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<p>GLADIOLUS</p> <p>UPOV Code: GLADI</p> <p><i>Gladiolus</i> L.</p>
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GUIDELINES
FOR THE CONDUCT OF TESTS
FOR DISTINCTNESS, UNIFORMITY AND STABILITY

Alternative Names: *

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Gladiolus</i> L.	Gladiolus	Glaïeul	Gladiole	Gladiolo

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 *Gladiolus* 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 corms, 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:

20 corms.

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

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 *Number of Growing Cycles*

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

3.2 *Testing Place*

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 "Examining Distinctness".

3.3 *Conditions for Conducting the Examination*

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

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

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 20 plants.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 *Additional Tests*

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 *Distinctness*

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants / Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the second column of 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 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 16) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: orange
 - Gr. 4: pink orange
 - Gr. 5: pink
 - Gr. 6: purple
 - Gr. 7: red purple
 - Gr. 8: blue
 - Gr. 9: 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. 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*

- | | | |
|----------------|--|---------------------|
| (*) | 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) | See Explanations on the Table of Characteristics in Chapter 8.1 | |
| (+) | See Explanations on the Table of Characteristics in Chapter 8.2. | |

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

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. VG/ MS (*) (+)	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
QN	short	basse	niedrig	baja	Albus, Nymph	3
	medium	moyenne	mittel	media	Dainty, Shocking, White Friendship	5
	tall	haute	hoch	alta	Traderhorn, Venetië, White Prosperity	7
2. VG/ MG (+)	Foliage: height	Feuillage : hauteur	Laub: Höhe	Follaje: altura		
QN	short	basse	niedrig	baja	Spic and Span	3
	medium	moyenne	mittel	media	Caprice, Eurovision, Princess Margaret Rose	5
	tall	haute	hoch	alta	Fidelio, Traderhorn	7
3. VG/ MG (*) (+)	Leaf: width	Feuille : largeur	Blatt: Breite	Hoja: anchura		
QN	narrow	étroite	schmal	estrecha	Imperator, Flevo Primo	3
	medium	moyenne	mittel	media	Bono's Memory, Caprice, Traderhorn, White Friendship	5
	broad	large	breit	ancha	Sancerre	7
4. VG (*) (+)	Leaf: curvature of distal half	Feuille : courbure de la moitié distale	Blatt: Biegung der distalen Hälfte	Hoja: curvatura de la mitad distal		
QN	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Jessica	1
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media	Advance	5
	strong	forte	stark	fuerte		7
5. VG (*)	Inflorescence: lateral branches	Inflorescence : branches latérales	Blütenstand: Seitenzweige	Inflorescencia: ramas laterales		
QL	absent	absentes	fehlend	ausentes	Pink Event Treasure, Spic and Span	1
	present	présentes	vorhanden	presentes	Charm, Elegance, Rose Supreme, White Prosperity	9
6. VG/ MS (*) (+)	Spike: length	Épi : longueur	Ähre: Länge	Espiga: longitud		
QN	short	court	kurz	corta		3
	medium	moyen	mittel	media	Flevo Laguna, Millenium	5
	long	long	lang	larga		7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7. VG/ MS (*) (+)	Spike: number of flowers	Épi : nombre de fleurs	Ähre: Anzahl Blüten	Espiga: número de flores		
QN	few	petit	gering	bajo	Hawaii, Nymph	3
	medium	moyen	mittel	medio	Little Darling, Picture, White Friendship	5
	many	grand	groß	alto	Traderhorn	7
8. VG/ MS (*) (+)	Spike: number of open flowers	Épi : nombre de fleurs ouvertes	Ähre: Anzahl offener Blüten	Espiga: número de flores abiertas		
QN	few	petit	gering	bajo		3
	medium	moyen	mittel	medio	Aurora, Pink Event	5
	many	élevé	groß	alto	Eva, Exselsa, Millenium	7
9. VG/ MS (*) (+)	Spike: length of internode	Epi : longueur de l'entre-nœud	Ähre: Internodienlänge	Espiga: longitud del entrenudo		
QN	short	court	kurz	corto	Jazmina	1
	medium	moyen	mittel	medio	Cartago	2
	long	long	lang	largo	White Prosperity	3
10. VG (*) (+)	Spike: arrangement of flowers	Épi : disposition des fleurs	Ähre: Anordnung der Blüten	Espiga: disposición de las flores		
PQ	one row	un rang	in einer Reihe	en una hilera	Early Bird, Groene Specht	1
	zig-zag	en zigzag	im Zickzack	en zigzag	Charm, Flevo Laguna, Lady Godiva	2
	two rows	deux rangs	in zwei Reihen	en dos hileras	Carqueiranne, Jessica	3
	irregular	irrégulière	unregelmäßig	irregular	Albus, Harrogate	4
11. VG (*) (+)	Bract: shape of apex	Bractée : forme du sommet	Deckblatt: Form der Spitze	Bráctea: forma del ápice		
QN	acute	aigu	spitz	agudo	Flevo Primo, Kalderon	1
	acute to obtuse	aigu à obtus	spitz bis stumpf	agudo a obtuso		2
	obtuse	obtus	stumpf	obtus	Mexico, Sophie	3
12. VG (*) (+)	Bract: anthocyanin coloration	Bractée: pigmentation anthocyanique	Hochblatt: Anthocyanfärbung	Bráctea: pigmentación antocianica		
QN	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Charm, Lady Godiva, Nova Lux, White Friendship	1
	weak	faible	gering	débil	Carqueiranne, Jessica, Spic and Span	3
	medium	moyenne	mittel	media	Eva, Helvetia, Treasure, Venetië	5
	strong	forte	stark	fuerte	Firebird, Harrogate, Oscar, Flevo Junior	7
	very strong	très forte	sehr stark	muy fuerte	Caprice	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
13. VG (*) (+)	Flower: shape in front view	Fleur : forme en vue de face	Blüte: Form in Vorderansicht	Flor: forma en vista frontal		
PQ	triangular	triangulaire	dreieckig	triangular	Beijing, Charm, Early Bird, Flevo Laguna, Lady Godiva	1
	star-shaped	en forme d'étoile	sternförmig	en forma de estrella	Albus, Beauty of Holland	2
	round	arrondie	rund	redonda	Caprice, Orlando, Pegasus	3
14. VG (*) (+)	Flower: attitude	Fleur : port	Blüte: Haltung	Flor: porte		
QN	upright	dressé	aufrecht	erguido	Princess Summer Yellow	1
	semi-upright	demi-dressé	halbaufrecht	semierguido	Flevo Laguna	2
	horizontal	horizontal	waagrecht	horizontal		3
15. VG/ (*) (+) MS	Flower: width	Fleur : largeur	Blüte: Breite	Flor: anchura		
QN	narrow	étroite	schmal	estrecha	Dainty, Flevo Laguna, Flevo Primo, Jackpot	3
	medium	moyenne	mittel	media	Groene Specht, Joyeuse Entrée, Shocking	5
	broad	grande	breit	ancha	Traderhorn, White Friendship	7
16. VG (*) (+)	Flower: main color	Fleur: couleur principale	Blüte: Hauptfarbe	Flor: color principal		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
17. VG (+)	Flower: shading of main color	Fleur : dégradé de la couleur principale	Blüte: Schattierung der Hauptfarbe	Flor: sombreado del color principal		
PQ	none	aucun	keine	ninguno	Novalux	1
	lighter towards the base	plus clair vers la base	heller zur Basis hin	más claro hacia la base	Idola, Priscilla	2
	evenly shaded	uniformément dégradé	gleichmäßig schattiert	sombreado uniforme		3
	lighter towards the apex	plus clair vers le sommet	heller zur Spitze hin	más claro hacia el ápice	Charlotte	4
18. VG/ MG	Perianth tube: length	Tube du périanthe : longueur	Perianthröhre: Länge	Tubo del perianto: longitud		
QN	short	court	kurz	corto	Eva, Picture	1
	medium	moyen	mittel	medio	Anitra, Flevo Laguna, Harrogate, Millenium	2
	long	long	lang	largo	Elegance, Zigeunerbaron	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19. VG (*)	Perianth tube: number of spots on inner side	Tube du périanthe : nombre de taches sur la face interne	Perianthröhre: Anzahl Punkte auf der Innenseite	Tubo del perianto: número de manchas en la cara interna		
QN	none or very few	aucun ou très petit	keine oder sehr gering	ninguno o muy bajo	Flevo Laguna, Lady Godiva, Leonore	1
	few	petit	gering	bajo	Elegance, Fire Bird, Zigeunerbaron	3
	medium	moyen	mittel	medio	Bonaire, Eva, Nymph	5
	many	grand	groß	alto	Costa Mary Hously, Little Darling	7
	very many	très grand	sehr groß	muy alto	Groene Specht, Jessica	9
20. VG (*) (+)	Perianth tube: distribution of spots on inner side	Tube du périanthe : répartition des taches sur la face interne	Perianthröhre: Verteilung der Punkte auf der Innenseite	Tubo del perianto: distribución de las manchas en la cara interna		
PQ	irregular	irrégulière	unregelmäßig	irregular	Elegance, Libelle, Princess Margaret Rose, Treasure	1
	interrupted band	bande interrompue	unterbrochener Streifen	banda interrumpida	Nymph, Picure, Sancerre	2
	continuous band	bande continue	ununterbrochener Streifen	banda continua	Groene Specht, Helvetia, Morning Kiss, Zigeunerbaron,	3
21. VG (*)	Perianth throat: number of spots on outer side	Gorge du périanthe : nombre de taches sur la face externe	Schlund der Perianthröhre: Anzahl Punkte auf der Außenseite	Garganta del perianto: número de manchas en la cara externa		
QN	none	aucun	keine	ninguna		1
	few	petit	gering	bajo		2
	medium	moyen	mittel	medio		3
	many	grand	groß	alto	Millenium, Flevo Laguna	4
22. VG (*)	Perianth throat: color of spots on outer side	Gorge du périanthe : couleur des taches sur la face externe	Schlund der Perianthröhre: Farbe der Punkte auf der Außenseite	Garganta del perianto: color de las manchas de la cara externa		
PQ	orange	orange	orange	naranja	Aurora	1
	pink	rose	rosa	rosa	White Prosperity	2
	medium red	rouge moyen	mittelrot	rojo medio	Bonaire, Helvetia, Nymph	3
	dark red	rouge foncé	dunkelrot	rojo oscuro	Elegance, Groene Specht, Jessica	4
	violet	violet	violett	violeta	Peter Pears, Zigeunerbaron	5
23. VG (*) (+)	Outer tepal: shape of blade	Tépale externe : forme du limbe	Äußeres Perigonblatt: Form der Spreite	Tépalo externo: forma del limbo		
QN (a)	ovate	ovale	eiförmig	ovado	Elegance, Millenium	1
	elliptic	elliptique	elliptisch	elíptico	Helvetia, Speranta	2
	obovate	obovale	verkehrt eiförmig	obovado	Candida Ali	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
24. VG	Outer tepal: undulation of margin	Tépale externe : ondulation du bord	Äußeres Perigonblatt: Randwellung	Tépalo externo: ondulación del borde		
QN (a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy leve	Albus, Ben Trovato, Caprice, Lady Godiva, Lustige Witwe	1
	weak	faible	gering	leve	Jessica, Maestro, Spic and Span, Traderhorn	3
	medium	moyenne	mittel	media	Groene Specht, White Friendship, Zigeunerbaron	5
	strong	forte	stark	fuerte	Alice, Flevo Primo, June	7
	very strong	très forte	sehr stark	muy fuerte		9
25. VG	Inner tepal: undulation of margin	Tépale interne : ondulation du bord	Inneres Perigonblatt: Randwellung	Tépalo interno: ondulación del borde		
QN (a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy leve	Flevo Beach	1
	weak	faible	gering	leve		3
	medium	moyenne	mittel	media	Casablanca	5
	strong	forte	stark	fuerte		7
	very strong	très forte	sehr stark	muy fuerte	Jester, White Pepper	9
26. VG (*)	Inner tepal: stripe	Tépale interne : raie	Inneres Perigonblatt: Streifen	Tépalo interno: estría		
QL (a)	absent	absente	fehlend	ausente	Elegance	1
	present	présente	vorhanden	presente	Advance, Alice Caprice	9
27. VG/MS	Inner tepal: length of stripe	Tépale interne : longueur de la raie	Inneres Perigonblatt: Länge des Streifens	Tépalo interno: longitud de la estría		
QN (a)	short	courte	kurz	corta		1
	medium	moyenne	mittel	media	Fidelio, Pink Event, Venetië	2
	long	longue	lang	larga	Eva, Flevo Party, Millenium	3
28. VG/MS	Inner tepal: width of stripe	Tépale interne : largeur de la raie	Inneres Perigonblatt: Breite des Streifens	Tépalo interno: anchura de la estría		
QN (a)	narrow	étroite	schmal	estrecha	Costa	1
	medium	moyenne	mittel	media	Flevo Party, Flevo Primo, Spic and Span	2
	broad	grande	breit	ancha	Flevo Salsa	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29. VG (*)	Inner tepal: color of stripe	Tépale interne : couleur de la raie	Inneres Perigonblatt: Farbe des Streifens	Tépalo interno: color de la estría		
PQ (a)	white	blanc	weiß	blanco	Bono's Memory, Millenium	1
	yellowish white	blanc jaunâtre	gelblich weiß	blanco amarillento	Fire Bird, Perseus	2
	yellow	jaune	gelb	amarillo	Bonaire, Charm	3
	orange	orange	orange	nararanja		4
	pink	rose	rosa	rosa		5
	red	rouge	rot	rojo	Treasure	6
	purple red	rouge pourpre	purpurrot	rojo purpúra	Flevo Primo, Pegasus, Pink Event	7
	violet blue	bleu violet	violettblau	azul violáceo	Costa	8
	dark purple	pourpre foncé	dunkelpurpurn	púrpura oscuro		9
30. VG (*)	Inner tepal: macule	Tépale interne : macule	Inneres Perigonblatt: Fleck	Tépalo interno: mácula		
QL (a)	absent	absente	fehlend	ausente	Charm, Flevo Laguna	1
	present	présente	vorhanden	presente	Elegance, Hypnose, Millenium	9
31. VG (*) (+)	Inner tepal: position of macule	Tépale interne : position de la macule	Inneres Perigonblatt: Position des Flecks	Tépalo interno: posición de la mácula		
QN (a)	at base	à la base	an der Basis	en la base	Flevo Sunset, Home Coming	1
	between base and centre	entre la base et le centre	zwischen der Basis und dem Mittelteil	entre la base y el centro		2
	central	au centre	im Mittelteil	central	Traderhorn	3
32. VG/MS	Inner tepal: size of macule in relation to size of inner tepal	Tépale interne : taille de la macule par rapport à la taille du tépale interne	Inneres Perigonblatt: Größe des Flecks im Verhältnis zur Größe des inneren Perigonblattes	Tépalo interno: tamaño de la mácula en relación con el tamaño del tépalo interno		
QN (a)	small	petite	klein	pequeña	Elegance, Victor Borge	3
	medium	moyenne	mittel	media		5
	large	grande	groß	grande	Jazmine, Velvet Eyes	7
33. VG (*) (+)	Inner tepal: shape of macule	Tépale interne : forme de la macule	Inneres Perigonblatt: Form des Flecks	Tépalo interno: forma de la mácula		
PQ (a)	type 1	type 1	Typ 1	tipo 1		1
	type 2	type 2	Typ 2	tipo 2	Costa	2
	type 3	type 3	Typ 3	tipo 3	Helvetia, Millenium	3
	type 4	type 4	Typ 4	tipo 4	Elegance, Pink Event, Zigeunerbaron	4
34. VG (*) (+)	Inner tepal: main color of macule	Tépale interne : couleur principale de la macule	Inneres Perigonblatt: Hauptfarbe des Flecks	Tépalo interno: color principal de la mácula		
PQ (a)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
35. (+)	VG Inner tepal: secondary color of macule	Tépale interne : couleur secondaire de la macule	Inneres Perigonblatt: Sekundärfarbe des Flecks	Tépalo interno: color secundario de la mácula		
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)		
36. (+)	VG Inner tepal: margin of macule	Tépale interne : bord de la macule	Inneres Perigonblatt: Rand des Flecks	Tépalo interno: borde de la mácula		
QN (a)	regular or slightly irregular	régulier ou légèrement irrégulier	regelmäßig oder leicht unregelmäßig	regular o ligeramente irregular	Hypnose, Jazmine	1
	moderately irregular	modérément irrégulier	etwas unregelmäßig	moderadamente irregular	Helvetia, Traderhorn	2
	very irregular	très irrégulier	sehr unregelmäßig	muy irregular		3
37. (*)	VG Inner tepal: different color of marginal zone	Tépale interne : couleur différente de la zone marginale	Inneres Perigonblatt: Unterschiedliche Farbe der Randzone	Tépalo interno: color diferente en la zona marginal		
QL (a)	absent	absente	fehlend	ausente		1
	present	présente	vorhanden	presente	Priscilla, Nymph	9
38. (+)	VG/MS Inner tepal: width of marginal zone	Tépale interne : largeur de la zone marginale	Inneres Perigonblatt: Breite der Randzone	Tépalo interno: anchura de la zona marginal		
QN (a)	narrow	étroite	schmal	estrecha	Flevo Junior, Millenium, Pink Event	1
	medium	moyenne	mittel	media		2
	broad	grande	breit	ancha	Priscilla	3
39. (+)	VG Inner tepal: border of marginal zone	Tépale interne : limite de la zone marginale	Inneres Perigonblatt: Rand der Randzone	Tépalo interno: borde de la zona marginal		
QN (a)	slightly irregular	légèrement irrégulière	leicht unregelmäßig	ligeramente irregular		1
	moderately irregular	modérément irrégulière	etwas unregelmäßig	moderadamente irregular	Priscilla	2
	very irregular	très irrégulière	sehr unregelmäßig	muy irregular		3
40. (*)	VG Inner tepal: color of marginal zone	Tépale interne : couleur de la zone marginale	Inneres Perigonblatt: Farbe der Randzone	Tépalo interno: color de la zona marginal		
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)		
41. (+)	VG Median inner tepal: attitude	Tépale interne médian : port	Inneres mittleres Perigonblatt: Haltung	Tépalo interno medio: porte		
QN (a)	semi-erect	demi-dressé	halbaufrecht	semierecto	Charm, Jessica	1
	semi-erect to horizontal	demi-dressé à horizontal	halbaufrecht bis waagrecht	semierecto a horizontal		2
	horizontal	horizontal	waagrecht	horizontal	Bonaire, Lady Godiva, Nymph	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
42. VG (+)	Median inner tepal: attitude of apex	Tépale interne médian : port du sommet	Inneres mittleres Perigonblatt: Haltung der Spitze	Tépalo interno medio: porte del ápice		
QN (a)	moderately incurved	légèrement incurvé	mäßig aufgebogen	moderadamente incurvado	Candy, Lady Godiva	1
	straight	droit	gerade	recto	Praha, White Prosperity	2
	moderately recurved	légèrement recourbé	mäßig gebogen	moderadamente recurvado	Charm, Nymph, Zoe	3
	strongly recurved	fortement recourbé	stark gebogen	muy recurvado	Little Darling	4
43. VG (*) (+)	Filament: main color	Filament : couleur principale	Staubfaden: Hauptfarbe	Filamento: color principal		
PQ	white	blanc	weiß	blanco	Bonaire, Nymph, White Friendship	1
	light yellow	jaune clair	hellgelb	amarillo claro	Corona	2
	light pink	rose clair	hellrosa	rosa claro	Peter Pears, Spic and Span, Traderhorn	3
	medium pink	rose moyen	mittelrosa	rosa medio	Bono's Memory	4
	light red	rouge clair	hellrot	rojo claro	Jessica, Zigeunerbaron	5
44. VG (*)	Filament: small spots at base	Filet : petites taches sur la base	Staubfaden: kleine Punkte an der Basis	Filamento: manchas pequeñas en la base		
QL	absent	absentes	fehlend	ausentes	Charm, Zigeunerbaron	1
	present	présentes	vorhanden	presentes	Jessica, Nymph, Traderhorn	9
45. VG	Filament: color of apex compared to main color	Filament : couleur du sommet par rapport à la couleur principale	Staubfaden: Farbe der Spitze im Vergleich zur Hauptfarbe	Filamento: color del ápice en comparación con el color principal		
QN	same color	même couleur	gleiche Farbe	mismo color	Treasure, White Friendship, White Prosperity	1
	slightly different color	couleur légèrement différente	leicht unterschiedliche Farbe	color ligeramente diferente		2
	very different color	couleur très différente	sehr unterschiedliche Farbe	color muy diferente	Charm, Nymph, Traderhorn	3
46. VG (+)	Anther: color of connective	Anthère : couleur du connectif	Staubblatt: Farbe des Konnektivs	Antera: color del conectivo		
PQ	white	blanc	weiß	blanco	White Friendship, White Prosperity, Zigeunerbaron	1
	yellow white	blanc jaune	gelbweiß	blanco amarillento	Charm, Lady Godiva	2
	light yellow	jaune clair	hellgelb	amarillo claro	Mykonos	3
	pink	rose	rosa	rosa	Fire Bird, Helvetia, Peter Pears	4

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
47. VG	Anther: color of stonium	Anthère : couleur de la fente de déhiscence	Staubblatt: Farbe des Stomiums	Antera: color del estomio		
PQ	white	blanche	weiß	blanco	Nymph, White Friendship	1
	yellow	jaune	gelb	amarillo	Costa	2
	orange	orange	orange	naranja		3
	red	rouge	rot	rojo	Denisa	4
	pink purple	pourpre rose	rosapurpur	púrpura rosado	Jessica, Princess Margaret Rose, White Friendship	5
	blue purple	pourpre bleu	blaupurpur	púrpura azul	Bonaire, Charm, Elegance	6
	violet	violette	violett	violeta		7
48. VG (*) (+)	Style: main color	Style : couleur principale	Griffel: Hauptfarbe	Estilo: color principal		
PQ	white	blanc	weiß	blanco	Eva, Nymph, Treasure	1
	yellow	jaune	gelb	amarillo	Elegance, Flevo Laguna, Mykonos, Pegasus	2
	yellow pink	rose jaune	gelbrosa	rosa amarillento	Jessica, Peter Pears	3
	red	rouge	rot	rojo	Zigeunerbaron	4
	violet	violet	violett	violeta		5
49. VG (+)	Style: color of base	Style : couleur de la base	Griffel: Farbe der Basis	Estilo: color de la base		
PQ	white	blanc	weiß	blanco	Flevo Primo, Pegasus, Treasure, White Goddess	1
	yellow white	blanc jaune	gelbweiß	blanco amarillento	Bonaire, Traderhorn, White Friendship, Zigeunerbaron	2
	yellow green	vert jaune	gelbgrün	verde amarillento	Nymph, White Prosperity	3
	pink	rose	rosa	rosa	Excelsa	4
50. VG (+)	Style: color of branches	Style : couleur des branches	Griffel: Farbe der Verzweigungen	Estilo: color de las ramas		
PQ	white	blanc	weiß	blanco	Bonaire, Flevo Laguna, Lady Godiva, White Friendship	1
	light yellow	jaune clair	hellgelb	amarillo claro	Mykonos, Pegasus	2
	light pink	rose clair	hellrosa	rosa claro	Groene Specht, Treasure	3
	medium pink	rose moyen	mittelrosa	rosa medio	Charm, Elegance, Zigeunerbaron	4
	red	rouge	rot	rojo	Princess Margaret Rose, Venetië	5
	violet	violet	violett	violeta		6

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
51. VG (*) (+)	Corm: color of flesh	Corne : couleur de la chair	Knolle: Farbe des Fleisches	Cormo: color de la pulpa		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
52. VG/ MG (+)	Time of beginning of flowering	Époque de début de la floraison	Zeitpunkt des Blühbeginns	Época de inicio de la floración		
QN	very early	très précoce	sehr früh	muy temprana	Charm, Jackpot, Leonore	1
	early	précoce	früh	temprana	Fidelio, Groene Specht, Pegasus, Pink Event	3
	medium	moyenne	mittel	media	Jessica, Nymph, Peter Pears	5
	late	tardive	spät	tardía	Evening Sun, Princess Margaret Rose, White Prosperity	7
	very late	très tardive	sehr spät	muy tardía	Carqueianne, Prelude	9

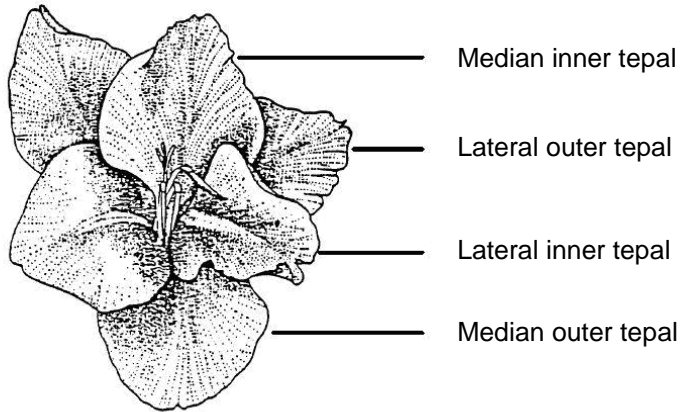
8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Observations should be made when the first flower is fading.

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

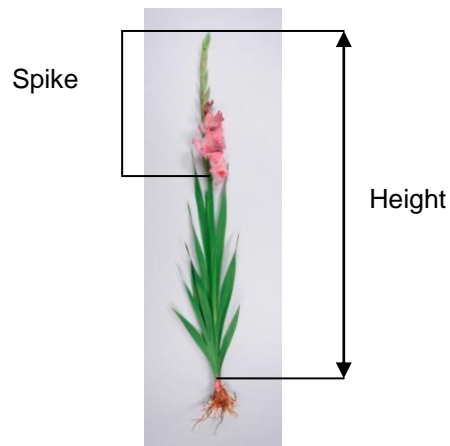
(a) Illustration of inner and outer tepals:



8.2 *Explanations for individual characteristics*

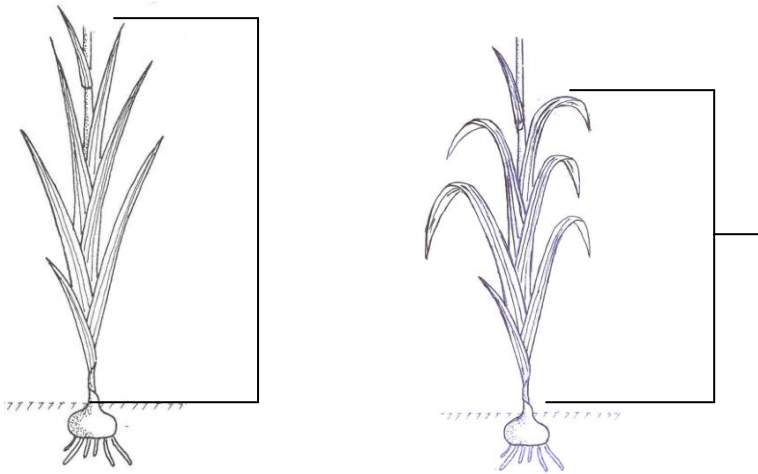
Ad. 1: Plant: height

Observations on plant height should be made including inflorescence.



Ad. 2: Foliage: height

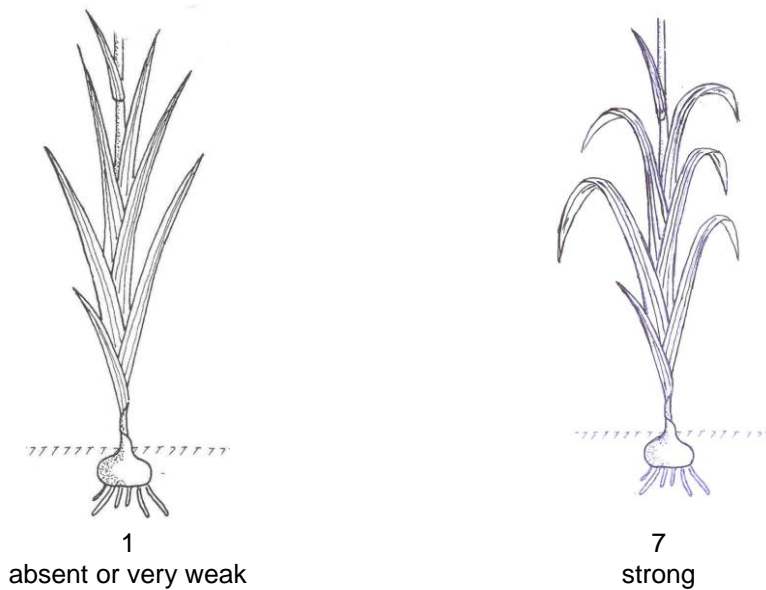
The height of the foliage is to be observed excluding bracts.



Ad. 3: Leaf: width

Observations on leaf width should be made on the second to last leaf.

Ad. 4: Leaf: curvature of distal half



Ad. 6: Spike: length



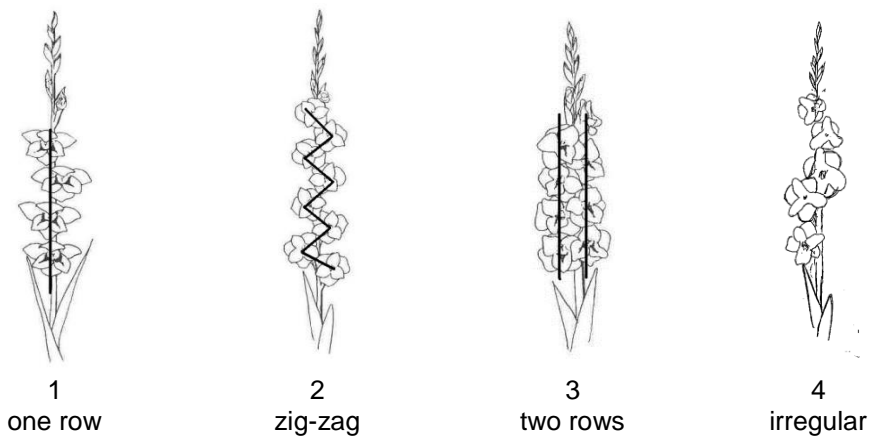
Ad. 7: Spike: number of flowers

All flowers including the closed buds.

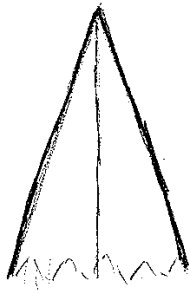
Ad. 8: Spike: number of open flowers

The observation should be made on all flowers which are fully open at the same time, including the first flower.

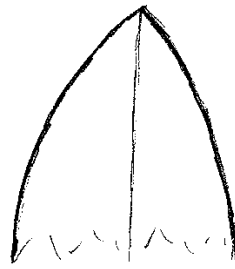
Ad. 10: Spike: arrangement of flowers



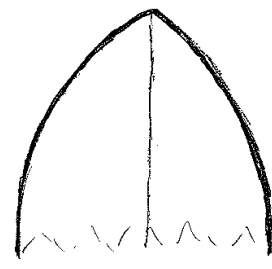
Ad. 11: Bract: shape of apex



1
acute



2
acute to obtuse

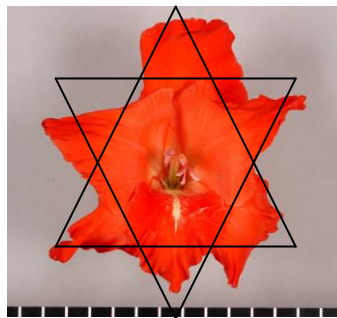


3
obtuse

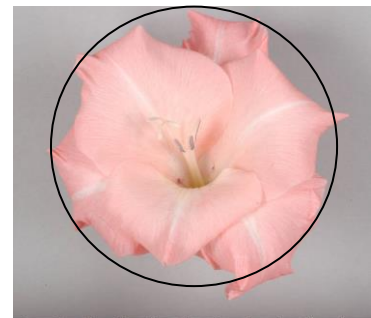
Ad. 13: Flower: shape in front view



1
triangular



2
star-shaped



3
round

Ad. 14: Flower: attitude



1
upright



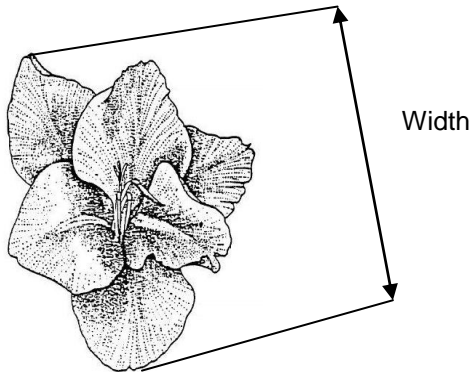
2
semi-upright



3
horizontal

Ad. 15: Flower: width

The broadest part of the flower should be observed.



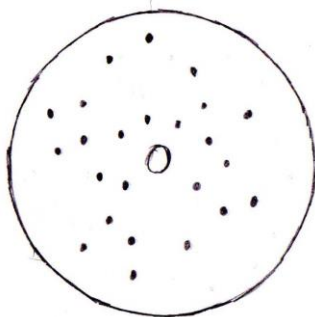
Ad. 16: Flower: main color

The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the lightest color is considered to be the main color.

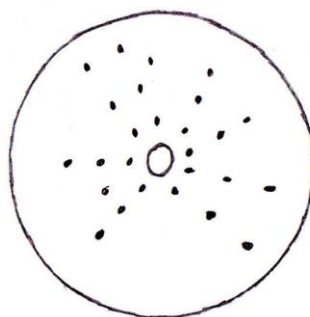
Ad. 17: Flower: shading of main color

Only varieties with more than one color.

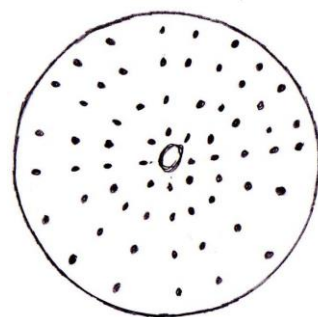
Ad. 20: Perianth tube: distribution of spots on inner side



1
irregular






2
interrupted band



3
continuous band

Ad. 23: Outer tepal: shape of blade

broadest part towards base		1 ovate
broadest part at the middle		2 elliptic
broadest part towards apex		3 obovate

Ad. 31: Inner tepal: position of macule



1
at base



2
between base and centre



3
central

Ad. 33: Inner tepal: shape of macule



1
type 1



2
type 2



3
type 3



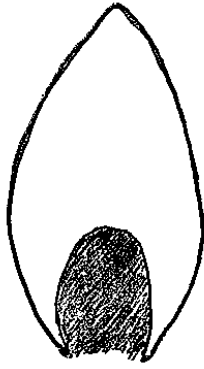
4
type 4

Ad. 34: Inner tepal: main color of macule

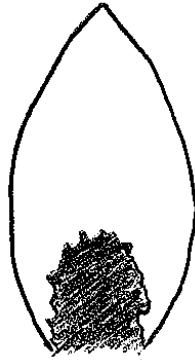
Ad. 35: Inner tepal: secondary color of macule

The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the lightest color is considered to be the main color.

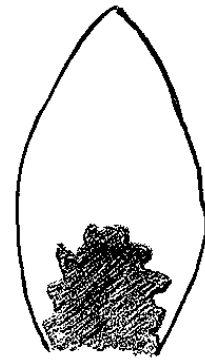
Ad. 36: Inner tepal: margin of macule



1
regular or slightly irregular

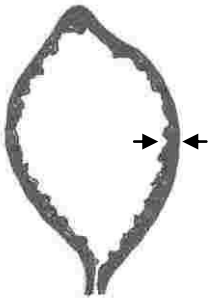


2
moderately irregular



3
strongly irregular

Ad. 38: Inner tepal: width of marginal zone



Ad. 39: Inner tepal: border of marginal zone



1
slightly irregular

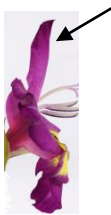


2
moderately irregular



3
very irregular

Ad. 41: Median inner tepal: attitude



1
semi-erect

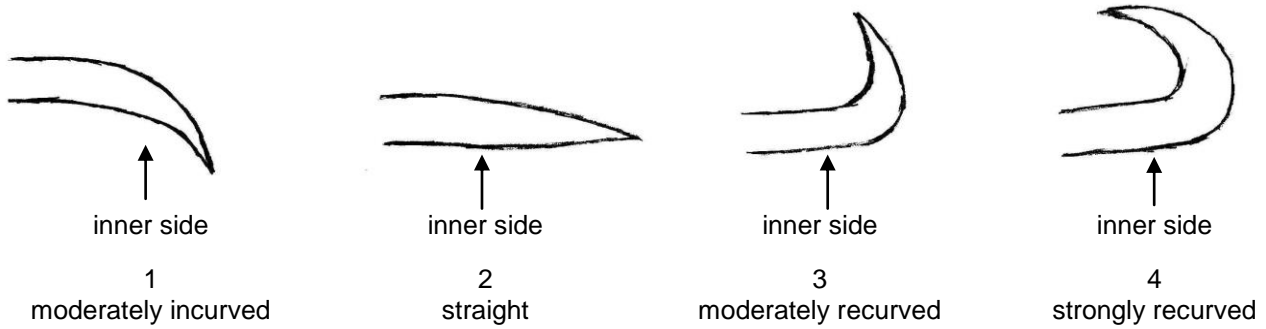


2
semi-erect to horizontal



3
horizontal

Ad. 42: Median inner tepal: attitude of apex



Ad. 43: Filament: main color

The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the lightest color is considered to be the main color. In cases where the areas of the secondary and tertiary color are too similar to reliably decide which color has the largest area, the lightest color is considered to be the secondary color.

Ad. 46: Anther: color of connective

The connective is the tissue between the two parts of the anther.

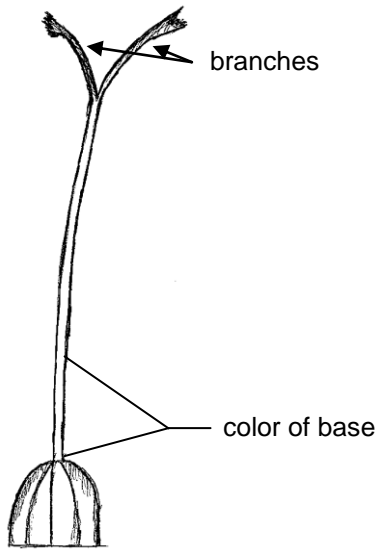


Ad. 48: Style: main color

The main color of the style should be observed without the basal part.

The main color is the color with the largest surface area. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the lightest color is considered to be the main color.

Ad. 49: Style: color of base
Ad. 50: Style: color of branches



Ad. 51: Corm: color of flesh

For observation of the color of the flesh, the corm must be cut in cross section.

Ad. 52: Time of beginning of flowering

Time of beginning of flowering is the time when 50 % of the plants have the first flower fully open.

9. Literature

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Bloembollenkeuringsdienst, 1984: Gladiolenstatistiek. Lisse, NL

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Hamilton, A.P., 1976: The European Gladioli. Quart. Bull. Alp. Gard. Soc. 44(2). Wallington, UK

Lewis, G.J., Obermeyer, A.A., 1972: Gladiolus, a revision of the South African species. Purnell, Capetown, Johannesburg, London, New York

Nederlandse Gladiolus Vereniging, 1973: Kleurbeschrijvingslijst. Hillegom, NL

North American Gladiolus Council, 1980-86: A Selected List of Gladiolus Varieties. Sun City, AZ, USA

Raalte, D. van, 1965: Handboek voor de bloemisterij 2. Born uitg., Assen, Amsterdam, NL

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1 Botanical name	<input type="text" value="Gladiolus L."/>	
1.2 Common name	<input type="text" value="Gladiolus"/>	
2. Applicant		
Name	<input type="text"/>	
Address	<input type="text"/>	
Telephone No.	<input type="text"/>	
Fax No.	<input type="text"/>	
E-mail address	<input type="text"/>	
Breeder (if different from applicant)	<input type="text"/>	
3. Proposed denomination and breeder's reference		
Proposed denomination (if available)	<input type="text"/>	
Breeder's reference	<input type="text"/>	

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

4.2.1 Vegetative propagation

- (a) cuttings []
- (b) *in vitro* propagation []
- (c) other (state method) []

4.2.2 Other []
(please provide details)

[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

Characteristics	Example Varieties	Note
5.1 Flower: width (15)		
very narrow		1[]
very narrow to narrow		2[]
narrow	Dainty, Flevo Laguna, Flevo Primo, Jackpot	3[]
narrow to medium		4[]
medium	Groene Specht, Joyeuse Entrée, Shocking	5[]
medium to broad		6[]
broad	Traderhorn, White Friendship	7[]
broad to very broad		8[]
very broad		9[]
5.2i Flower: main color (16)		
RHS Colour Chart (indicate reference number)		
5.2ii Flower: main color (16)		
white		1[]
yellow		2[]
orange		3[]
pink orange		4[]
pink		5[]
purple		6[]
red purple		7[]
blue		8[]
green		9[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Plant: height</i>	<i>short</i>	<i>medium</i>

Comments:

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#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [] No []

(If yes, please provide details)

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

Yes [] No []

(If yes, please provide details)

7.3 Other information

7.3.1 Main use

- | | | |
|-----|--------------|-----|
| (a) | garden plant | [] |
| (b) | pot plant | [] |
| (c) | cut-flower | [] |
| (d) | other | [] |
- (please provide details)

7.3.2 A representative color image of the variety should accompany the Technical Questionnaire.

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.

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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]