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



#### **GLADIOLUS**

**UPOV** Code:

Gladiolus L.

#### **GUIDELINES**

#### FOR THE CONDUCT OF TESTS

### FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from the Netherlands

to be considered by the

Technical Working Party for Ornamental Plants and Forest Trees at its forty-third session, to be held in Cuernavaca, Morelos State, Mexico, from September 20 to 24, 2010

#### Alternative Names:

 Botanical name
 English
 French
 German
 Spanish

 Gladiolus L.
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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.

<sup>\*</sup> 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 *Gladiolus* L. of the family *Iridaceae*.

## 2. <u>Material Required</u>

- 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 of commercial standard, able to show all the characteristics in the first year
- 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 Unless otherwise stated, all observations should be made at the time of full flowering.

3.3.3 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.

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- 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 / Parts of Plants to be Examined

Unless otherwise indicated, all observations for the purposes of distinctness should be made on 10 plants or parts taken from each of 10 plants, 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 second column of the Table of

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Characteristics (see document TGP/9 "Examining Distinctness", Section 4 "Observation of characteristics"):

MG: single measurement of a group of plants or parts of plants

MS: measurement of a number of individual plants or parts of plants

VG: visual assessment by a single observation of a group of plants or parts of plants

VS: visual assessment by observation of individual plants or parts of plants

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

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

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

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness."

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

#### 4.2 *Uniformity*

- 4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:
- 4.2.2 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1 % and an acceptance probability of at least 95 % should be applied. In the case of a sample size of 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) Flower: width (characteristic 15)
  - (b) Flower: main color (characteristic 17) with the following groups: white

Gr. 1: yellow

Gr. 2: orange

Gr. 3: pink orange

Gr. 4: pink

Gr. 5: purple

Gr. 6: red purple

Gr. 7: blue

Gr. 8: green

- 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. <u>Introduction to the Table of Characteristics</u>
- 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.

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## 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:

<b>State</b>	Note
<mark>small</mark>	3
medium	<u>5</u>
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:

<b>State</b>	Note
very small	1
very small to small	2
<mark>small</mark>	3
small to medium	<mark>4</mark>
<mark>medium</mark>	<mark>5</mark>
medium to large	6
<mark>large</mark>	<u>7</u>
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.

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- 6.5 Legend
- (\*) Asterisked characteristic see Chapter 6.1.2
- QL: Qualitative characteristic see Chapter 6.3
- QN: Quantitative characteristic see Chapter 6.3
- PQ: Pseudo-qualitative characteristic see Chapter 6.3

## MG, MS, VG, VS – see Chapter 4.1.5

- (a)-(c) See Explanations on the Table of Characteristics in Chapter 8.1
- (+) See Explanations on the Table of Characteristics in Chapter 8.

#### 7. <u>Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres</u>

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.		Plant: height	Plante: hauteur	Pflanze: Höhe	Planta: altura		
QN	(a)	short	basse	sehr niedrig	muy baja	Albus, Nymph	3
		medium	moyenne	mittel	media	Dainty, Shocking, White Friendship	5
		tall	haute	hoch	alta	Traderhorn, Venetië, White Prosperity	7
2.		Foliage: height	Feuillage: hauteur	Laub: Höhe			
QN	(a)	short	basse	sehr niedrig	muy baja	Spic and Span	3
		medium	moyenne	mittel	media	Caprice, Eurovision, Princess Mary Rose	3
		tall	haute	hoch	alta	Fidelio, Traderhorn	5
3.		Leaf: width					
(+)							
QN	(a)	narrow				Imperator	3
		medium				Bono's Memory, Caprice, Traderhorn, White Friendship	5
		broad				Sancerre	7
4.		Leaf: curvature of distal half					
(+)		uistai nan					
QN	(a)	absent or very weak				Jessica	1
		weak					3
		medium				Advance	5
		strong					7

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.		Inflorescence: lateral branches	Epi: branches latérales	Ähre: Seitenzv	veige		
QL	(a)	absent	absentes	fehlend		Spic and Span, Treasure	1
		present	présentes	vorhanden		Charm, White Prosperity, Rose Supreme, Elegance	9
<b>6.</b> (+)		Spike: length of flowering part					
QN	(a)	short					3
		medium					5
		long					7
7.		Spike: number of flowers	Epi: nombre de fleurs	Ähre: Anzahl	Blüten		
QN	(a)	few	petit	gering		Hawaii, Nymph	3
		medium	moyen	mittel		Little Darling, Picture, White Friendship	5
		many	grand	groß		Traderhorn	7
<b>8.</b> (+)		Spike: number of open flowers					
QN	(a)	few					3
		medium				Aurora	5
		many				Exselsa	7
9.		Spike: length of internodes					
QN	(a)	short					3
		medium					5
		long					7

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10.		Spike: arrangement of flowers	Epi: disposition des fleurs	Ähre: Anordnung der Blüten			
PQ	(a)	one row	un rang	in einer Reihe		Early Bird, Groene Specht	1
		zig-zag	en zigzag	im Zickzack		Charm, Lady Godiva	2
		two rows	deux rangs	in zwei Reihen		Carqueiranne, Jessica	3
		irregular	irrégulier	unregelmäßig		Albus, Harrogate	4
11.		Bract: shape of apex					
PQ	PQ (a)	acute				Flevo Primo, Kalderon	1
		acute to obtuse					2
		obtuse				Sophie, Mexico	3
12.		Bract: anthocyanin coloration	Bractée: pigmentation anthocyanique	Hochblatt: Anthocyanfärbung			
QN	(a)	absent or very weak	absente ou très faible	fehlend oder sehr gering		Charm, Lady Godiva, Nova Lux, White Friendship	1
		weak	faible	gering		Carqueiranne, Jessica, Spic and Span	3
		medium	moyenne	mittel		Treasure, Venetië	5
		strong	forte	stark		Firebird, Harrogate, Oscar, Flevo Junior	7
		very strong	très forte	sehr stark		Caprice	9
13.		Flower: shape in lateral view of upper					
(+)		part					
PQ	(a)	triangular				Charm, Early Bird, Lady Godiva, Flevo Laguna, Beijing	1
		star-shaped				Albus, Beauty of Holland	2
		round				Caprice, Pegasus, Orlando, Costa	3

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14.		Flower: attitude					
QN	(a)	upright					1
		horizontal				Flevo Laguna	2
		drooping					3
15.		Flower: width					
(+)							
QN	(a)	narrow				Dainty, Jackpot, Flevo Laguna	3
		medium				Groene Specht, Joyeuse Entrée, Shocking	5
		broad				Traderhorn, White Friendship	7
16.		Flower: number of colors					
PQ	(a)	selfcolored				Lady Godiva, Lucky Number, Greenstar, Jacksonville, Gold, Venus	1
		multicolored					2
<b>17.</b> (+)		Flower: main color	Fleur: couleur principale	Blüte: Hauptfarbe			
PQ	(a)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)			
18.		Flower: shading of main color					
QN	(a)	lighter towards the base					1
		not shaded					2
		lighter towards the top					3

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19.		Perianth tube: length					
QN	(a)	short				Picture	3
		medium				Anitra, Harrogate	5
		long				Zigeunerbaron	7
20.		Perianth tube: number of spots on inner side					
QN	(a)	absent or very few				Lady Godiva, Leonore	1
		few				Fire Bird, Zigeunerbaron	3
		medium				Bonaire, Nymph	5
		many				Little Darling, Mary Hously	7
		very much				Groene Specht, Jessica	9
<b>21.</b> (+)		Perianth tube: distribution of spots on inner side					
PQ	(a)	irregular				Libelle, Princess Mary Rose, Treasure	1
		in an interrupted band	I			Nymph, Picure, Sancerre	2
		in an uninterrupted band				Groene Specht, Morning Kiss, Zigeunerbaron	3
22.		Perianth throat: spots on outer side					
QL	(a)	absent					1
		present					9

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		Perianth throat: color of spot on outer side					
PQ	PQ (a)	orange				Aurora	1
		pink				White Prosperity	2
		medium red				Bonaire, Nymph	3
		dark red				Groene Specht, Jessica	4
		violet				Peter Pears, Zigeunerbaron	5
24.		Outer tepal: shape of blade					
PQ	(a)	ovate					1
		elliptic				Speranta	2
		obovate				Candida Ali	3
25.		Outer tepal: undulation of margin					
QN	(a)	absent or very weak				Albus, Ben Trovato, Caprice, Lady Godiva, Lustige Witwe	1
		weak				Jessica, Maestro, Spic and Span, Traderhorn	3
		medium				Groene Specht, White Friendship, Zigeunerbaron	5
		strong				Alice, June	7
		very strong					9

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26.		Inner tepal: undulation of margin					
QN	(a)	absent or very weak					1
		weak					3
		medium					5
		strong					7
		very strong					9
27.		Inner tepal: stripe					
PQ	(a)	absent					1
		present				Alice Caprice, Advance	9
28.		Only varieties with striped inner tepal: Inner tepal: length of stripe					
QN	(a)	short					3
		medium				Venetië, Fidelio	5
		long				Flevo Party	7
29.		Only varieties with striped inner tepals Inner tepal: width ostripe	: of				
QN	(a)	narrow					1
		medium				Spic and Span, Flevo Party	2
		wide				Flevo Salsa	3

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30.		Only varieties with striped inner tepals: Inner tepal: color of stripe					
PQ	(a)	white				Bono's Memory	1
		cream				Fire Bird, Perseus	2
		yellow				Charm, Bonaire	3
		orange					4
		pink					5
		red				Treasure	6
		purple red				Pegasus	7
		violet blue					8
		dark purple					9
31.		Only varieties with more than one color Inner tepal: macule	:				
QL	(a)	absent				Charm	1
		present				Hypnose	9
<b>32.</b> (+)		Only varieties with maculate inner tepal: Inner tepal: position of macule					
QL	(a)	at base				Flevo Sunset, Home Coming	1
		central				Traderhorn	9
33.		Only varieties with maculate inner tepal: Inner tepal: size of macule in relation to size of inner tepal					
QN	(a)	small				Victor Borge	3
		medium					5
		large				Velvet Eyes, Jazmine	7

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>34.</b> (+)		Only varieties with maculate inner tepals: Inner tepal: shape of macule					
PQ	(a)	type 1					1
		type 2					2
		type 3					3
		type 4				Zigeunerbaron	4
		type 5				Treasure	5
<b>35.</b> (+)		Only varieties with maculate inner tepals: Inner tepal: main color of macule					
PQ	(a)	RHS colour chart (indicate reference number)					1
36.		Only varieties with					
(+)		maculate inner tepals: Inner tepal: secondary color on macule					
PQ	(a)	RHS colour chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		
37.		Only varieties with maculate inner tepals: Inner tepal: margin of macule					
QN	(a)	regular or slightly irregular				Jazmine, Hypnose	1
		moderately irregular				Traderhorn, Helvetia	2
		very irregular					3
38.		Only varieties with more than one color: Inner tepal: marginal zone	:				
QL	(a)	absent					1
		present				Priscilla	9

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39.		Only varieties with marginate inner tepals: Inner tepal: width of marginal zone					
QN	(a)	narrow				Millenium, Pink Event, Flevo Junior	3
		medium					5
		broad				Priscilla	7
40.		Only varieties with marginate inner tepal: Inner tepal: appearance of marginal zone					
QN	(a)	slightly irregular					1
		moderately irregular				Priscilla	2
		very irregular					3
41.		Only varieties with margnate inner tepals: Inner tepal: color of marginal zone					
PQ	(a)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Tabla de colores RHS (indíquese el número de referencia)		
42.		Only varieties with triangular shaped perianth inner tepal in lateral view: Median inner tepal: attitude					
QN	(a)	semi-erect				Charm, Jessica	1
		semi-erect to horizontal					2
		horizontal				Bonaire, Lady Godiva, Nymph, Eva, Jester	3

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
<b>43.</b> (+)		(Only varieties with triangular shaped perianth inner tepal in lateral view): Median inner tepal: attitude of apex					
PQ	(c)	moderately hooded				Candy, Lady Godiva	1
		straight				Praha, White Prosperity	2
		slightly reflexed					3
		moderately reflexed				Charm, Nymph, Zoe	4
		strongly reflexed				Little Darling	5
44.		Filament: main color					
PQ	(a)	white				Bonaire, Nymph, White Friendship	1
		light yellow				Corona	2
		light pink				Peter Pears, Spic and Span, Traderhorn	3
		medium pink				Bono's Memory	4
		light red				Jessica, Zigeunerbaron	5
45.		Filament: small spots at base	Filet: petites taches sur la base	Staubfaden: kle Punkte an der I			
QL	(a)	absent	absentes	fehlend		Charm, Zigeunerbaron	1
		present	présentes	vorhanden		Jessica, Nymph, Traderhorn	9

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
46.		Filament: color at apex compared to main color					
QL	(a)	same color				Treasure, White Friendship, White Prosperity	1
		different color				Charm, Nymph, Traderhorn	2
<b>47.</b> (+)		Anther: color of connective	Anthère: couleur du connectif	Staubblatt: Farbe des Konnektivs			
PQ	(a)	white	blanc	weiß		White Prosperity, White Friendship, Zigeunerbaron	1
		yellow white	blanc jaune	gelbweiß		Charm, Lady Godiva	2
		light yellow	jaune clair	hellgelb		Mykonos	3
		pink	rose	rosa		Fire Bird, Peter Pears	4
48.		Anther: color of stomium	Anthère: couleur de la fente de déhiscence	Staubblatt: Farbe des Stomiums			
PQ	(a)	white	blanche	weiß		Nymph, White Friendship, White Prosperity	1
		yellow	jaune	gelb			2
		orange	orange	orange			3
		red	rouge	rot		Denisa	4
		pink purple	pourpre rose	rosapurpur		Friendship, Jessica, Princess Mary Rose	5
		blue purple	pourpre bleu	blaupurpur		Charm, Bonaire	6

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		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
49.		Style: main color	Style: couleur principale	Griffel: Haupt	farbe		
PQ	(a)	white	blanc	weiß		Nymph, Treasure	1
		yellow	jaune	gelb		Mykonos, Pegasus	2
		yellow pink	rose jaune	gelbrosa		Jessica, Peter Pears	3
		red	rouge	rot		Zigeunerbaron	4
		violet	violet	violett			5
50.		Style: color of base					
PQ	(a)	yellow green				Nymph, White Prosperity	1
		yellow white				Bonaire, Traderhorn, White Friendship, Zigeunerbaron	2
		white				Pegasus, Treasure, White Goddess	3
		pink				Excelsa	4
51.		Style: color of branches					
PQ	(a)	white				Bonaire, Lady Godiva, White Friendship	1
		light yellow				Mykonos, Pegasus	2
		light pink				Groene Specht, Treasure	3
		medium pink				Charm, Zigeunerbaron	4
		red				Princess Mary, Venetië	5
		violet					6

# TG/108/4(proj.4) Gladiolus, 2010-08-02 - 22 -

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
52.		Style: color of branches					
PQ	(a)	white				Bonaire, Lady Godiva, White Friendship	1
		light yellow				Mykonos, Pegasus	2
		light pink				Groene Specht, Treasure	3
		medium pink				Charm, Zigeunerbaron	4
		red				Princess Mary, Venetië	5
		violet					
53.		Corm: color of flesh (in cross-section)	Corme: couleur de la chair (en section transversale)	Knolle: Farbe des Fleisches (im Querschnitt)			
PQ	(a)	RHS color chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)			
54.		Time of beginning of flowering	Epoque de début de la floraison	Zeitpunkt des Blühbeginns			
QN	(a)	very early	très précoce	sehr früh		Charm, Jackpot, Leonore	1
		early	précoce	früh		Fidelio, Groene Specht, Pegasus	3
		medium	moyenne	mittel		Jessica, Nymph, Peter Pears	5
		late	tardive	spät		Evening Sun, Princess Mary Rose, White Prosperity	7
		very late	très tardive	sehr spät		Carqueianne, Prelude	9

## 8. Explanations on the Table of Characteristics

## 8.1 Explanations covering several characteristics

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

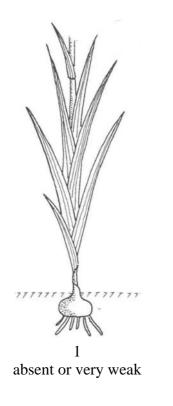
(a) Observations on plant, leaves and inflorescence should be made when the first flower is fading.

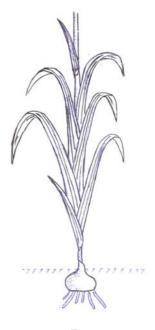
## 8.2 Explanations for individual characteristics

## Ad. 3: Leaf: width

Observations should be taken from the second-last leaf.

## Ad. 4: Leaf: curvature of distal half





7 strong

## Ad. 6: Spike: length of flowering part

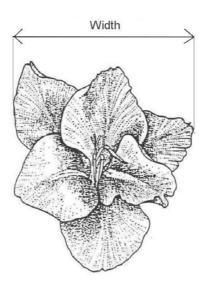


Length of flowering part

## Ad. 8: Spike: number of open flowers

All flowers which are fully open in the same time including the first flower when the first flower is fading.

## Ad. 15: Flower: width



Ad. 17: Flower: main color

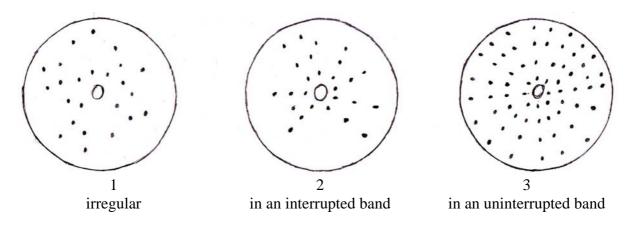
Ad. 29: Inner segment: main color of macule

Ad. 30: Inner segments: secondary color of macule

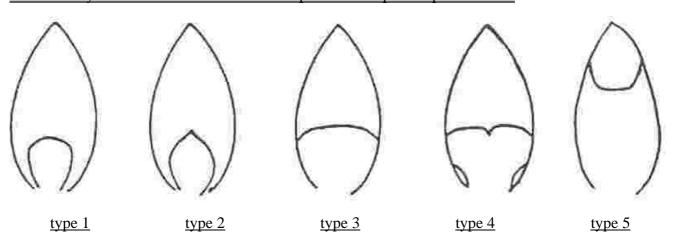
Ad. 49: Style: main color

The main color is the color with the largest total surface area, the secondary color (if present) is the color with the second largest total surface area. In case of when none of the colors is clearly predominant then the lightest color will be the main color.

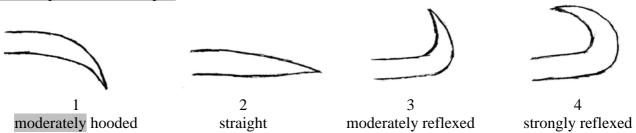
## Ad. 21: Perianth tube: number of spots on inner side



Ad: 34: Only varieties with maculate inner tepals: Inner tepal: shape of macule



Ad. 43: (Only varieties with triangular shaped perianth inner tepal in lateral view): Median inner tepal: attitude of apex



## Ad. 47: Anther: color of connective

Connective: the filament or tissue connecting the two (cells of an) anthers, particularly when those (cells) separated.

## 9. <u>Literature</u>

## 10. <u>Technical Questionnaire</u>

TECHNICAL QUESTIONNAIR			Page {x} of {y}	Reference Number:
				Application date: (not to be filled in by the applicant)
			INICAL QUESTIONN tion with an application	NAIRE on for plant breeders' rights
1.	Subject of the Technical Qu	ıesti	ionnaire	
	1.1 Botanical name	Gla	adiolus L.	
	1.2 Common name			
2.	Applicant			
	Name			
	Address			
	Telephone No.			
	Fax No.			
	E-mail address			
	Breeder (if different from a	ppli	cant)	
3.	Proposed denomination and	l bre	eeder's reference	
	Proposed denomination (if available)			
	Breeder's reference			

ΓΕCHNICAL QUESTIONNAIRE	Page (v) of (v)	Reference Number:

1. ]	Info	rmation	on the breeding scheme and propagation of the variety						
2	4.1	Breedi	eding scheme						
		Variet	esulting from:						
		4.1.1	Crossing						
			(a) controlled cross [ ] (please state parent varieties)						
		(	female parent x (						
			(b) partially known cross [ ] (please state known parent variety(ies))						
		(	female parent x (						
			(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)						
	-								

<sup>&</sup>lt;sup>#</sup> Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNI	CAL QUESTION	NAIRE 1	Page {x} of {y}	Reference Number:	
4.2	Method of prop 4.2.1 Vegetat	agating the vive propagat			
	(a) cutt	ings		[ ]	
		itro propagat er (state meth		[ ]	
***************************************	(c) othe	er (state meu	10d <i>)</i>		
<u> </u>	4.2.2 Other (please provide	details)		[ ]	
					The state of the s

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 (15)	Flower: width	
	very narrow	1[]
	very narrow to narrow	2[]
	narrow	3[]
	narrow to medium	4[]
	medium	5[]
	medium to broad	6[]
	broad	7[]
	broad to very broad	8[]
	very broad	9[]
5.2i (17)	Flower: main color	
	RHS Colour Chart (indicate reference number)	
5.2ii (17)	Flower: main color	
	white	1[]
	yellow	2[]
	orange	3[]
	pink orange	4[]
	pink	5[]
	purple	6[]
	red purple	7[]
	blue	8[]
	green	9[]

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TECHNICAL QUESTI	ONNAIRE	Page {x} o	of {y}	Reference Nu	ımber:
6. Similar varieties and Please use the following candidate variety differs is (or are) most similar examination of distincts	ng table and rs from the vo r. This inforn	box for con wriety (or va mation may	mments to crieties) wh help the e.	ich, to the bes	t of your knowledge,
Denomination(s) of variety(ies) similar to your candidate variety	ety(ies) similar to which your candidate		Describe the expression of the characteristic(s) for the <b>similar</b> variety(ies)		Describe the expression of the characteristic(s) for <b>your</b> candidate variety
Example	Plant:	height	short		medium
Comments:					

TECI	HNICA	AL QUEST	TIONNAIRE	Page {x}	of {y}	Reference Number:					
<sup>#</sup> 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	s, please p	rovide details)								
7.2	Are th	e there any special conditions for growing the variety or conducting the examination?									
	Yes	[ ]		No [	]						
	(If yes, please provide details)										
7.3	Other	Other information									
	7.3.1	7.3.1 Main use									
		(a) (b) (c) (d)	garden plan pot plant cut-flower other (please prov		s)	[ ] [ ] [ ]					
	7.3.2 Quest	A repr tionnaire.	esentative colo	or image	of the varie	ety should accompany the Technical					
8.	Autho	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)	(b) Has such authorization been obtained?									
		Yes [	]	No	[ ]						
	If the answer to (b) is yes, please attach a copy of the authorization.										

<sup>&</sup>lt;sup>#</sup> Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

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IEC	HNICA	AL QUESTIONNAIRE   Page $\{x\}$ of $\{y\}$	Reference N	umber:							
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, phytoplasm	na)	Yes [ ]	No [ ]						
	(b)	Chemical treatment (e.g. growth retardant, pestic	eide)	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]