of lateral zone of inner side					
		absent or very few				Alsdun01, Konplatina	1
		few				Kongrenday	3
		medium				Zalsatista	5
		many					7

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
27.	**(*)**	**QN**	**VG**	**(+)**	**(a), (c)**				
		Outer tepal: large stripes on inner side (marginal zone excluded)							
		absent						Alsdun01, Konplatina	1
		few						ESM T122	2
		medium							3
		many							4
28.	**(*)**	**PQ**	**VG**	**(+)**	**(a), (c)**				
		Inner lateral tepal: shape							
		narrow elliptic						Kongrenday	1
		medium elliptic						Tespolar, Zalsabri	2
		narrow obovate						Konwpearls	3
		medium obovate						Zapriliarange	4
29.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of central zone of inner side							
		RHS Colour Chart (indicate reference number)							
30.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of apical zone of inner side (tip excluded)							
		RHS Colour Chart (indicate reference number)							
31.	**(*)**	**PQ**	**VG**		**(a), (c), (d)**				
		Inner lateral tepal: main color of basal zone of inner side							
		RHS Colour Chart (indicate reference number)							

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32.	**(*)**	**QN MG/VG**	**(+)**	**(a), (c)**			
		Inner lateral tepal: number of stripes on inner side					
		absent or very few				Tesmars	1
		few				Alsdun01	3
		medium				Konplatina, Zalsabri	5
		many				ESM T122, Gataran	7
		very many				Zalsatista	9
33.	**(*)**	**QN VG**	**(+)**	**(a), (c)**			
		Inner lateral tepal: area of striped zone on inner side					
		small				Tesmars	3
		medium				Alsdun01, Zalsabri	5
		large				Konplatina	7
34.	**(*)**	**QN MG/MS/VG**	**(+)**	**(a), (c)**			
		Inner lateral tepal: length of longest stripes on inner side (stripe on central vein excluded)					
		short				Alsdun01, Tesmars	3
		medium				Konaribean, Konplatina	5
		long				Tesnoram, Zapriliarange	7
35.	**(*)**	**QN MG/VG**	**(+)**	**(a), (c)**			
		Inner lateral tepal: width of widest stripes on inner side (stripe on central vein excluded)					
		narrow				Alsdun01, Konaribean	3
		medium				Konplatina, Tesmoonli	5
		broad				Konantarct, Zalsatista	7
36.	**(*)**	**PQ VG**		**(a), (c), (d)**			
		Inner median tepal: main color of inner side					
		RHS Colour Chart (indicate reference number)					

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Inner median tepal: secondary color of inner side					
		RHS Colour Chart (indicate reference number)					
38.	**(*)**	**QN** **MG/VG**	**(a), (c)**				
		Inner median tepal: number of stripes on inner side					
		absent or very few				Alsdun01, Tesmars	1
		few				Tesrome, Zalsabri	3
		medium				ESM T122, Zanalsron	5
		many				Zalsatista	7
39.	**(*)**	**PQ** **VG**	**(+)** **(a), (c)**				
		Anther: color					
		greenish				Konplatina, Tesmoonli	1
		yellowish				Zalsabri	2
		orange				Alsdun01, Konaribean	3
		purplish				Tespolar, Zalsanebli	4
		brownish				Gataran, Konswitch	5
		blue					6
		medium grey					7
		dark grey					8
40.	**(*)**	**PQ** **VG**	**(a), (c), (d)**				
		Filament: main color					
		white				Konantarct, Zalsabri	1
		yellow				ESM T122, Gataran	2
		orange				Konaribean	3
		orange red				Alsdun01, Zalsance	4
		red				Tesronto, Zaprikate	5
		pink				Kongrenday, Tesnoram	6
		red purple				Konalegria, Tesrome	7
		light purple				Konplatina, Tesmoonli	8
		medium purple				Tesmars, Zalsatista	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
41.	**(*)**	**QN VG**	**(+)**	**(a), (c)**			
		Filament: spots					
		absent or very few					1
		few					2
		medium					3
		many					4
		very many					5
42.	**(*)**	**QL VG**	**(+)**	**(a), (c)**			
		Stigma: spots					
		absent					1
		present					9
43.	**(*)**	**QN VG**	**(+)**	**(a), (c)**			
		Ovary: anthocyanin coloration					
		absent or very weak				Konswitch, Tesmoonli	1
		weak				Konplatina, Zalsabri	3
		medium				Alsdun01, Zalsatista	5
		strong				Konaribean, Tesmars	7
		very strong				Tespale	9

8. Explanations on the Table of Characteristics

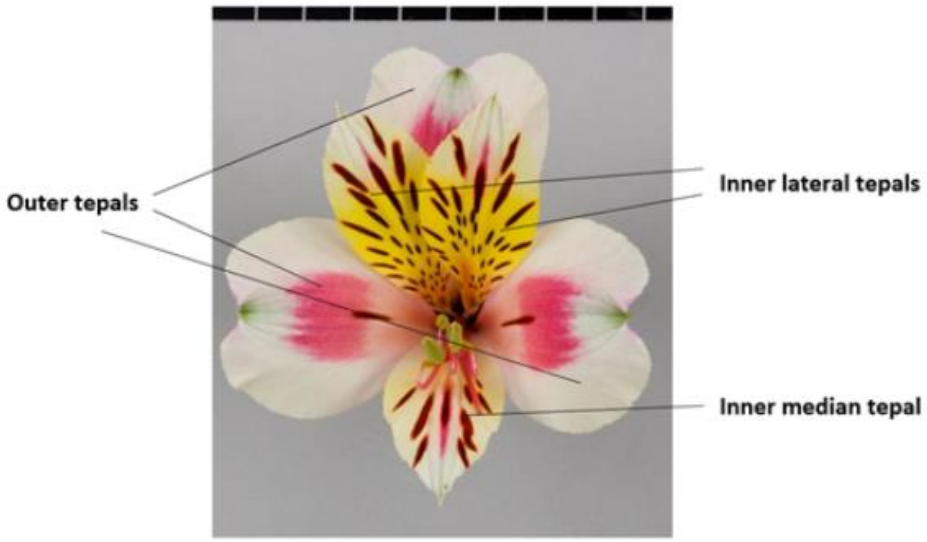
8.1 Explanations covering several characteristics

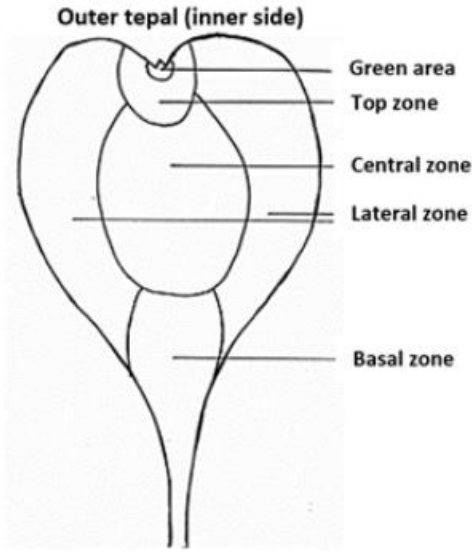
Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

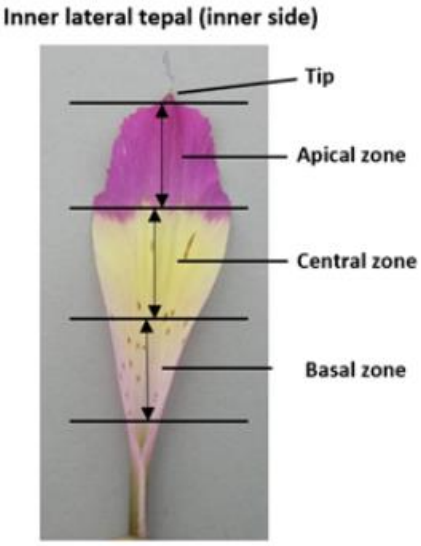
(a) Unless otherwise indicated, all observations should be made on the first fully developed stem when 50% of the flowers are open.

(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.







(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

Ad. 7: Leaf blade: attitude

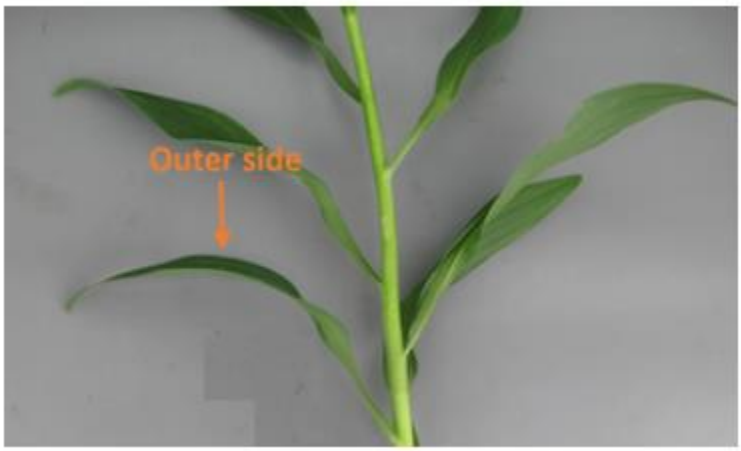
3
semi-erect

5
horizontal

7
semi-drooping

Ad. 8: Leaf blade: number of colors on outer side

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



1
one

2
two

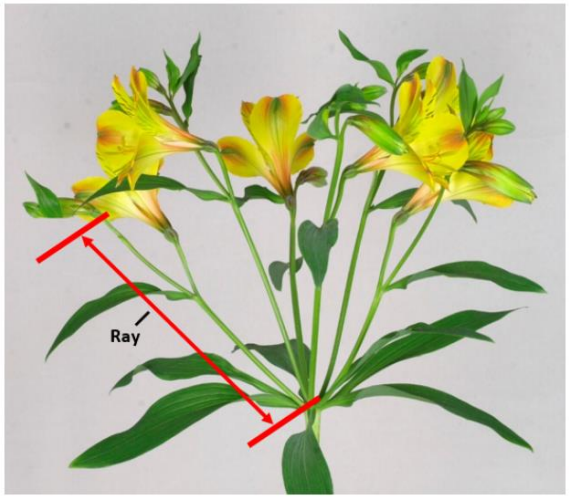
3
more than two

Ad. 9: Leaf blade: “silvery” 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: height in side view

Ad. 18: Outer tepal: shape of blade

	← broadest part →		
	below middle	at middle	above middle
broad ← width → narrow		 1 medium elliptic	 4 moderately obovate
		 2 broad elliptic	 5 broad obovate
		 3 round	

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 weak

3
weak

5
medium

7
strong

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
absent

2
few

3
medium

4
many

Ad. 28: Inner lateral tepal: shape

	← broadest part →		
	below middle	at middle	above middle
broad ← width → narrow		 1 narrow elliptic	 3 narrow obovate
		 2 moderately elliptic	 4 moderately obovate

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


1
absent or very few


3
few


5
medium


7
many


9
very many

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

3
small

5
medium

7
large

Ad. 34: Inner lateral tepal: length of longest stripes on inner side (stripe on central vein excluded)

1
very short

3
short

5
medium

7
long

9
very long

Ad. 35: Inner lateral tepal: width of widest stripes on inner side (stripe on central vein excluded)

1
very narrow

3
narrow

5
medium

7
broad

9
very broad

Ad. 39: Anther: color

To be observed just before dehiscence.

Ad. 41: Filament: spots

1
absent or very few

2
few

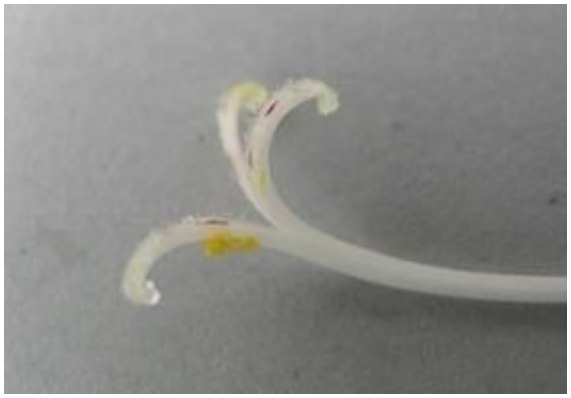
3
medium

4
many

5
very many

Ad. 42: Stigma: spots

1
absent



9
present

Ad. 43: Ovary: anthocyanin coloration

1
absent or very weak

3
weak

5
medium

7
strong

9
very strong

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

2. Applicant

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

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

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

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

4.1 Breeding scheme

Variety resulting from:

4.1.1 Crossing

(a) controlled cross [ ]

(please state parent varieties)

(……..……..…) x (……..……..…)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]

(please state parent variety)

4.1.3 Discovery and development [ ]

(please state where and when discovered and how developed)

4.1.4 Other [ ]

(please provide details)

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

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

4.2 Method of propagating the variety

4.2.1 Seed-propagated varieties

(a) [ ]
(b) Other (please provide details) [ ]

4.2.2 Vegetative propagation

(a) *In vitro* propagation [ ]
(b) Rhizomes [ ]
(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: number of colors on outer side**		
	one		1 [ ]
	two		2 [ ]
	more than two	Alsdun01	3 [ ]
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]