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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

CAMPANULA

UPOV Code: CAMPA

Campanula L.

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>Campanula</i> L.	Campanula, Bell flower	Campanule	Glockenblume	Campánula

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 *Campanula* 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:

10 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. The plants should be grown in containers to observe the plant growth habit (characteristic 1).

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 10 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 9 plants or parts taken from each of 9 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 10 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: growth habit (characteristic 1)
- (b) Plant: height (characteristic 2)
- (c) Leaf blade: main color (characteristic 13)
- (d) Flower: attitude (characteristic 20)
- (e) Flower: type (characteristic 21)
- (f) Corolla: number of whorls (characteristic 25)
- (g) Corolla: main color of outer side (characteristic 28)
 - Gr. 1: white
 - Gr. 2: pink
 - Gr. 3: red purple
 - Gr. 4: purple
 - Gr. 5: blue
- (h) Corolla: main color of inner side (characteristic 34)
 - Gr. 1: white
 - Gr. 2: pink
 - Gr. 3: red purple
 - Gr. 4: purple
 - Gr. 5: blue
- (i) Corolla: spots on inner side (characteristic 37)

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)-(c) 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 Beispielsorten Variedades ejemplo	Note/ Nota
1. VG (*) (+)	Plant: growth habit	Plante : type de croissance	Pflanze: Wuchsform	Planta: hábito de crecimiento		
PQ	upright	dressé	aufrecht	erguida	La Bello	1
	semi-upright	demi-dressé	halbaufrecht	semierguida	Sarastro	2
	spreading	étalé	breitwüchsig	extendida	PKMP05	3
	horizontal	horizontal	waagerecht	horizontal	Blue Rivulet	4
	drooping	retombant	überhängend	colgante	Camp trailbule	5
2. VG/ (*) (+)	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
QN	extremely short	extrêmement courte	extrem niedrig	extremadamente baja	Puck	1
	very short	très courte	sehr niedrig	muy baja	Samantha	3
	short	courte	niedrig	baja	Caroline	5
	medium	moyenne	mittel	media	Sarastro	7
	tall	haute	hoch	alta	Kent Belle	9
	very tall	très haute	sehr hoch	muy alta		11
	extremely tall	extrêmement haute	extrem hoch	extremadamente alta	Aida	13
3. VG/ (*) (+)	Plant: width	Plante : largeur	Pflanze: Breite	Planta: anchura		
QN	very narrow	très étroite	sehr schmal	muy estrecha		1
	narrow	étroite	schmal	estrecha	Napoli Blue	3
	medium	moyenne	mittel	media	PKMP05	5
	broad	large	breit	ancha	Sarastro	7
	very broad	très large	sehr breit	muy ancha	Blue Rivulet	9
4. VG (*) (+)	Plant: density	Plante : densité	Pflanze: Dichte	Planta: densidad		
QN	very sparse	très clairsemée	sehr locker	muy escasa	PKM01	1
	sparse	clairsemée	locker	escasa	Caroline	3
	medium	assez dense	mittel	media	Samantha	5
	dense	dense	dicht	densa	PKMP05	7
	very dense	très dense	sehr dicht	muy densa	PKMP01	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5. VG (+)	Stem: color	Tige : couleur	Trieb: Farbe	Tallo: color		
PQ	yellow green	vert-jaune	gelbgrün	verde amarillento	Blue Eyed Blonde	1
	light green	vert clair	hellgrün	verde claro	PKMP05	2
	medium green	vert moyen	mittelgrün	verde medio	Sarastro	3
	dark green	vert foncé	dunkelgrün	verde oscuro	PKM01	4
	grey green	vert-gris	graugrün	verde grisáceo	PKMFOR168	5
	green tinged with red purple	vert teinté de pourpre-rouge	grün meliert mit purpurrot	verde teñido de púrpura rojizo	Blue Rivulet	6
	red purple	pourpre-rouge	purpurrot	púrpura rojizo	Silver Bells	7
6. VG/ MG/ MS (*)	Leaf blade: length	Limbe : longueur	Blattspreite: Länge	Limbo: longitud		
QN (a)	very short	très court	sehr kurz	muy corto	PKMP05	1
	short	court	kurz	corto	Napoli Blue	3
	medium	moyen	mittel	medio	Blue Rivulet	5
	long	long	lang	largo	Caroline	7
	very long	très long	sehr lang	muy largo	Elizabeth	9
7. VG/ MG/ MS (*) (+)	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura		
QN (a)	very narrow	très étroit	sehr schmal	muy estrecho	Pink Octopus	1
	narrow	étroit	schmal	estrecho	Blue Eyed Blonde	3
	medium	moyen	mittel	medio	Caroline	5
	broad	large	breit	ancho	Silver Bells	7
	very broad	très large	sehr breit	muy ancho	Sarastro	9
8. VG/ MG/ MS (*) (+)	Leaf blade: length/width ratio	Limbe : rapport longueur/largeur	Blattspreite: Verhältnis Länge/Breite	Limbo: relación longitud/anchura		
QN (a)	low	bas	klein	baja	Caroline	3
	medium	moyen	mittel	media	Pink Octopus	5
	high	élevé	groß	alta	Blue Eyed Blond	7
9. VG (+)	Leaf blade: position of broadest part	Limbe : position de la partie la plus large	Blattspreite: Position des breitesten Teils	Limbo: posición de la parte más ancha		
QN (a)	strongly towards base	fortement vers la base	stark zur Basis hin	fuertemente hacia la base		1
	moderately towards base	modérément vers la base	mäßig zur Basis hin	moderadamente hacia la base		2
	at middle	au milieu	in der Mitte	en la mitad		3
	towards apex	vers l'apex	zur Spitze hin	hacia el ápice		4

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10.	VG	Leaf blade: shape of apex	Limbe : forme de l'apex	Blattspreite: Form der Spitze	Limbo: forma del ápice	
(+)						
PQ	(a)	acuminate	acuminé	zugespitzt	acuminado	1
		acute	aigu	spitz	agudo	2
		obtuse	obtus	stumpf	obtus	3
11.	VG	Leaf blade: shape of base	Limbe : forme de la base	Blattspreite: Form der Basis	Limbo: forma de la base	
(+)						
PQ	(a)	attenuate	amincie	keilförmig zugespitzt	atenuada	1
		acute	aiguë	spitz	aguda	2
		obtuse	obtuse	stumpf	obtusa	3
		rounded	arrondie	abgerundet	redondeada	4
		truncate	tronquée	abgestumpft	truncada	5
		cordate	cordiforme	herzförmig	cordiforme	6
12.	VG	Leaf blade: variegation	Limbe : panachure	Blattspreite: Panaschierung	Limbo: variegación	
(*)						
QL	(a)	absent	absente	fehlend	ausente	Pink Octopus
		present	présente	vorhanden	presente	Kifu
13.	VG	Leaf blade: main color	Limbe : couleur principale	Blattspreite: Hauptfarbe	Limbo: color principal	
(*)						
(+)						
PQ	(a)	whitish	blanchâtre	weißlich	blanquecino	1
		yellow	jaune	gelb	amarillo	Kifu
		yellow green	vert-jaune	gelbgrün	verde amarillento	Blue Eyed Blonde
		light green	vert clair	hellgrün	verde claro	Caroline
		medium green	vert moyen	mittelgrün	verde medio	Sarastro
		dark green	vert foncé	dunkelgrün	verde oscuro	PKM01
		grey green	vert-gris	graugrün	verde grisáceo	Silver Bells
		green tinged with purplish red	vert teinté de rouge violacé	grün meliert mit purpurrot	verde teñido de rojo púrpura	Blue Rivulet
14.	VG	Leaf blade: rugosity	Limbe : rugosité	Blattspreite: Blasigkeit	Limbo: rugosidad	
QN	(a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	nula o muy débil	PKM01
		weak	faible	gering	débil	Pink Octopus
		medium	moyenne	mittel	media	Sarastro
		strong	forte	stark	fuerte	Elizabeth
		very strong	très forte	sehr stark	muy fuerte	Hot Lips

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
15. VG	Leaf blade: glossiness	Limbe : brilliance	Blattspreite: Glanz	Limbo: brillo		
QN (a)	absent or very weak	absente ou très faible	fehlend oder sehr schwach	ausente o muy débil	PKM01	1
	weak	faible	schwach	débil	Pink Octopus	2
	medium	moyenne	mittel	medio	Caroline	3
	strong	forte	stark	fuerte	Silver Bells	4
16. VG (*)	Leaf blade: pubescence	Limbe : pubescence	Blattspreite: Behaarung	Limbo: pubescencia		
QN (a)	absent or very sparse	absente ou très clairsemée	fehlend oder sehr gering	ausente o muy escasa	PKM01	1
	sparse	clairsemée	gering	escasa	Pink Octopus	2
	medium	assez dense	mittel	media	Sarastro	3
	dense	dense	dicht	densa	Caroline	4
	very dense	très dense	sehr dicht	muy densa	PKMFOR168	5
17. VG (+)	Leaf blade: indentations of margin	Limbe : denticulations du bord	Blattspreite: Randeinschnitte	Limbo: indentaciones del borde		
QN (a)	absent or very few	absentes ou très peu nombreuses	fehlend oder sehr wenige	ausente o muy pocas	PKM01	1
	few	peu nombreuses	wenige	pocas	Napoli Blue	2
	medium	assez nombreuses	mittel	medio	Sarastro	3
	many	nombreuses	viele	abundantes	Caroline	4
	very many	très nombreuses	sehr viele	muy abundantes	Elizabeth	5
18. VG (+)	Leaf blade: depth of indentations of margin	Limbe : profondeur des denticulations du bord	Blattspreite: Tiefe der Randeinschnitte	Limbo: profundidad de las indentaciones del borde		
QN (a)	very shallow	très peu profondes	sehr flach	muy poco profundas	PKM01	1
	shallow	peu profondes	flach	poco profundas	Caroline	2
	medium	assez profondes	mittel	medias	Pink Octopus	3
	deep	profondes	tief	profundas	Camp trailbule	4
	very deep	très profondes	sehr tief	muy profundas	Sarastro	5
19. VG (+)	Leaf blade: undulation of margin	Lime : ondulation du bord	Blattspreite: Randwellung	Limbo: ondulación del borde		
QN (a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Sarastro	1
	weak	faible	gering	débil	Caroline	2
	medium	moyenne	mittel	media	Elizabeth	3
	strong	forte	stark	fuerte	PKMFOR168	4
	very strong	très forte	sehr stark	muy fuerte	Hot Lips	5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
20.	VG	Flower: attitude	Fleur : port	Blüte: Haltung	Flor: porte		
(*)							
(+)							
QN	(b)	upwards	dressé	aufwärts	erecta	Samantha	1
		slightly outwards	légèrement perpendiculaire	leicht horizontal	ligeramente hacia afuera	PKMP05	2
		strongly outwards	fortement perpendiculaire	stark horizontal	fuertemente hacia afuera	Blue Eyed Blonde	3
		slightly downwards	légèrement retombant	leicht abwärts	ligeramente hacia abajo	Pink Octopus	4
		strongly downwards	fortement retombant	stark abwärts	fuertemente hacia abajo	Sarastro	5
21.	VG	Flower: type	Fleur : type	Blüte: Typ	Flor: tipo		
(*)							
(+)							
PQ	(b)	tubular	tubulaire	röhrenförmig	tubular	Sarastro	1
		campanulate	campanulée	glockenförmig	acampanada	PKMH01	2
		rotate	arrondie	radförmig	rotácea	Samantha	3
		stellate (with strap-shaped lobes)	étoilée (avec des lobes en forme de ruban)	sternförmig (mit bandförmigen Lappen)	estrellada (con lóbulos ligulados)	Pink Octopus	4
22.	VG	Calyx: petaloid lobes	Calice : lobes pétaloïdes	Kelch: Nebenkronlappen	Cáliz: lóbulos petaloïdes		
(*)							
(+)							
QL	(b)	absent	absents	fehlend	ausentes	Kent Belle	1
		present	présents	vorhanden	presentes	Pantaloons	9
23.	VG	<u>Only varieties with calyx: petaloid lobes present:</u> Calyx lobe: color of outer side	<u>Seulement les variétés avec un calice : lobes pétaloïdes présents :</u> Lobe du calice : couleur de la face externe	<u>Nur Sorten mit Kelch: Nebenkronlappen vorhanden:</u> Kelchlappen: Farbe der Außenseite	<u>Únicamente variedades con cáliz: lóbulos petaloïdes presentes:</u> lóbulo del cáliz: color de la cara externa		
PQ	(b)	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)		
24.	VG	Calyx: position of lobes	Calice : position des lobes	Kelch: Haltung der Lappen	Cáliz: posición de los lóbulos		
(+)							
QN	(b)	adpressed to corolla	appliqués contre la corolle	anliegend an Krone	adpresos a la corola		1
		moderately spreading	modérément étalés	etwas abstehend	moderadamente extendidos		3
		horizontal	horizontaux	waagrecht	horizontales		5
		moderately reflexed	modérément réfléchis	etwas zurückgebogen	moderadamente reflejos		7
		strongly reflexed	fortement réfléchis	stark zurückgebogen	fuertemente reflejos		9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25. VG (*) (+)	Corolla: number of whorls	Corolle : nombre de verticilles	Krone: Anzahl Wirtel	Corola: número de verticilos		
QN (b)	very few	très petit	sehr wenige	muy bajo	PKMH01	1
	few	petit	wenige	bajo	Havidb701	2
	medium	moyen	mittel	medio	White Ball	3
	many	grand	viele	alto	La Bello	4
26. VG/ MG/ MS (*) (+)	Corolla: length	Corolle : longueur	Krone: Länge	Corola: longitud		
QN (b)	very short	très courte	sehr kurz	muy corta	Blue Rivulet	1
	short	courte	kurz	corta	Jelly Bells	3
	medium	moyenne	mittel	media	Caroline	5
	long	longue	lang	larga	Pantaloons	7
	very long	très longue	sehr lang	muy larga	Sarastro	9
27. VG/ MG/ MS (*) (+)	Corolla: diameter	Corolle : diamètre	Krone: Durchmesser	Corola: diámetro		
QN (b)	very small	très petit	sehr klein	muy pequeño		1
	small	petit	klein	pequeño	PKMP05	3
	medium	moyen	mittel	medio	Sarastro	5
	large	grand	groß	grande	Blue Eyed Blonde	7
	very large	très grand	sehr groß	muy grande	Pink Octopus	9
28. VG (*)	Corolla: main color of outer side	Corolle : couleur principale de la face externe	Krone: Hauptfarbe der Außenseite	Corola: color principal de la cara externa		
PQ (b) (c)	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
29. VG (*) (+)	Corolla: distribution of secondary color of outer side	Corolle : distribution de la couleur secondaire de la face externe	Krone: Verteilung der Sekundärfarbe der Außenseite	Corola: distribución del color secundario de la cara externa		
PQ (b)	none	aucune	keine	ninguno		1
(c)	distal quarter	quart distal	im distalen Viertel	en el cuarto distal		2
	basal half	moitié basale	in der basalen Hälfte	en la mitad basal		3
	basal quarter	quart basal	im basalen Viertel	en el cuarto basal		4
	at base	à la base	an der Basis	en la base		5
	marginal zone	zone marginale	in der Randzone	en la zona del borde		6
	midribs	nervures médianes	auf den Mittelrippen	en los nervios centrales		7
	midribs and marginal zone	nervures médianes et zone marginale	auf den Mittelrippen und in der Randzone	en los nervios centrales y en la zona del borde		8
	along veins	le long des nervures	entlang der Adern	a lo largo de los nervios		9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30. (*)	VG	Corolla: secondary color of outer side	Corolle : couleur secondaire de la face externe	Krone: Sekundärfarbe der Außenseite	Corola: color secundario de la cara externa	
PQ	(b)	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)	
31. (*)	VG	Corolla: spots on outer side	Corolle : taches sur la face externe	Krone: Flecken an der Außenseite	Corola: manchas en la cara externa	
QL	(b)	absent	absentes	fehlend	ausentes	Sarastro 1
		present	présentes	vorhanden	presentes	Pink Chimes 9
32. (+)	VG	Corolla: distribution of spots on outer side	Corolle : distribution des taches sur la face externe	Krone: Verteilung der Flecken auf der Außenseite	Corola: distribución de las manchas en la cara externa	
PQ	(b)	mainly in basal quarter	principalement sur le quart basal	hauptsächlich im basalen Viertel	principalmente en el cuarto basal	1
		mainly in basal half	principalement sur la moitié basale	hauptsächlich in der basalen Hälfte	principalmente en la mitad basal	2
		mainly in basal three quarters	principalement sur les trois quarts basaux	hauptsächlich im basalen Dreiviertel	principalmente en los tres cuartos basales	3
		throughout	partout	überall	en la totalidad	4
		mainly along basal quarter of midribs	principalement sur le quart basal des nervures médianes	hauptsächlich entlang dem basalen Viertel der Mittelrippen	principalmente a lo largo del cuarto basal de los nervios centrales	5
		mainly along basal half of midribs	principalement sur la moitié basale des nervures médianes	hauptsächlich entlang der basalen Hälfte der Mittelrippen	principalmente a lo largo de la mitad basal de los nervios centrales	6
		mainly along basal three quarters of midribs	principalement sur les trois quarts basaux des nervures médianes	hauptsächlich entlang dem basalen Dreiviertel der Mittelrippen	principalmente a lo largo de los tres cuartos basales de los nervios centrales	7
		mainly along entire length of midribs	principalement sur toute la longueur des nervures médianes	hauptsächlich entlang der gesamten Länge der Mittelrippen	principalmente en toda la longitud de los nervios centrales	8
33.	VG	Corolla: density of spots on outer side	Corolle : densité des taches sur la face externe	Krone: Dichte der Flecken auf der Außenseite	Corola: densidad de las manchas de la cara externa	
QN	(b)	very sparse	très clairsemées	sehr locker	muy escasa	1
		sparse	clairsemées	locker	escasa	Silver Bells 3
		medium	assez clairsemées	mittel	media	Elizabeth 5
		dense	denses	dicht	densa	Pink Chimes 7
		very dense	très denses	sehr dicht	muy densa	9
34. (*)	VG	Corolla: main color of inner side	Corolle : couleur principale de la face interne	Krone: Hauptfarbe der Innenseite	Corola: color principal de la cara interna	
PQ	(b)	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 Corolla: distribution of secondary color of inner side	Corolle : distribution de la couleur secondaire de la face interne	Krone: Verteilung der Sekundärfarbe der Innenseite	Corola: distribución del color secundario de la cara interna		
PQ	(b) none	aucune	keine	ninguno		1
	(c) distal quarter	quart distal	im distalen Viertel	en el cuarto distal		2
	basal half	moitié basale	in der basalen Hälfte	en la mitad basal		3
	basal quarter	quart basal	im basalen Viertel	en el cuarto basal		4
	at base	à la base	an der Basis	en la base		5
	marginal zone	zone marginale	in der Randzone	en la zona del borde		6
	midribs	nervures médianes	auf den Mittelrippen	en los nervios centrales		7
	longitudinal zone	zone longitudinale	an der Längsseite der Kronlappen	en la zona longitudinal		8
	along veins	le long des nervures	entlang der Adern	a lo largo de los nervios		9
36. (*)	VG Corolla: secondary color of inner side	Corolle : couleur secondaire de la face interne	Krone: Sekundärfarbe der Innenseite	Corola: color secundario de la cara interna		
PQ	(b) RHS Colour Chart	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
	(c) (indicate reference number)					
37. (*)	VG Corolla: spots on inner side	Corolle : taches sur la face interne	Krone: Flecken an der Innenseite	Corola: manchas en la cara interna		
QL	(b) absent	absentes	fehlend	ausentes	La Bello	1
	present	présentes	vorhanden	presentes	Pink Octopus	9
38. (+)	VG Corolla: distribution of spots on inner side	Corolle : distribution des taches sur la face interne	Krone: Verteilung der Flecken auf der Innenseite	Corola: distribución de las manchas en la cara interna		
PQ	(b) mainly in basal quarter	principalement sur le quart basal	hauptsächlich im basalen Viertel	principalmente en el cuarto basal		1
	mainly in basal half	principalement sur la moitié basale	hauptsächlich in der basalen Hälfte	principalmente en la mitad basal		2
	mainly in basal three quarters	principalement sur les trois quarts basaux	hauptsächlich im basalen Dreiviertel	principalmente en los tres cuartos basales		3
	throughout	partout	überall	en la totalidad		4
	mainly along basal quarter of midribs	principalement sur le quart basal des nervures médianes	hauptsächlich entlang dem basalen Viertel der Mittelrippen	principalmente a lo largo del cuarto basal de los nervios centrales		5
	mainly along basal half of midribs	principalement sur la moitié basale des nervures médianes	hauptsächlich entlang der basalen Hälfte der Mittelrippen	principalmente a lo largo de la mitad basal de los nervios centrales		6
	mainly along basal three quarters of midribs	principalement sur les trois quarts basaux des nervures médianes	hauptsächlich entlang dem basalen Dreiviertel der Mittelrippen	principalmente a lo largo de los tres cuartos basales de los nervios centrales		7
	mainly along entire length of midribs	principalement sur toute la longueur des nervures médianes	hauptsächlich entlang der gesamten Länge der Mittelrippen	principalmente en toda la longitud de los nervios centrales		8

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39. VG	Corolla: density of spots on inner side	Corolle : densité des taches sur la face interne	Krone: Dichte der Flecken auf der Innenseite	Corola: densidad de las manchas de la cara interna		
QN (b)	very sparse	très clairsemées	sehr locker	muy escasa		1
	sparse	clairsemées	locker	escasa	Silver Bells	3
	medium	assez clairsemées	mittel	media	Pink Octopus	5
	dense	denses	dicht	densa	Pink Chimes	7
	very dense	très denses	sehr dicht	muy densa	Hot Lips	9
40. VG	Corolla: color of spots on inner side	Corolle : couleur des taches sur la face interne	Krone: Farbe der Flecken auf der Innenseite	Corola: color de las manchas de la cara interna		
PQ (b)	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)		
41. VG (*)	Corolla: pubescence of inner side	Corolle : pubescence de la face interne	Krone: Behaarung der Innenseite	Corola: pubescencia de la cara interna		
QL (b)	absent	absente	fehlend	ausente	Caroline	1
	present	présente	vorhanden	presente	Pink Octopus	9
42. VG/ MG/ MS (+)	Corolla: length of fused part	Corolle : longueur de la partie soudée	Krone: Länge des verwachsenen Teils	Corola: longitud de la parte soldada		
QN (b)	absent or extremely short	absente ou extrêmement courte	fehlend oder extrem kurz	ausente o extremadamente corta	Pink Octopus	1
	very short	très courte	sehr kurz	muy corta	PKM01	3
	short	courte	kurz	corta	Caroline	5
	medium	moyenne	mittel	media	Kent Belle	7
	long	longue	lang	larga	Pantaloons	9
	very long	très longue	sehr lang	muy larga	Elizabeth	11
	extremely long	extrêmement longue	extrem lang	extremadamente larga	Sarastro	13
43. VG (*) (+)	Corolla: relative length of fused part compared to total corolla length	Corolle : longueur relative de la partie soudée par rapport à la longueur totale de la corolle	Krone: relative Länge des verwachsenen Teils im Vergleich zur Gesamtkronenlänge	Corola: longitud de la parte soldada en relación con la longitud total de la corola		
QN (b)	absent or very short	absente ou très courte	fehlend oder sehr kurz	ausente o muy corta		1
	short	courte	kurz	corta		3
	medium	moyenne	mittel	media		5
	long	longue	lang	larga		7
	very long	très longue	sehr lang	muy larga		9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
44.	VG/ MG/ MS (+)	Corolla: diameter of fused part	Corolle : diamètre de la partie soudée	Krone: Durchmesser des verwachsenen Teils	Corola: diámetro de la parte soldada		
QN	(b)	absent or very small	nul ou très petit	fehlend oder sehr klein	nulo o muy pequeño	PKMP05	1
		small	petit	klein	pequeño	Samantha	3
		medium	moyen	mittel	medio	Elizabeth	5
		large	grand	groß	grande		7
		very large	très grand	sehr groß	muy grande	Blue Eyed Blonde	9
45.	VG (*) (+)	Corolla: profile of fused part in longitudinal section	Corolle : profil de la partie soudée en section longitudinale	Krone: Profil des verwachsenen Teils im Längsschnitt	Corola: perfil de la parte soldada en sección longitudinal		
PQ	(b)	converging	convergent	zusammenlaufend	convergente		1
		parallel	parallèle	parallel	paralelo		2
		very weakly diverging	très faiblement divergent	sehr wenig auseinanderlaufend	muy débilmente divergente		3
		weakly diverging	faiblement divergent	wenig auseinanderlaufend	débilmente divergente		4
		moderately diverging	modérément divergent	mäßig auseinanderlaufend	moderadamente divergente		5
		strongly diverging	fortement divergent	stark auseinanderlaufend	fuertemente divergente		6
		very strongly diverging	très fortement divergent	sehr stark auseinanderlaufend	muy fuertemente divergente		7
46.	VG (*) (+)	Corolla lobe: shape	Lobe de la corolle : forme	Kronlappen: Form	Lóbulo de la corola: forma		
PQ	(b)	triangular	triangulaire	dreieckig	triangular		1
		ovate	ovale	eiförmig	oval		2
		elliptic	elliptique	elliptisch	elíptico		3
		oblong	oblong	rechteckig	oblongo		4
47.	VG/ MG/ MS (+)	Corolla lobe: length	Lobe de la corolle : longueur	Kronlappen: Länge	Lóbulo de la corola: longitud		
QN	(b)	very short	très court	sehr kurz	muy corto	Jelly Bells	1
		short	court	kurz	corto	PKMP05	3
		medium	moyen	mittel	medio	Blue Eyed Blonde	5
		long	long	lang	largo		7
		very long	très long	sehr lang	muy largo		9
		extremely long	extrêmement long	extrem lang	extremadamente largo	Pink Octopus	11

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
48.	VG/ MG/ MS (+)	Corolla lobe: width	Lobe de la corolle : largeur	Kronlappen: Breite	Lóbulo de la corola: anchura	
QN	(b)	very narrow	très étroit	sehr schmal	muy estrecho	Blue Rivulet 1
		narrow	étroit	schmal	estrecho	Caroline 3
		medium	moyen	mittel	medio	Kent Belle 5
		broad	large	breit	ancho	La Bello 7
		very broad	très large	sehr breit	muy ancho	Blue Eyed Blonde 9
49.	VG (* (+)	Corolla lobe: curvature	Lobe de la corolle : courbure	Kronlappen: Biegung	Lóbulo de la corola: curvatura	
QN	(b)	very weakly incurving	très faiblement incurvé	sehr schwach eingebogen	muy débilmente incurvado	1
		straight	droit	gerade	recto	2
		very weakly reflexing	très faiblement recourbé	sehr schwach zurückgebogen	muy débilmente reflexo	3
		weakly reflexing	faiblement recourbé	schwach zurückgebogen	débilmente reflexo	4
		moderately reflexing	modérément recourbé	mäßig zurückgebogen	moderadamente reflexo	5
		strongly reflexing	fortement recourbé	stark zurückgebogen	fuertemente reflexo	6
		very strongly reflexing	très fortement recourbé	sehr stark zurückgebogen	muy fuertemente reflexo	7
50.	VG (+)	Corolla lobe: shape of apex	Lobe de la corolle : forme de l'apex	Kronlappen: Form der Spitze	Lóbulo de la corola: forma del ápice	
PQ	(b)	acuminate	acuminé	zugespitzt	acuminado	1
		acute	aigu	spitz	agudo	2
		obtuse	obtus	stumpf	obtuso	3
		rounded	arrondi	abgerundet	redondeado	4
		truncate	tronqué	abgestumpft	truncado	5
51.	VG	Pollen: color	Pollen : couleur	Pollen: Farbe	Polen: color	
PQ	(b)	whitish	blanchâtre	weißlich	blanquecino	Pink Octopus 1
		greenish	verdâtre	grünlich	verdoso	2
		yellowish	jaunâtre	gelblich	amarillento	Caroline 3
		purplish	violacé	purpurn	purpúreo	June Bell 4
		bluish	bleuâtre	bläulich	azulado	PKM01 5

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

Observation should be made at the time of full flowering.

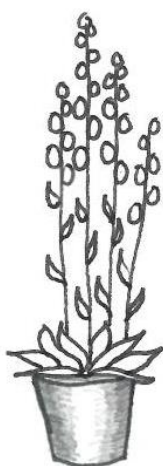
Characteristics containing the following key in the second column of the Table of Characteristics should be examined as indicated below:

- (a) Observations on the leaf blade should be made on fully expanded leaves from the middle third of a flowering stem, excluding the inflorescence. Observations are not made on the basal leaves of the plant. The upper side of the leaf should always be observed unless otherwise stated.
- (b) Observations on the calyx and corolla should be made on new fully open flowers.
- (c) The main color is the color with the largest surface area, excluding any spots that may be present. The color with the second largest area is the secondary color, excluding any spots that may be present. In cases where the areas of the main and secondary color are too similar to reliably decide which color has the largest area, the darkest color is considered to be the main color. The guideline makes provision for two colors; if more colors are present, those with the smallest area should not be observed.

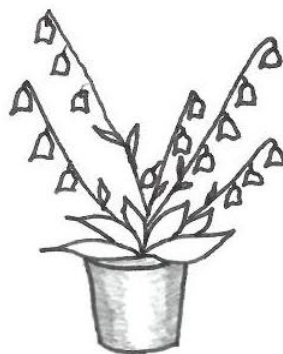
8.2 *Explanations for individual characteristics*

Ad. 1: Plant: growth habit

The plants should be grown in containers to observe the plant growth habit.



1
upright



2
semi-upright



3
spreading



4
horizontal

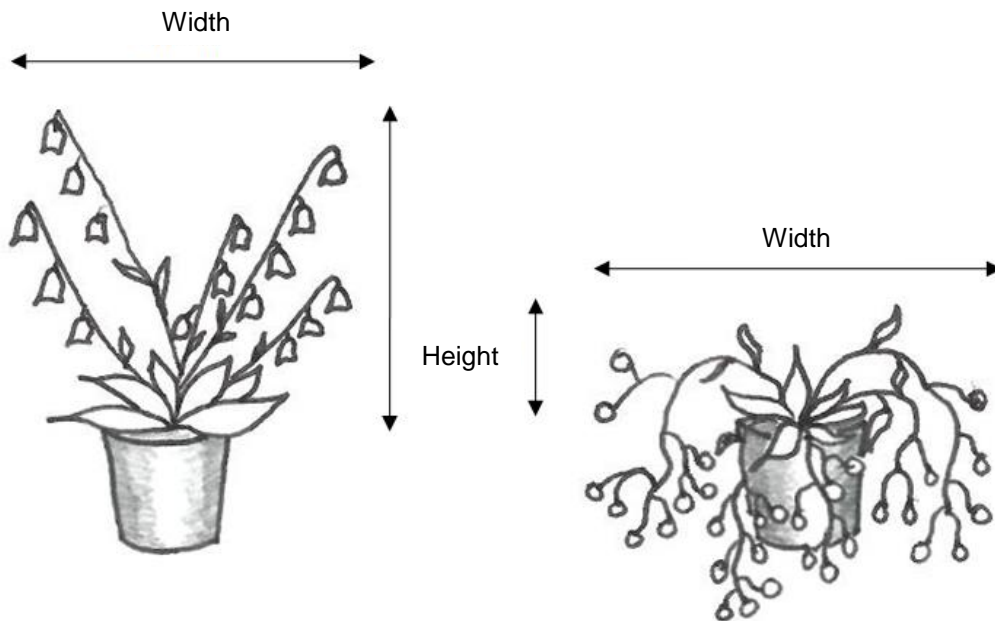


5
drooping

Ad. 2: Plant: height

Ad. 3: Plant: width

The natural height of the plant should be assessed from the surface of the growing medium. The natural width of the plants should be observed.



Ad. 4: Plant: density

This is an overall assessment of the density of the whole plant, including flowers and leaves.

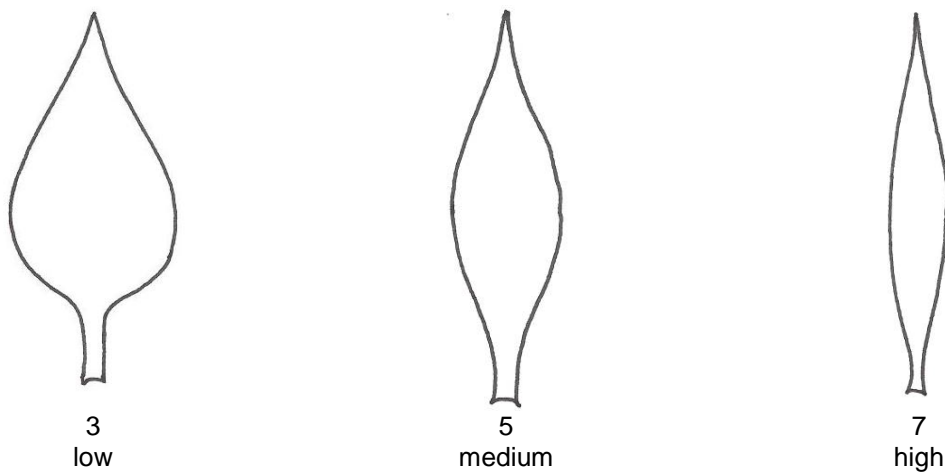
Ad. 5: Stem: color

To be observed in the middle third of the flowering stem, excluding the flowering part.

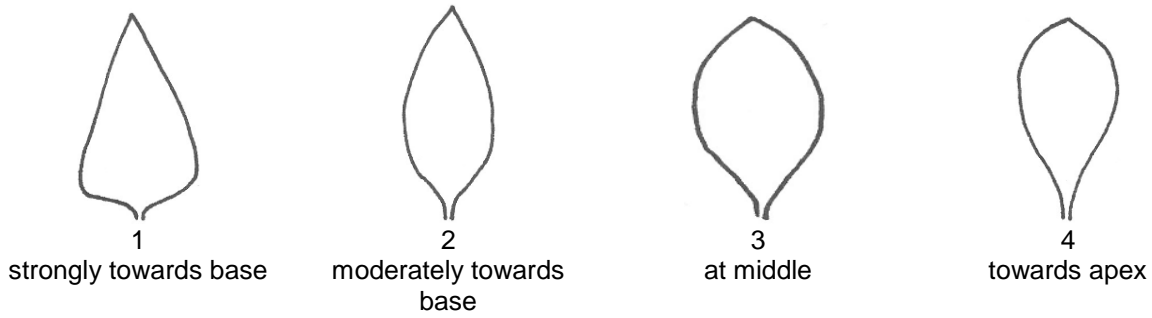
Ad. 7: Leaf blade: width

To be observed at the broadest part of the leaf blade.

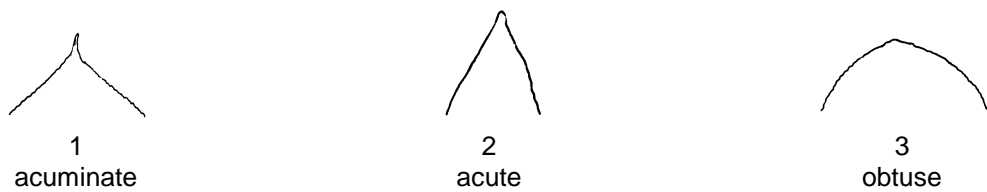
Ad. 8: Leaf blade: length/width ratio



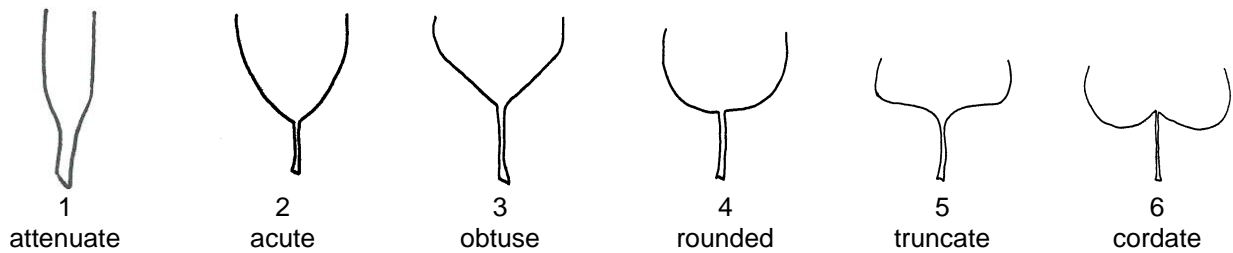
Ad. 9: Leaf blade: position of broadest part



Ad. 10: Leaf blade: shape of apex



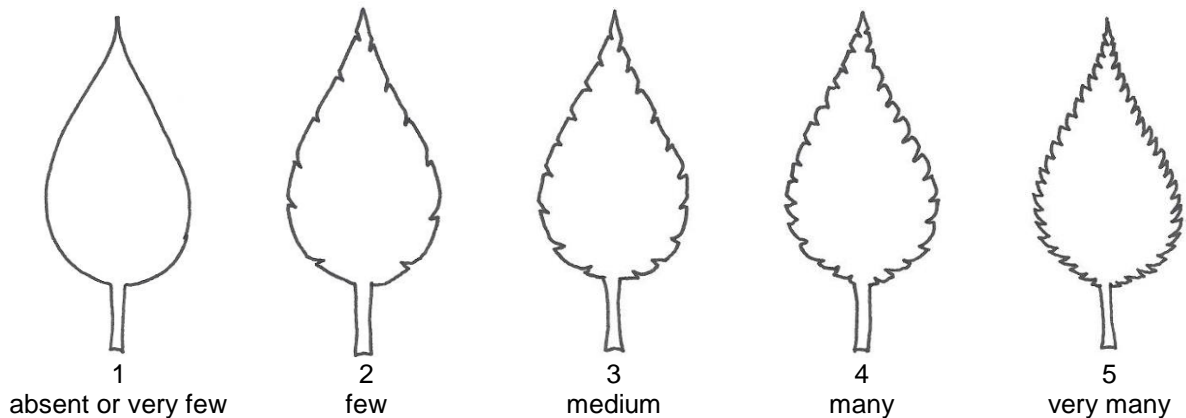
Ad. 11: Leaf blade: shape of base



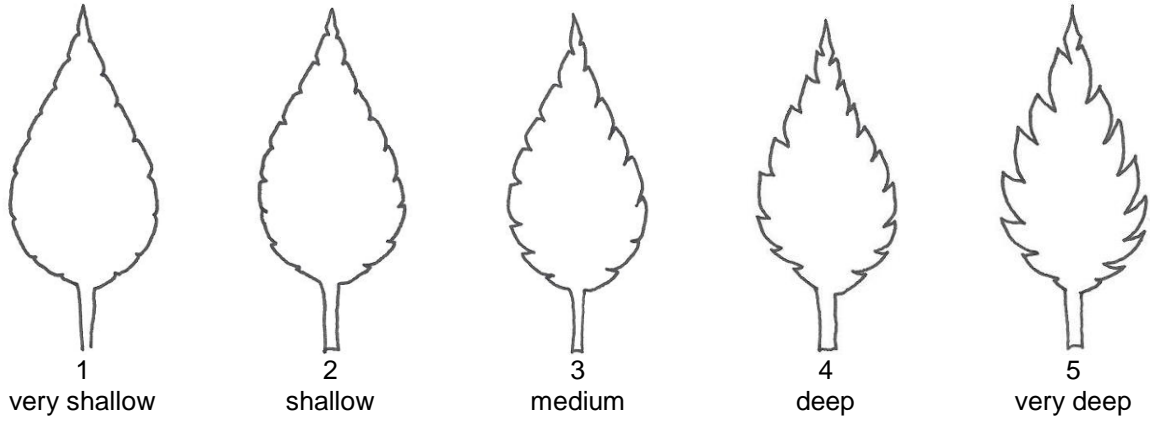
Ad. 13: Leaf blade: main color

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

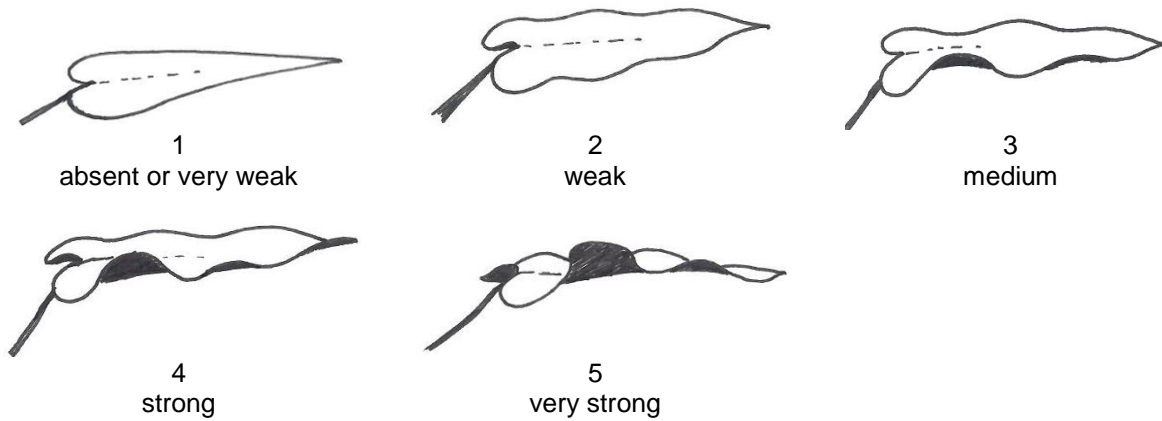
Ad. 17: Leaf blade: indentations of margin



Ad. 18: Leaf blade: depth of indentations of margin

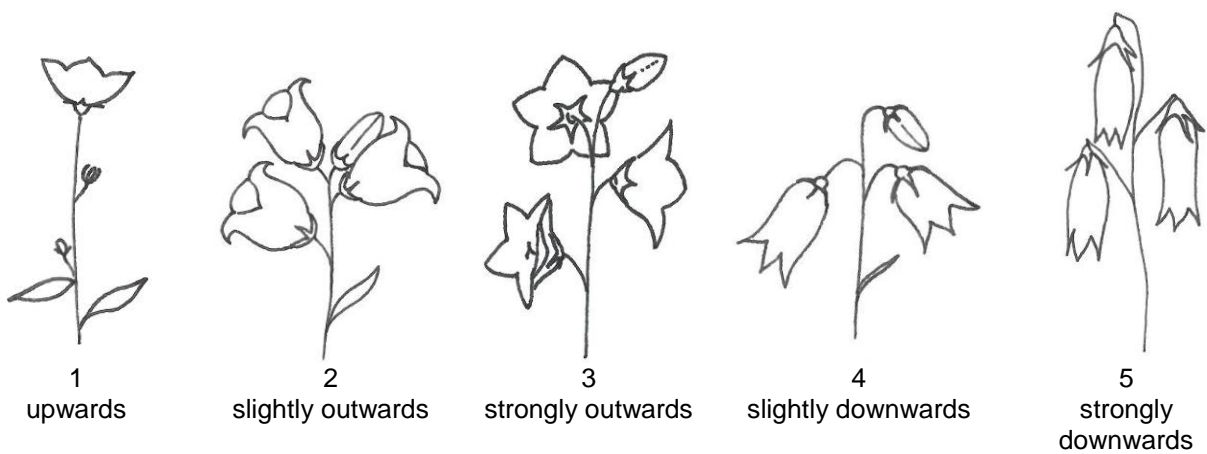


Ad. 19: Leaf blade: undulation of margin



Ad. 20: Flower: attitude

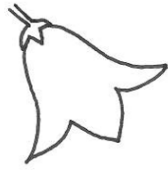
The natural attitude of the corolla should be observed irrespective of the angle of the pedicel.



Ad. 21: Flower: type



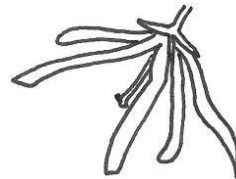
1
tubular



2
campanulate



3
rotate



4
stellate (with strap-shaped lobes)

Ad. 22: Calyx: petaloid lobes



1
absent



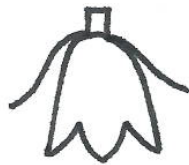
9
present

Ad. 24: Calyx: position of lobes

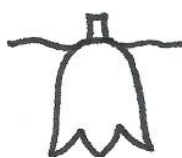
The observation is on the lobe of the calyx and excludes any appendage that might be present between the lobes.



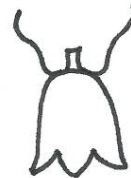
1
adpressed to
corolla



3
moderately
spreading



5
horizontal



7
moderately reflexed



9
strongly reflexed

Ad. 25: Corolla: number of whorls

This does not include the petaloid calyx where present.



1
very few



2
few



3
medium

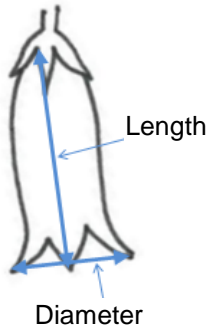


4
many

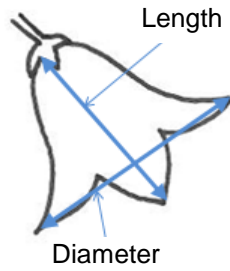
Ad. 26: Corolla: length

Ad. 27: Corolla: diameter

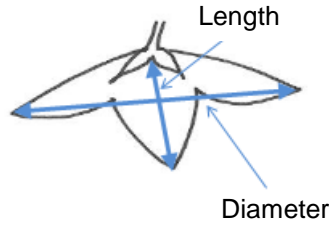
Assess the natural length of the corolla from the lowest to highest point, and assess the natural diameter of the corolla at its widest point.



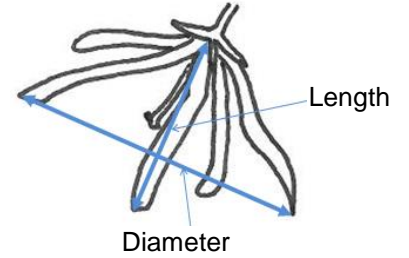
Flower type: tubular



Flower type: campanulate



Flower type: rotate



Flower type: stellate (with strap-shaped lobes)

Ad. 29: Corolla: distribution of secondary color of outer side



1
none



2
distal quarter



3
basal half



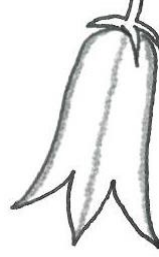
4
basal quarter



5
at base



6
marginal zone



7
midribs



8
midribs and marginal zone

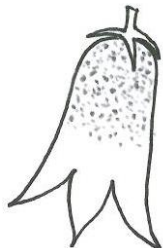


9
along veins
(including midrib)

Ad. 32: Corolla: distribution of spots on outer side



1
mainly in basal quarter



2
mainly in basal half



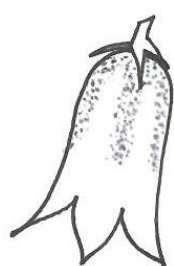
3
mainly in basal three quarters



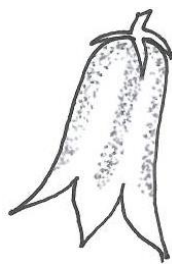
4
throughout



5
mainly along basal quarter of midribs



6
mainly along basal half of midribs

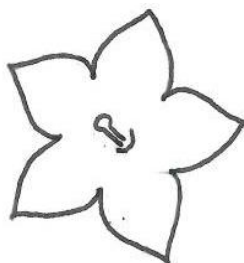


7
mainly along basal three quarters of midribs

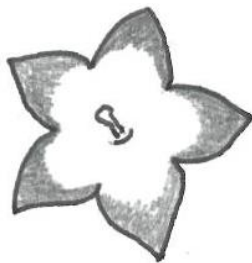


8
mainly along entire length of midribs

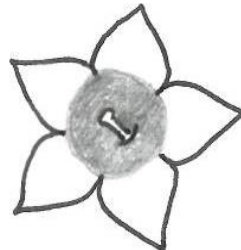
Ad. 35: Corolla: distribution of secondary color of inner side



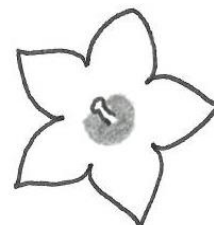
1
none



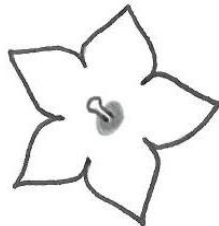
2
distal quarter



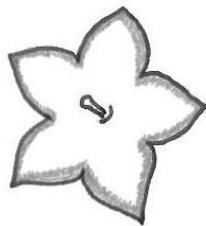
3
basal half



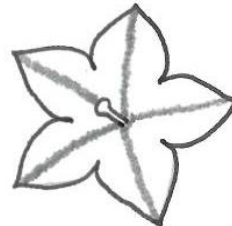
4
basal quarter



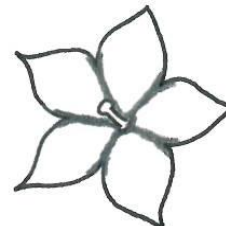
5
at base



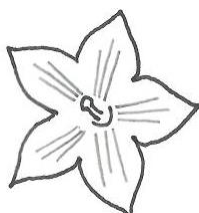
6
marginal zone



7
midribs

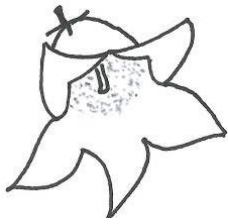


8
longitudinal zone (lobe sinus to base)

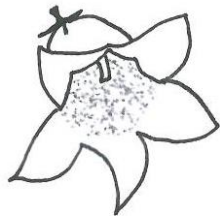


9
along veins

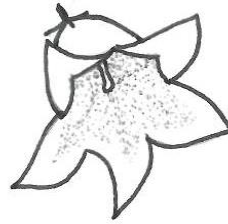
Ad. 38: Corolla: distribution of spots on inner side



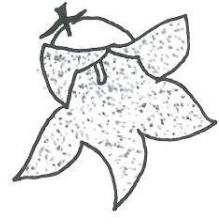
1
mainly in basal quarter



2
mainly in basal half



3
mainly in basal three quarters



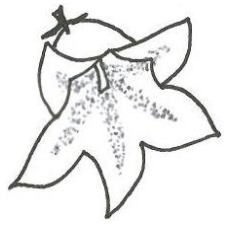
4
throughout



5
mainly along basal quarter of midribs



6
mainly along basal half of midribs



7
mainly along basal three quarters of midribs



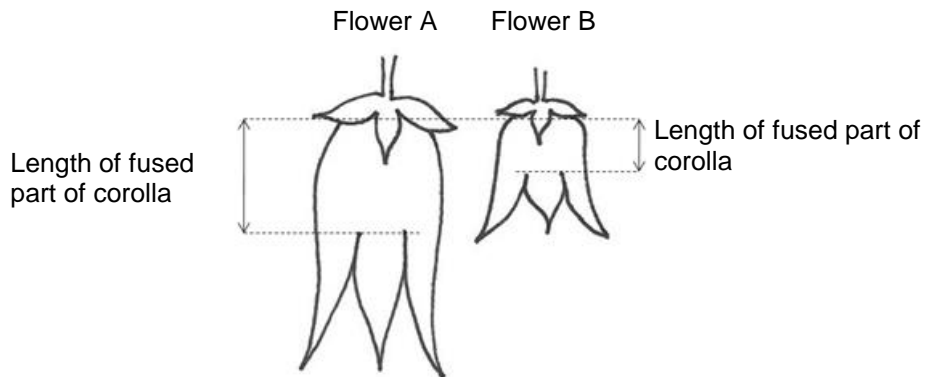
8
mainly along entire length of midribs

Ad. 42: Corolla: length of fused part

Ad. 43: Corolla: relative length of fused part compared to total corolla length

The length of the fused part of the corolla can be expressed in absolute terms in characteristic 42, or as a proportion of the total length of the corolla in characteristic 43. The expression of the two characteristics is independent as shown in the two examples below.

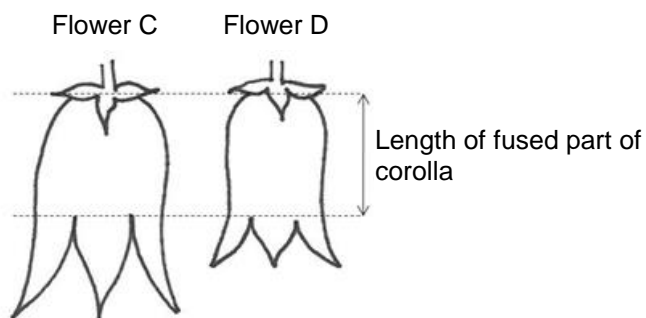
Example 1



Characteristic 42 – the note observed for the absolute length of the fused part of the corolla for flower A would be different from flower B as A is twice the length of B.

Characteristics 43 – the note observed would be the same for flower A and flower B as the proportion of the corolla made up of the fused part is 'medium' for both.

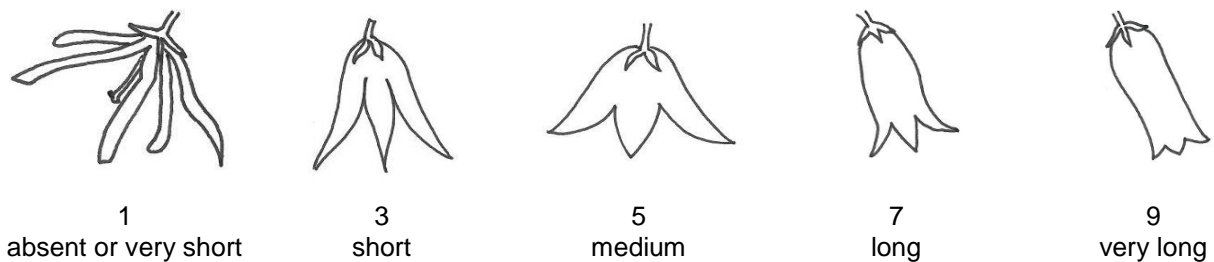
Example 2



Characteristic 42 – the note observed for the absolute length of flower C would be the same as flower D.

Characteristic 43 – the note observed for flower C would be 5 (medium) and for flower D it would be 7 (long), this is because the proportion of the corolla made up of the fused part is different.

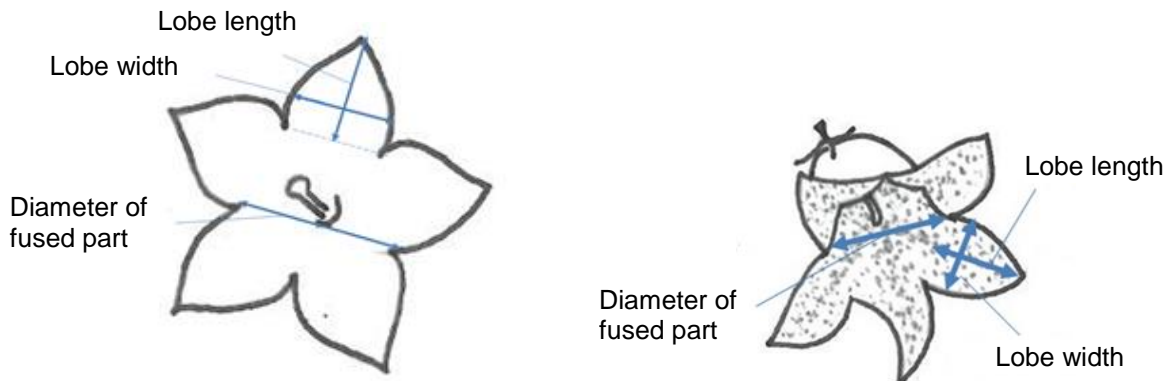
Ad. 43: Corolla: relative length of fused part compared to total corolla length



Ad. 44: Corolla: diameter of fused part

Ad. 47: Corolla lobe: length

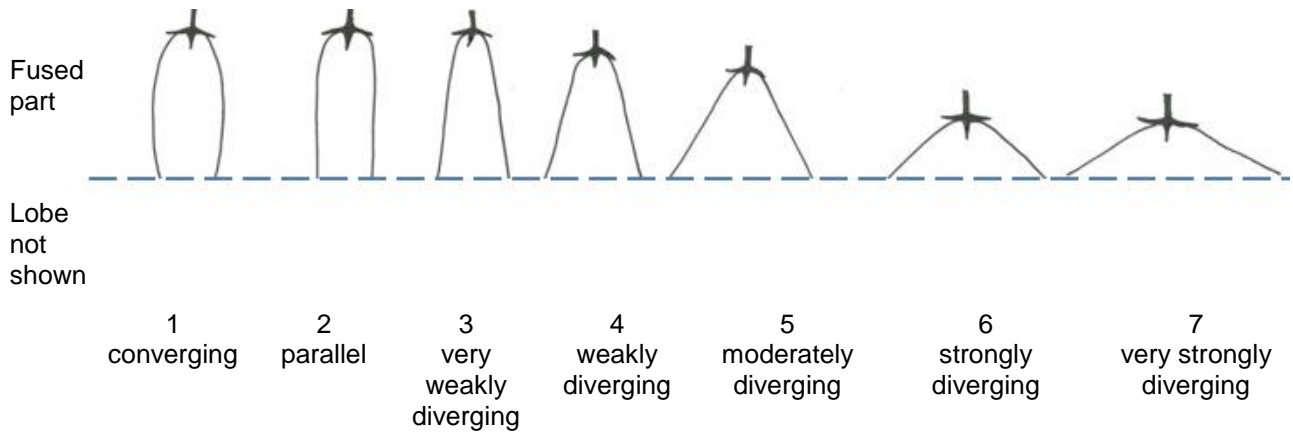
Ad. 48: Corolla lobe: width



Ad. 45: Corolla: profile of fused part in longitudinal section

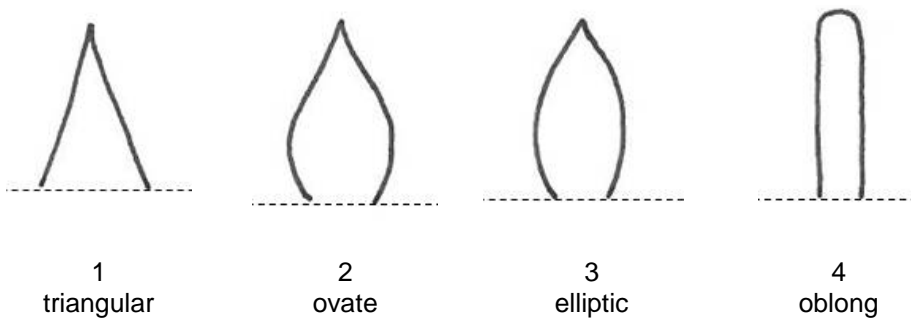
Only to be observed on varieties where Characteristic 43 "Corolla: relative length of fused part compared to total corolla length", has been observed to be equal to or greater than note 5.

The observation excludes the angle of the lobe.

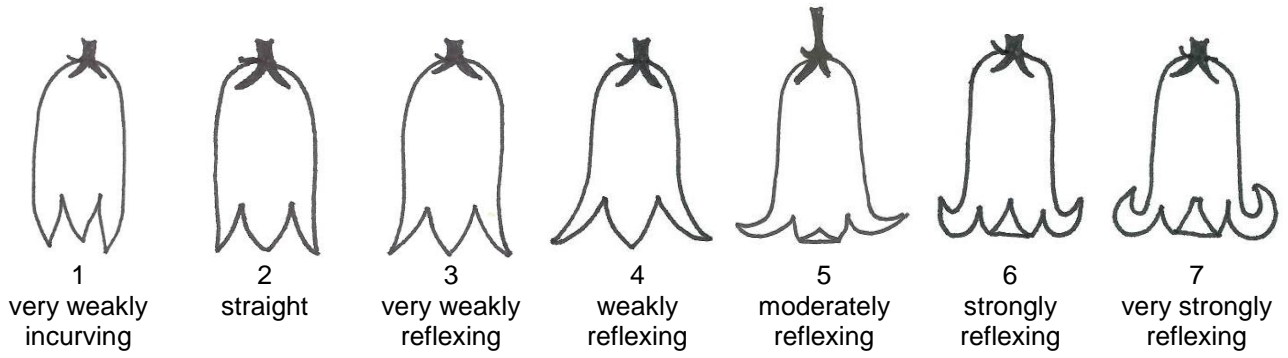


Ad. 46: Corolla lobe: shape

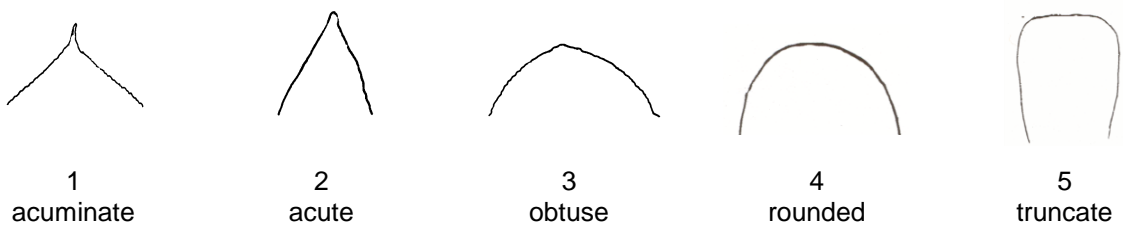
The lobe is the unfused part of the corolla.



Ad. 49: Corolla lobe: curvature



Ad. 50: Corolla lobe: shape of apex



9. Literature

Brickell, C.,(ed.), 1996: The Royal Horticultural Society A-Z Encyclopedia of Garden Plants. Dorling Kindersley Ltd.. London, GB, 219-223

Huxley, A., (ed.), Griffiths, M., (ed.), Levy, M., (ed.), 1999: The Royal Horticultural Society Dictionary of Gardening. McMillan Reference Ltd.. London, GB, 1: 485-495

Lewis, P., Lynch, M., 1989: Campanulas. Christopher Helm Ltd. Bromley, Kent, GB

Nicholls, G., 2006: Dwarf Campanulas and Associated Genera. Timber Press Inc. Oregon, US

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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	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	Genus	<input type="text" value="Campanula L."/>
1.2	Common name	<input type="text" value="Campanula"/>
1.3	Species (please complete)	<input type="text"/>

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 Seed []

4.2.3 Other []
(please provide details)

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

Characteristics	Example Varieties	Note
5.1 Plant: growth habit (1)		
upright	La Bello	1[]
semi-upright	Sarastro	2[]
spreading	PKMP05	3[]
horizontal	Blue Rivulet	4[]
drooping	Camp trailbule	5[]
5.2 Plant: height (2)		
extremely short	Puck	1[]
extremely short to very short		2[]
very short	Samantha	3[]
very short to short		4[]
short	Caroline	5[]
short to medium		6[]
medium	Sarastro	7[]
medium to tall		8[]
tall	Kent Belle	9[]
tall to very tall		10[]
very tall		11[]
very tall to extremely tall		12[]
extremely tall	Aida	13[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.3 Leaf blade: main color (13)		
whitish		1[]
yellow	Kifu	2[]
yellow green	Blue Eyed Blonde	3[]
light green	Caroline	4[]
medium green	Sarastro	5[]
dark green	PKM01	6[]
grey green	Silver Bells	7[]
green tinged with purplish red	Blue Rivulet	8[]
5.4 Flower: attitude (20)		
upwards	Samantha	1[]
slightly outwards	PKMP05	2[]
strongly outwards	Blue Eyed Blonde	3[]
slightly downwards	Pink Octopus	4[]
strongly downwards	Sarastro	5[]
5.5 Flower: type (21)		
tubular	Sarastro	1[]
campanulate	PKMH01	2[]
rotate	Samantha	3[]
stellate (with strap-shaped lobes)	Pink Octopus	4[]
5.6 Corolla: number of whorls (25)		
very few	PKMH01	1[]
few	Havidb701	2[]
medium	White Ball	3[]
many	La Bello	4[]
5.7 (i) Corolla: main color of outer side (excluding spots) (28)		
RHS Colour Chart (indicate reference number)		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.7 (ii) Corolla: main color of outer side (excluding spots) (28)		
white	La Bello	1[]
pink	Elizabeth	2[]
red purple		3[]
purple	Sarastro	4[]
blue	Blue Rivulet	5[]
5.8 (i) Corolla: secondary color of outer side (excluding spots) (30)		
RHS Colour Chart (indicate reference number)		
5.8 (ii) Corolla: secondary color of outer side (excluding spots) (30)		
white	Elizabeth	1[]
pink		2[]
red purple		3[]
purple		4[]
blue	La Bello	5[]
5.9 (i) Corolla: main color of inner side (excluding spots) (34)		
RHS Colour Chart (indicate reference number)		
5.9 (ii) Corolla: main color of inner side (excluding spots) (34)		
white	Pink Octopus	1[]
pink	Elizabeth	2[]
red purple		3[]
purple	Sarastro	4[]
blue	Samantha	5[]
5.10 (i) Corolla: secondary color of inner side (excluding spots) (36)		
RHS Colour Chart (indicate reference number)		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.10 (ii) Corolla: secondary color of inner side (excluding spots) (36)		
white	Elizabeth	1[]
pink	Caroline	2[]
red purple		3[]
purple		4[]
blue	La Bello	5[]
5.11 Corolla: spots on inner side (37)		
absent	La Bello	1[]
present	Pink Octopus	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 the characteristic(s) for your candidate variety
<i>Example</i>	<i>Flower: attitude</i>	<i>upwards</i>	<i>slightly outwards</i>

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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#7. Additional information which may help in the examination of the variety

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

Yes [] No []

(If yes, please provide details)

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

Yes [] No []

(If yes, please provide details)

7.3 Main use of the variety

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

.....

7.4 A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

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

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

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

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

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

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

If the answer to (b) is yes, please attach a copy of the authorization.

9. Information on plant material to be examined or submitted for examination.

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

- | | | |
|---|---------|--------|
| (a) Microorganisms (e.g. virus, bacteria, phytoplasma) | Yes [] | No [] |
| (b) Chemical treatment (e.g. growth retardant, pesticide) | Yes [] | No [] |
| (c) Tissue culture | Yes [] | No [] |
| (d) Other factors | Yes [] | No [] |

Please provide details for where you have indicated "yes".

.....

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant's name

Signature

Date

[End of document]