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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

<p>HOSTA</p> <p>UPOV Code: HOSTA</p> <p><i>Hosta</i> Tratt.</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>Hosta</i> Tratt.	Funkia, Hosta, Plantain Lily	Funkia, Hémérocalle du Japon	Funkie	Hosta

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 *Hosta* Tratt.

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 two year old plants ready to flower and able to express all their characteristics in the first year of examination.

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

20 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 two independent growing cycles.

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) Leaf blade: shape (characteristic 11)
- (b) Leaf blade: color covering the largest surface area, with the following groups:
 - white
 - light yellow
 - medium yellow
 - dark yellow
 - light green
 - medium green
 - dark green
 - blue green
- (c) Leaf blade: color covering the second largest surface area, with the following groups:
 - white
 - light yellow
 - medium yellow
 - dark yellow
 - light green
 - medium green
 - dark green
 - blue 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)-(e) | 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 (*) (+)	Plant: color of first scaly leaves	Plante : couleur des premières feuilles écailleuses	Pflanze: Farbe der ersten schuppigen Blätter	Planta: color de las primeras hojas escamosas		
PQ (a)	green	verte	grün	verde	Sagae	1
	purple	pourpre	purpurn	púrpura	El Capitan	2
	brown	brune	braun	marrón	Fenmans Fascination	3
2. VG/ MG/ MS (*)	Plant: height of foliage	Plante : hauteur du feuillage	Pflanze: Höhe des Laubes	Planta: altura del follaje		
QN (a)	short	basse	niedrig	baja	Great Escape	3
	medium	moyenne	mittel	media	Paradise Island	5
	tall	haute	hoch	alta	Fragrant Queen	7
3. VG/ MG/ MS (*)	Plant: width	Plante : largeur	Pflanze: Breite	Planta: anchura		
QN (a)	very narrow	très étroite	sehr schmal	muy estrecha	Desert Mouse, Pandora's Box	1
	narrow	étroite	schmal	estrecha	Secret Ambition	3
	medium	moyenne	mittel	media	Paradise Island	5
	broad	large	breit	ancha		7
	very broad	très large	sehr breit	muy ancha	Big Boy	9
4. VG/ MG/ MS (*)	Petiole: length	Pétiole : longueur	Blattstiel: Länge	Peciolo: longitud		
QN (a)	very short	très court	sehr kurz	muy corto	Desert Mouse	1
	short	court	kurz	corto	Time Tunnel	3
	medium	moyen	mittel	medio	Earth Angel	5
	long	long	lang	largo	Blue Circle	7
	very long	très long	sehr lang	muy largo	Big Boy, Flower Power, Green Acres	9
5. VG (*) (+)	Petiole: shape of inner side in cross section	Pétiole : forme de la face interne en section transversale	Blattstiel: Form der Innenseite im Querschnitt	Peciolo: forma de la cara interna en sección transversal		
PQ (a)	flat	plate	flach	plana		1
	V-shape	en V	V-Form	en V		2
	U-shape	en U	U-Form	en U		3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6.	VG	Petiole: color	Pétiole : couleur	Blattstiel: Farbe	Peciolo: color	
PQ	(a)	yellow	jaune	gelb	amarillo	White Christmas 1
		yellow green	vert-jaune	gelbgrün	verde amarillento	Desert Mouse 2
		light green	vert clair	hellgrün	verde claro	Fragrant Queen 3
		medium green	vert moyen	mittelgrün	verde medio	Stirfry 4
		dark green	vert foncé	dunkelgrün	verde oscuro	Devon Green 5
		blue green	vert-bleu	blaugrün	verde azulado	Bressingham Blue 6
		blue grey	gris-bleu	blaugrau	gris azulado	Grand Marquee 7
7.	VG	Petiole: pattern of anthocyanin coloration	Pétiole : répartition de la pigmentation anthocyanique	Blattstiel: Muster der Anthocyanfärbung	Peciolo: patrón de distribución de la pigmentación antocianica	
PQ	(a)	absent	absente	fehlend	ausente	Desert Mouse 1
		flush	diffuse	geflammt	pátina	Pilgrim 2
		spotted	mouchetée	gepunktet	en lunares	Paradise Island 3
8.	VG/ MG/ MS	Leaf blade: length	Limbe : longueur	Blattspreite: Länge	Limbo: longitud	
QN	(a)	very short	très court	sehr kurz	muy corto	Desert Mouse 1
		short	court	kurz	corto	Little Treasure, Secret Ambition 3
		medium	moyen	mittel	medio	Heat Wave 5
		long	long	lang	largo	Blue Circle 7
		very long	très long	sehr lang	muy largo	Big Boy 9
9.	VG/ MG/ MS	Leaf blade: width	Limbe : largeur	Blattspreite: Breite	Limbo: anchura	
QN	(a)	very narrow	très étroit	sehr schmal	muy estrecho	Desert Mouse 1
		narrow	étroit	schmal	estrecho	Secret Ambition 3
		medium	moyen	mittel	medio	Risky Business 5
		broad	large	breit	ancho	7
		very broad	très large	sehr breit	muy ancho	Big Boy, Sum and Substance 9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10. VG (+)	Leaf blade: position of broadest part	Limbe : position de la partie la plus large	Blattspreite: Position der breitesten Stelle	Limbo: posición de la parte más ancha		
QN (a)	at middle	au milieu	in der Mitte	en la mitad		1
	slightly towards base	légèrement vers la base	leicht zur Basis hin	ligeramente hacia la base		2
	moderately towards base	plus ou moins vers la base	mäßig zur Basis hin	moderadamente hacia la base		3
	strongly towards base	fortement vers la base	stark zur Basis hin	fuertemente hacia la base		4
11. VG (*) (+)	Leaf blade: shape	Limbe : forme	Blattspreite: Form	Limbo: forma		
PQ (a)	broad ovate	ovale large	breit eiförmig	oval ancho	Sum and Substance	1
	medium ovate	ovale moyen	mittel eiförmig	oval medio	Desert Mouse, Sagae	2
	narrow ovate	ovale étroit	schmal eiförmig	oval estrecho		3
	very narrow ovate	ovale très étroit	sehr schmal eiförmig	oval muy estrecho	Stiletto	4
	transverse elliptic	elliptique transverse	quer elliptisch	elíptico transversal		5
	circular	circulaire	kreisförmig	circular	Abiqua Drinking Gourd	6
	medium elliptic	elliptique moyen	mittel eiliptisch	elíptico medio	Pineapple Poll	7
	narrow elliptic	elliptique étroit	schmal elliptisch	elíptica estrecha	Saishu Jima	8
	very narrow elliptic	elliptique très étroit	sehr schmal elliptisch	elíptico muy estrecho		9
12. VG (*) (+)	Leaf blade: shape of base	Limbe : forme de la base	Blattspreite: Form der Basis	Limbo: forma de la base		
PQ (a)	acute	pointue	spitz	aguda	Saishu Jima, Sea Octopus	1
	obtuse	obtuse	stumpf	obtusa	Hoosier Harmony	2
	truncate	tronquée	abgeflacht	truncada		3
	cordate	en forme de coeur	herzförmig	cordiforme	Minnie Klopping, Pacific Blue Edger	4
13. VG (*) (+)	Leaf blade: shape of apex (excluding tip)	Limbe : forme du sommet (pointe exclue)	Blattspreite:Form der Spitze (ohne aufgesetzte Spitze)	Limbo: forma del ápice (excluida la punta)		
PQ (a)	acute	pointu	spitz	agudo	Otome-no-ka	1
	obtuse	obtus	stumpf	obtus	Oriana	2
	rounded	arrondi	abgerundet	redondeado	Aureonebulosa, Great Expectations, Tokudama	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14.	VG	Leaf blade: color 1	Limbe :	Blattspreite: Farbe 1	Limbo: primer color		
			première couleur				
	(*)						
	(+)						
PQ	(a)	RHS Colour Chart	Code RHS des	RHS-Farbkarte	Carta de colores RHS		
	(b)	(indicate reference number)	couleurs (indiquer le numéro de référence)	(Nummer angeben)	(indíquese el número de referencia)		
15.	VG	Leaf blade: color 1: distribution	Limbe :	Blattspreite: Farbe 1: Verteilung	Limbo: primer color: distribución		
			première couleur : distribution				
	(*)						
	(+)						
PQ	(a)	at basal zone	en zone basale	an der basalen Zone	en la zona basal		1
		at center	au centre	in der Mitte	en el centro		2
		at top	au sommet	an der Spitze	en el ápice		3
		at marginal zone	en zone marginale	an der Randzone	en la zona del borde		4
		irregular	irrégulière	unregelmäßig	irregular		5
		throughout	partout	überall	en la totalidad		6
16.	VG	Leaf blade: color 1: pattern	Limbe :	Blattspreite: Farbe 1: Muster	Limbo: primer color: patrón de distribución		
			première couleur : répartition				
	(*)						
	(+)						
PQ	(a)	flamed	flaméolée	geflammt	flameado		1
		striped	rayée	gestreift	rayado		2
		spotted	tachetée	gefleckt	en lunares		3
		in sectors	en secteurs	in Sektoren	por sectores		4
		marbled	marbrée	marmoriert	veteado		5
		marginated	au bord	am Rand	marginal		6
		solid or nearly solid	uniforme ou presque	ganzflächig oder beinahe ganzflächig	liso o prácticamente liso		7
17.	VG	Leaf blade: color 1: total area	Limbe :	Blattspreite: Farbe 1: Gesamtfläche	Limbo: primer color: superficie total		
			première couleur : surface totale				
	(*)						
	(+)						
QN	(a)	small	petite	klein	pequeña		3
		medium	moyenne	mittel	media		5
		large	grande	groß	grande		7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	VG	Leaf blade: color 2 (if present)	Limbe : deuxième couleur (si présente)	Blattspreite: Farbe 2 (falls vorhanden)	Limbo: segundo color (si está presente)		
	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)		
19.	VG	Leaf blade: color 2: distribution	Limbe: deuxième couleur : distribution	Blattspreite: Farbe 2: Verteilung	Limbo: segundo color: distribución		
	PQ	(a) none	aucune	keine	ausente		1
		at basal zone	en zone basale	an der basalen Zone	en la zona basal		2
		at center	au centre	in der Mitte	en el centro		3
		at top	au sommet	an der Spitze	en el ápice		4
		at marginal zone	en zone marginale	an der Randzone	en la zona del borde		5
		irregular	irrégulière	unregelmäßig	irregular		6
		throughout	partout	überall	en la totalidad		7
20.	VG	Leaf blade: color 2: pattern	Limbe : deuxième couleur : répartition	Blattspreite: Farbe 2: Muster	Limbo: segundo color: patrón de distribución		
	PQ	(a) flamed	flaméolée	geflammt	flameado		1
		striped	rayée	gestreift	rayado		2
		spotted	tachetée	gefleckt	en lunares		3
		in sectors	en secteurs	in Sektoren	por sectores		4
		marbled	marbrée	marmoriert	veteado		5
		marginated	au bord	am Rand	marginal		6
		solid or nearly solid	uniforme ou presque	ganzflächig oder beinahe ganzflächig	liso o prácticamente liso		7
21.	VG	Leaf blade: color 2: total area	Limbe : deuxième couleur : surface totale	Blattspreite: Farbe 2: Gesamtfläche	Limbo: segundo color: superficie total		
	QN	(a) small	petite	klein	pequeña		3
		medium	moyenne	mittel	media		5
		large	grande	groß	grande		7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
22.	VG	Leaf blade: color 3 (if present)	Limbe : troisième couleur (si présente)	Blattspreite: Farbe 3 (falls vorhanden)	Limbo: tercer color (si está presente)		
	(*) (+)						
PQ	(a) (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)		
23.	VG	Leaf blade: color 3: distribution	Limbe : troisième couleur : distribution	Blattspreite: Farbe 3: Verteilung	Limbo: tercer color: distribución		
	(*) (+)						
PQ	(a)	none	aucune	keine	ausente		1
		at basal zone	en zone basale	an der basalen Zone	en la zona basal		2
		at center	au centre	in der Mitte	en el centro		3
		at top	au sommet	an der Spitze	en el ápice		4
		at marginal zone	en zone marginale	an der Randzone	en la zona del borde		5
		irregular	irrégulière	unregelmäßig	irregular		6
		throughout	partout	überall	en la totalidad		7
24.	VG	Leaf blade: color 3: pattern	Limbe : troisième couleur : répartition	Blattspreite: Farbe 3: Muster	Limbo: tercer color: patrón de distribución		
	(+)						
PQ	(a)	flamed	flaméolée	geflammt	flameado		1
		striped	rayée	gestreift	rayado		2
		spotted	tachetée	gefleckt	en lunares		3
		in sectors	en secteurs	in Sektoren	por sectores		4
		marbled	marbrée	marmoriert	veteado		5
		marginated	au bord	am Rand	marginal		6
		solid or nearly solid	uniforme ou presque	ganzflächig oder beinahe ganzflächig	liso o prácticamente liso		7
25.	VG	Leaf blade: color 3: total area	Limbe : troisième couleur : surface totale	Blattspreite: Farbe 3: Gesamtfläche	Limbo: tercer color: superficie total		
	(*) (+)						
QN	(a)	small	petite	klein	pequeña		3
		medium	moyenne	mittel	media		5
		large	grande	groß	grande		7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26. (*) (+)	VG	Leaf blade: color 4 (if present)	Limbe : quatrième couleur (si présente)	Blattspreite: Farbe 4 (falls vorhanden)	Limbo: cuarto color (si está presente)	
PQ	(a) (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)	
27. (*) (+)	VG	Leaf blade: color 4: distribution	Limbe : quatrième couleur : distribution	Blattspreite: Farbe 4: Verteilung	Limbo: cuarto color: distribución	
PQ	(a)	none	aucune	keine	ausente	1
		at basal zone	en zone basale	an der basalen Zone	en la zona basal	2
		at center	au centre	in der Mitte	en el centro	3
		at top	au sommet	an der Spitze	en el ápice	4
		at marginal zone	en zone marginale	an der Randzone	en la zona del borde	5
		irregular	irrégulière	unregelmäßig	irregular	6
		throughout	partout	überall	en la totalidad	7
28. (+)	VG	Leaf blade: color 4: pattern	Limbe : quatrième couleur : répartition	Blattspreite: Farbe 4: Muster	Limbo: cuarto color: patrón de distribución	
PQ	(a)	flamed	flaméolée	geflammt	flameado	1
		striped	rayée	gestreift	rayado	2
		spotted	tachetée	gefleckt	en lunares	3
		in sectors	en secteurs	in Sektoren	por sectores	4
		marbled	marbrée	marmoriert	veteado	5
		marginated	au bord	am Rand	marginal	6
		solid or nearly solid	uniforme ou presque	ganzflächig oder beinahe ganzflächig	liso o prácticamente liso	7
29. (*) (+)	VG	Leaf blade: color 4: total area	Limbe : quatrième couleur : surface totale	Blattspreite: Farbe 4: Gesamtfläche	Limbo: cuarto color: superficie total	
QN	(a)	small	petite	klein	pequeña	3
		medium	moyenne	mittel	media	5
		large	grande	groß	grande	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30. (*) (+)	VG	Leaf blade: color 5 (if present)	Limbe : cinquième couleur (si présente)	Blattspreite: Farbe 5 (falls vorhanden)	Limbo: quinto color (si está presente)	
PQ	(a) (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	Leaf blade: color 5: distribution	Limbe : cinquième couleur : distribution	Blattspreite: Farbe 5: Verteilung	Limbo: quinto color: distribución	
PQ	(a)	none	aucune	keine	ausente	1
		at basal zone	en zone basale	an der basalen Zone	en la zona basal	2
		at center	au centre	in der Mitte	en el centro	3
		at top	au sommet	an der Spitze	en el ápice	4
		at marginal zone	en zone marginale	an der Randzone	en la zona del borde	5
		irregular	irrégulière	unregelmäßig	irregular	6
		throughout	partout	überall	en la totalidad	7
32. (+)	VG	Leaf blade: color 5: pattern	Limbe : cinquième couleur : répartition	Blattspreite: Farbe 5: Muster	Limbo: quinto color: patrón de distribución	
PQ	(a)	flamed	flaméolée	geflammt	flameado	1
		striped	rayée	gestreift	rayado	2
		spotted	tachetée	gefleckt	en lunares	3
		in sectors	en secteurs	in Sektoren	por sectores	4
		marbled	marbrée	marmoriert	veteado	5
		marginated	au bord	am Rand	marginal	6
		solid to nearly solid	uniforme ou presque	ganzflächig oder beinahe ganzflächig	liso o prácticamente liso	7
33. (*) (+)	VG	Leaf blade: color 5: total area	Limbe : cinquième couleur : surface totale	Blattspreite: Farbe 5: Gesamtfläche	Limbo: quinto color: superficie total	
QN	(a)	small	petite	klein	pequeña	3
		medium	moyenne	mittel	media	5
		large	grande	groß	grande	7

	English	français	deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
34.	VG	Leaf blade: profile in cross section	Limbe : profil en section transversale	Blattspreite: Profil im Querschnitt	Limbo: perfil en sección transversal	
QN	(a)	convex	convexe	konvex	convexo	Big Daddy 1
		flat	plat	gerade	plano	Aphrodite, White Feather 2
		moderately concave	moyennement concave	mäßig konkav	moderadamente cóncavo	Desert Mouse 3
		strongly concave	fortement concave	stark konkav	fuertemente cóncavo	Love Pat 4
35.	VG	Leaf blade: number of parallel veins	Limbe : nombre de nervures parallèles	Blattspreite: Anzahl parallele Adern	Limbo: número de nervios paralelos	
QN	(a)	few	petit	gering	bajo	Fragrant Queen 1
		medium	moyen	mittel	medio	Frosted Mouse, Heat Wave 2
		many	grand	hoch	alto	Blue Circle 3
36.	VG	Leaf blade: degree of bulging	Limbe : degré de protébourance	Blattspreite: Grad der Wölbung	Limbo: grado de abultamiento	
QN	(a)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Peter Pan 1
		weak	faible	gering	débil	Hyacinthina 2
		medium	moyenne	mittel	medio	Blue Circle 3
		strong	forte	stark	fuerte	Ground Master 4
		very strong	très forte	sehr stark	muy fuerte	Pizzazz 5
37.	VG	Leaf blade: blistering	Limbe : cloqûre	Blattspreite: Blasigkeit	Limbo: abullonado	
QN	(a)	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Fragrant Queen 1
		medium	moyenne	mittel	medio	Sea Dream 2
		strong	forte	stark	fuerte	Midas Touch 3
38.	VG	Leaf blade: undulation of margin	Limbe : ondulation du bord	Blattspreite: Randwellung	Limbo: ondulación del borde	
QN	(a)	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Silvery Slugproof 1
		medium	moyenne	mittel	media	American Sweetheart 2
		strong	forte	stark	fuerte	Sparky 3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
39.	VG	Leaf blade: twisting	Limbe : torsion	Blattspreite: Verdrehung	Limbo: torsión		
(+)							
QN	(a)	absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Devon Green, Earth Angel	1
		moderate	moyenne	mäßig	moderada	Blue Angel, Pizzazz	2
		strong	forte	stark	fuerte	Green Power, White Christmas	3
40.	VG/ MS	Inflorescence: length	Inflorescence : longueur	Blütenstand: Länge	Inflorescencia: longitud		
(*) (+)							
QN	(c)	short	courte	kurz	corta	Great Escape	3
		medium	moyenne	mittel	media	Secret Ambition	5
		long	longue	lang	larga	Fragant Queen	7
41.	VG/ MG	Inflorescence: number of flowers	Inflorescence : nombre de fleurs	Blütenstand: Anzahl Blüten	Inflorescencia: número de flores		
(*)							
QN	(c)	few	petit	gering	bajo	Paradise Island	3
		medium	moyen	mittel	medio	Secret Ambition	5
		many	grand	groß	alto	Moonstruck	7
42.	VG	Inflorescence: attitude of flowers	Inflorescence : port des fleurs	Blütenstand: Haltung der Blüten	Inflorescencia: porte de las flores		
QN	(c)	erect	dressé	aufrecht	erecto		1
		horizontal	horizontal	waagrecht	horizontal	Diamond Tiara	2
		drooping	retombant	hängend	colgante	Halcyon, George Smith	3
43.	VG	Peduncle: color	Pédoncule : couleur	Blütenstandstiel: Farbe	Pedúnculo: color		
PQ	(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)		
44.	VG	Inflorescence: presence of bracts	Inflorescence : présence de bractées	Blütenstand: Vorhandensein von Deckblättern	Inflorescencia: presencia de brácteas		
(*)							
QL	(c) (e)	absent	absentes	fehlend	ausentes		1
		present	présentes	vorhanden	presentes	Moonstruck	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
45.	VG/ MS	Bract: length	Bractée : longueur	Deckblatt: Länge	Bráctea: longitud		
QN	(c) (e)	short	courte	kurz	corta	Paradise Island	3
		medium	moyenne	mittel	media	Grand Marquee	5
		long	longue	lang	larga	Secret Ambition	7
46.	VG/ MS	Bract: width	Bractée : largeur	Deckblatt: Breite	Bráctea: anchura		
QN	(c)	narrow	étroite	schmal	estrecha	American Sweetheart	3
	(e)	medium	moyenne	mittel	media	Risky Business	5
		broad	large	breit	ancha	Earth Angel	7
47.	VG	Bract: shape in cross section	Bractée : forme en section transversale	Deckblatt: Form im Querschnitt	Bráctea: forma en sección transversal		
QN	(c)	concave	concave	konkav	cóncava	Desert Mouse	1
	(e)	flat	plate	gerade	plana		2
		convex	convexe	konvex	convexa		3
48.	VG (*)	Bract: color of outer side	Bractée : couleur de la face externe	Deckblatt: Farbe der Außenseite	Bráctea: color de la cara externa		
PQ	(c) (e)	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)		
49.	VG/ MG (+)	Pedice: length	Pédicelle : longueur	Blütenstiel: Länge	Pedicelo: longitud		
QN	(e)	short	court	kurz	corto	Desert Mouse	3
		medium	moyen	mittel	medio	Grand Marquee	5
		long	long	lang	largo	Earth Angel	7
50.	VG	Pedice: color	Pédicelle : couleur	Blütenstiel: Farbe	Pedicelo: color		
PQ	(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)		
51.	VG (*) (+)	Flower: type	Fleur : type	Blüte: Typ	Flor: tipo		
QN	(c)	single	simple	einfach	simple	Halcyon, Tropical Dancer	1
		semi-double	semi-double	halb gefüllt	semidoble		2
		double	double	gefüllt	doble		3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
52.	VG/ MG/ MS (+)	Perianth: length	Périanthe : longueur	Blütenhülle: Länge	Perianto: longitud	
QN	(c)	short	court	kurz	corto	Desert Mouse 3
		medium	moyen	mittel	medio	Secret Ambition 5
		long	long	lang	largo	Atlantis 7
53.	VG/ MG/ MS (+)	Perianth: width	Périanthe : largeur	Blütenhülle: Breite	Perianto: anchura	
QN	(c)	narrow	étroit	schmal	estrecho	Paradise Island 3
		medium	moyen	mittel	medio	Secret Ambition 5
		broad	large	breit	ancho	7
54.	VG (+)	Perianth: shape in lateral view	Périanthe : forme en vue latérale	Blütenhülle: Form in der Seitenansicht	Perianto: forma en vista lateral	
PQ	(c)	tubular	tubulaire	röhrenförmig	tubular	1
		flared	évasé	aufgeweitet	en forma de trompeta	2
		funnel	en forme d'entonnoir	trichterförmig	en forma de embudo	3
		campanulate	campanulé	glockenförmig	acampanado	4
55.	VG/ MG/ MS (+)	Corolla tube: length	Tube de la corolle : longueur	Kronröhre: Länge	Tubo de la corola: longitud	
QN	(c)	short	court	kurz	corto	3
		medium	moyen	mittel	medio	Great Escape 5
		long	long	lang	largo	American Sweetheart 7
56.	VG (*)	Corolla tube: color of outer side	Tube de la corolle : couleur de la face externe	Kronröhre: Farbe der Außenseite	Tubo de la corola: color de la cara externa	
PQ	(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)	
57.	VG/ MG/ MS (+)	Corolla: length of <u>outer</u> lobes	Corolle : longueur des lobes <u>extérieurs</u>	Krone: Länge der <u>äußeren</u> Lappen	Corola: longitud de los <u>lóbulos</u> <u>externos</u>	
QN	(c)	short	court	kurz	cortos	Earth Angel 3
		medium	moyen	mittel	medios	Risky Business 5
		long	long	lang	largos	American Sweetheart 7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
58.	VG	Corolla: shape of <u>outer</u> lobes	Corolle : forme des lobes <u>extérieurs</u>	Krone: Form der <u>äußeren</u> Lappen	Corola: forma de los lóbulos <u>externos</u>	
(+)						
PQ	(c)	broad ovate	ovales larges	breit eiförmig	ovales anchos	1
		medium ovate	ovales moyens	mittel eiförmig	ovales medios	Desert Mouse, Lucky Mouse
		narrow ovate	ovales étroits	schmal eiförmig	ovales estrechos	3
		very narrow ovate	ovales très étroits	sehr schmal eiförmig	ovales muy estrechos	4
		broad elliptic	elliptiques larges	breit elliptisch	elípticos anchos	5
		circular	circulaires	kreisförmig	circulares	6
		medium elliptic	elliptiques moyens	mittel elliptisch	elípticos medios	Atlantis
		narrow elliptic	elliptiques étroits	schmal elliptisch	elípticos estrechos	8
59.	VG	Corolla: color on outer side of <u>outer</u> lobes	Corolle : couleur sur la face externe des lobes <u>extérieurs</u>	Krone: Farbe auf Außenseite der <u>äußeren</u> Lappen	Corola: color en la cara externa de los lóbulos <u>externos</u>	
(*)						
PQ	(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)	
60.	VG	Corolla: shape of apex of <u>outer</u> lobes	Corolle : forme du sommet des lobes <u>extérieurs</u>	Krone: Form der Spitze der <u>äußeren</u> Lappen	Corola: forma del ápice de los lóbulos <u>externos</u>	
(*)						
PQ	(c)	acute	pointu	spitz	agudo	Atlantis, Fragrant Queen
		obtuse	obtus	stumpf	obtuso	2
		rounded	arrondi	abgerundet	redondeado	3
61.	VG/ MG/ MS	Corolla: length of <u>inner</u> lobes	Corolle : longueur des lobes <u>intérieurs</u>	Krone: Länge der <u>inneren</u> Lappen	Corola: longitud de los lóbulos <u>internos</u>	
(+)						
QN	(c)	short	courts	kurz	cortos	Secret Ambition
		medium	moyens	mittel	medios	Risky Business
		long	longs	lang	largos	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
62.	VG	Corolla: shape of <u>inner</u> lobes	Corolle : forme des lobes <u>intérieurs</u>	Krone: Form der <u>inneren</u> Lappen	Corola: forma de los <u>lóbulos</u> <u>internos</u>	
(+)						
PQ	(c)	broad ovate	ovales larges	breit eiförmig	ovales anchos	1
		medium ovate	ovales moyens	mittel eiförmig	ovales medios	Atlantis, Lucky Mouse 2
		narrow ovate	ovales étroits	schmal eiförmig	ovales estrechos	3
		very narrow ovate	ovales très étroits	sehr schmal eiförmig	ovales muy estrechos	4
		broad elliptic	elliptiques larges	breit elliptisch	elípticos anchos	5
		circular	circulaires	kreisförmig	circulares	Risky Business 6
		medium elliptic	elliptiques moyens	mittel elliptisch	elípticos medios	7
		narrow elliptic	elliptiques étroits	schmal elliptisch	elípticos estrechos	8
63.	VG	Corolla: color of outer side of <u>inner</u> lobes	Corolle : couleur de la face externe des lobes <u>intérieurs</u>	Krone: Farbe der <u>Außenseite</u> der <u>inneren</u> Lappen	Corola: color de la cara externa de los <u>lóbulos</u> <u>internos</u>	
(+)						
PQ	(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)	
64.	VG	Corolla: shape of apex of <u>inner</u> lobes	Corolla : forme du sommet des lobes <u>intérieurs</u>	Krone: Form der <u>Spitze</u> der <u>inneren</u> Lappen	Corola: forma del <u>ápice</u> de los <u>lóbulos</u> <u>internos</u>	
PQ	(c)	acute	pointu	spitz	agudo	1
		obtuse	obtus	stumpf	obtus	2
		rounded	arrondi	abgerundet	redondeado	Atlantis, Desert Mouse 3
65.	VG/ MG/ MS	Filament: length	Filament : longueur	Filament: Länge	Filamento: longitud	
QN	(c)	short	court	kurz	corto	Heat Wave 3
		medium	moyen	mittel	medio	Earth Angel 5
		long	long	lang	largo	American Sweetheart 7
66.	VG	Filament: color	Filament : couleur	Filament: Farbe	Filamento: color	
PQ	(c)	white or whitish	blanc ou blanchâtre	weiß oder weißlich	blanco o blancuzco	Atlantis 1
		light green	vert clair	hellgrün	verde claro	Roxsanne, Tattoo 2
		medium green	vert moyen	mittelgrün	verde medio	3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota	
67.	VG	Anther: color	Anthère : couleur	Anthere: Farbe	Antera: color		
(*)							
PQ	(c)	yellow	jaune	gelb	amarillo	Tattoo	1
		yellow with purple	jaune avec violet	gelb mit purpurn	amarillo con púrpura	Golden Meadows	2
		yellow brown	brun-jaune	gelbbraun	marrón amarillento	Desert Mouse	3
		purple	pourpre	purpurn	púrpura	Atlantis, Secret Love	4
		brown purple	pourpre-brun	braunpurpurn	púrpura amarronado	Paradise Island, Risky Business	5
68.	VG	Pollen: color	Pollen : couleur	Pollen: Farbe	Polen: color		
PQ	(c)	medium yellow	jaune moyen	mittelgelb	amarillo medio	Fragrant Queen, Secret Ambition	1
		dark yellow	jaune foncé	dunkelgelb	amarillo oscuro	Roxsanne	2
		yellow orange	orange-jaune	gelborange	naranja amarillento	Earth Angel, Heat Wave	3
		orange	orange	orange	naranja	Atlantis, Desert Mouse	4
69.	VG/ MG/ MS	Style: length	Style : longueur	Griffel: Länge	Estilo: longitud		
QN	(c)	short	court	kurz	corto	Desert Mouse	3
		medium	moyen	mittel	medio	Secret Ambition	5
		long	long	lang	largo	American Sweetheart	7
70.	VG	Style: color	Style : couleur	Griffel: Farbe	Estilo: color		
PQ	(c)	white or whitish	blanc ou blanchâtre	weiß oder weißlich	blanco o blancuzco	Atlantis	1
		light green	vert clair	hellgrün	verde claro	Golden Meadows, Paradise Joyce	2
		medium green	vert moyen	mittelgrün	verde medio	Paradise Power	3
71.	VG	Style: color of stigma	Style : couleur du stigmaté	Griffel: Farbe der Narbe	Estilo: color del estigma		
PQ	(c)	white or whitish	blanc ou blanchâtre	weiß oder weißlich	blanco o blancuzco	Atlantis, Desert Mouse	1
		light green	vert clair	hellgrün	verde claro	Last Dance, Liberty Hosta	2
		medium green	vert moyen	mittelgrün	verde medio	Roxsanne	3
		light yellow	jaune clair	hellgelb	amarillo claro		4
		light purple	violet clair	hellpurpurn	púrpura claro	Liberty Hosta	5
		light violet blue	violet-bleu clair	hellviolettblau	azul violáceo claro	WAR 101	6

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

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

- (a) Plant, petiole and leaf characteristics should be observed before flowering.
- (b) Where the characteristic refers to colors as "one", "two" etc., they are to be recorded in the order that they appear on the RHS chart, i.e. color one is the one with the lowest number, color two with the second lowest and so on. For example, if the leaves are Green 137A dotted with White 155A, Green 137A will be color one and White 155A color two. If two colors are on the same leaf of the chart, for example Green 137A and Green 137D, 137A is regarded as the lower numbered color. It should be noted that under this system, ranking is independent of surface area, so the color covering the greatest surface area may be classified as color three or four. The Guideline makes provision for five colors; if there are more, the color[s] with the smallest surface area[s] should be discounted.
- (c) Characteristics of the inflorescence should be observed when first flowers are open.
- (d) Length of peduncle should be observed when all flowers are open.
- (e) Characteristics of the bract should be observed on the bract of the first flower in the inflorescence.

A photograph of the leaf could be provided in conjunction with the description in order to clarify the color distribution and/or pattern. However, a warning should be added to this photograph, explaining that the primary intent of the photograph is to show the distribution and/or pattern of the colors on the plant part rather than the actual colors. Color on photographs can be affected by the technology of the camera and the facilities used to display the photograph (printer, overhead projector, etc.).

8.2 *Explanations for individual characteristics*

Ad. 1: Plant: color of first scaly leaves

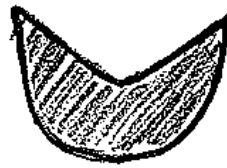
The characteristic should be observed when the first shoots emerge and before opening of the leaves.



Ad. 5: Petiole: shape of inner side in cross section



1
flat

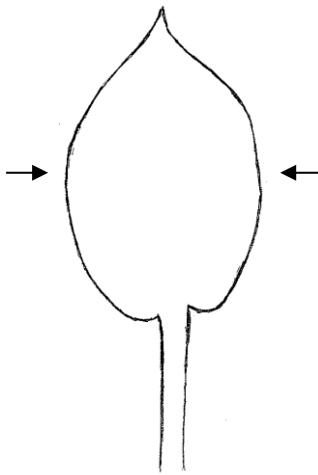


2
V-shape

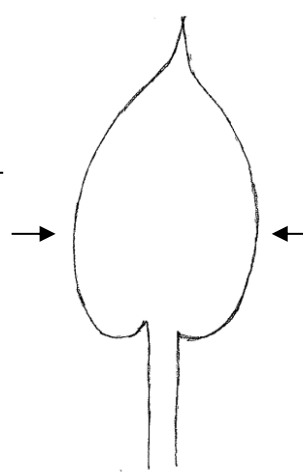


3
U-shape

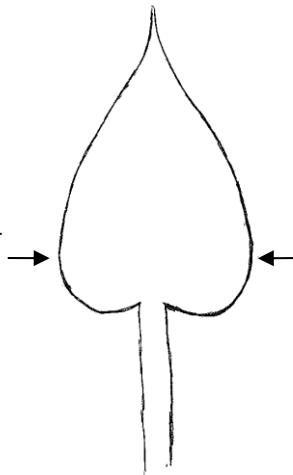
Ad. 10: Leaf blade: position of broadest part



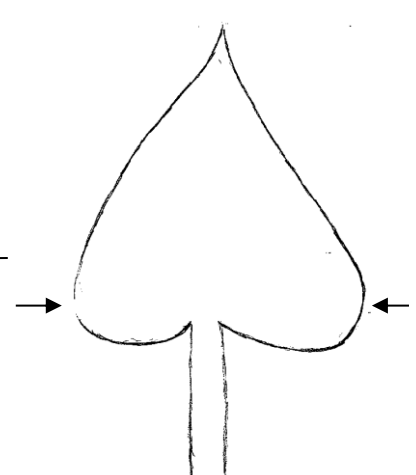
1
at middle



2
slightly towards base












3
moderately towards base



4
strongly towards base

Ad 11: Leaf blade: shape

		← broadest part →	
		below middle	at middle
narrow (high) ↑ width (ratio length/width) ↓ broad (low)	 4 very narrow ovate	 9 very narrow elliptic	
	 3 narrow ovate	 8 narrow elliptic	
	 2 medium ovate	 7 medium elliptic	
	 1 broad ovate	 6 circular	
		 5 transverse elliptic	

Ad. 12: Leaf blade: shape of base



1
acute



2
obtuse



3
truncate



4
cordate

Ad. 13: Leaf blade: shape of apex (excluding tip)



1
acute



2
obtuse



3
rounded

Ad. 15: Leaf blade: color 1: distribution

Ad. 19: Leaf blade: color 2: distribution

Ad. 23: Leaf blade: color 3: distribution

Ad. 27: Leaf blade: color 4: distribution

Ad. 31: Leaf blade: color 5: distribution



at basal
zone



at center



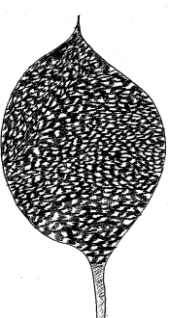
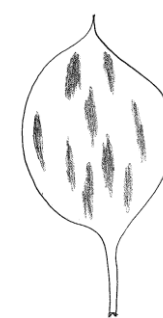
at top



at marginal zone



irregular



throughout

Ad. 16: Leaf blade: color 1: pattern

Ad. 20: Leaf blade: color 2: pattern

Ad. 24: Leaf blade: color 3: pattern

Ad. 28: Leaf blade: color 4: pattern

Ad. 32: Leaf blade: color 5: pattern



1
flamed (green)



2
striped (light yellow)



3
spotted (light yellow)



4
in sectors (yellow green)



5
marbled (grey green)



6
marginated (white)

Ad. 17: Leaf blade: color 1: total area
Ad. 21: Leaf blade: color 2: total area
Ad. 25: Leaf blade: color 3: total area
Ad. 29: Leaf blade: color 4: total area
Ad. 33: Leaf blade: color 5: total area

The area has to be compared to the whole area of the leaf surface.

In order to provide an illustration of the recording method, two worked examples are provided below. The first describes a leaf with only one color, the second a leaf with several colors.

Worked Example One – (variety with only one leaf color)



14. Leaf blade: color 1 – RHS Colour Chart – ca. RHS 144 A - dark green
15. Leaf blade: color 1: distribution – throughout (6)
16. Leaf blade: color 1: pattern – solid or nearly solid (7)
17. Leaf blade: color 1: total area – very large (9)
18. Leaf blade: color 2 – RHS Colour Chart – not applicable
19. Leaf blade: color 2: distribution – none (1)
20. Leaf blade: color 2: pattern – not applicable
21. Leaf blade: color 2: total area – not applicable
22. Leaf blade: color 3 – RHS Colour Chart – not applicable
23. Leaf blade: color 3: distribution – none (1)
24. Leaf blade: color 3: pattern – not applicable
25. Leaf blade: color 3: total area – not applicable
26. Leaf blade: color 4 – RHS Colour Chart – not applicable
27. Leaf blade: color 4: distribution – none (1)
28. Leaf blade: color 4: pattern – not applicable
29. Leaf blade: color 4: total area – not applicable
30. Leaf blade: color 5 – RHS Colour Chart – not applicable
31. Leaf blade: color 5: distribution – none (1)
32. Leaf blade: color 5: pattern – not applicable
33. Leaf blade: color 5: total area – not applicable

Worked Example Two – (variety with several leaf colors)



14. Leaf blade: color 1 – RHS Colour Chart – ca. RHS 146 A – brown green
15. Leaf blade: color 1: distribution – at marginal zone (4)
16. Leaf blade: color 1: pattern – solid or nearly solid (7)
17. Leaf blade: color 1: total area – medium (5)
18. Leaf blade: color 2 – RHS Colour Chart – ca. RHS 151 A – green brown
19. Leaf blade: color 2: distribution – irregular (6)
20. Leaf blade: color 2: pattern – in sectors (4)
21. Leaf blade: color 2: total area – small (3)
22. Leaf blade: color 3 – RHS Colour Chart – ca. RHS 155 A - white
23. Leaf blade: color 3: distribution – at center (3)
24. Leaf blade: color 3: pattern – flamed (1)
25. Leaf blade: color 3: total area – small to medium (4)
26. Leaf blade: color 4 – RHS Colour Chart – not applicable
27. Leaf blade: color 4: distribution – none (1)
28. Leaf blade: color 4: pattern – not applicable
29. Leaf blade: color 4: total area – not applicable
30. Leaf blade: color 5 – RHS Colour Chart – not applicable
31. Leaf blade: color 5: distribution – none (1)
32. Leaf blade: color 5: pattern – not applicable
33. Leaf blade: color 5: total area – not applicable

Ad. 35: Leaf blade: number of parallel veins



1
few



3
many

Ad.36: Leaf blade: degree of bulging



1
absent or very weak



5
very strong

Ad. 37: Leaf blade: blistering



1
absent or weak



2
medium



3
strong

Ad. 39: Leaf blade: twisting



1
absent or weak

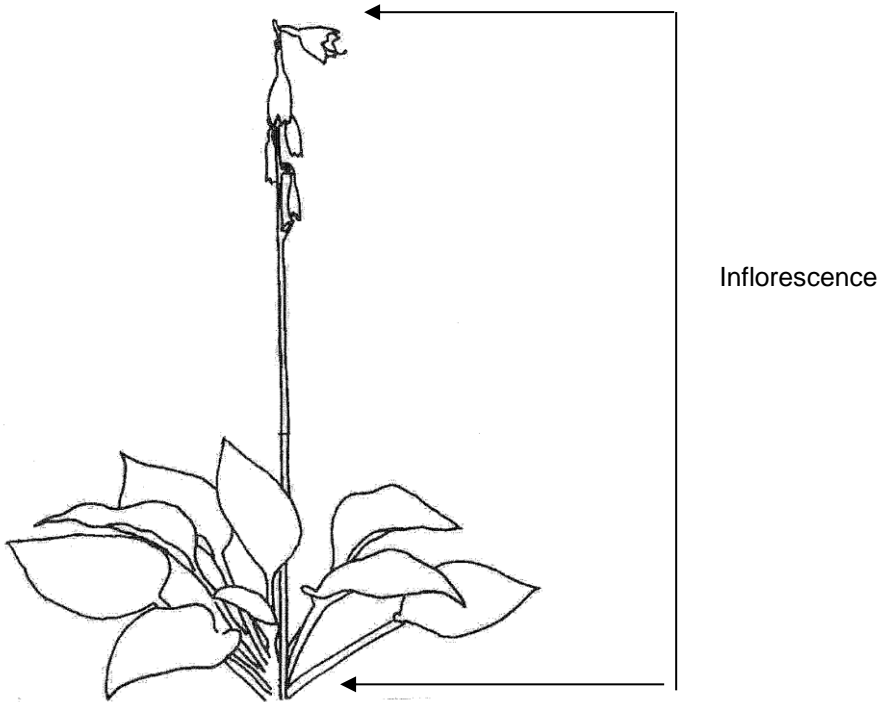


2
moderate



3
strong

Ad. 40: Inflorescence: length



Ad. 49: Pedicel: length

Ad. 55: Corolla tube: length

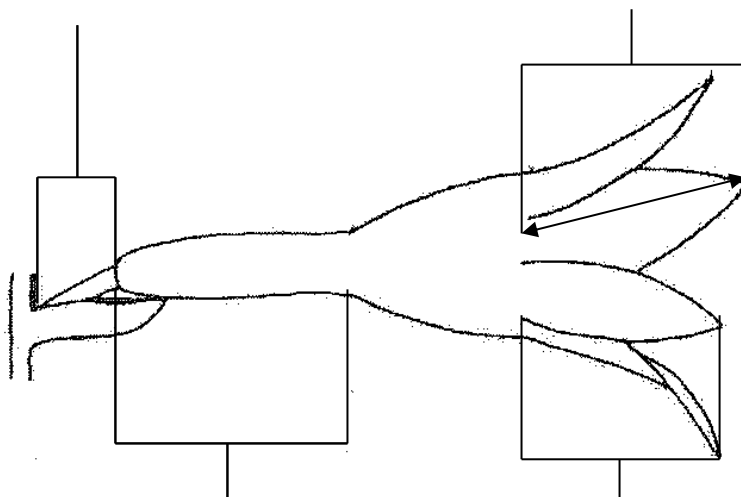
Ad. 57: Corolla: length of outer lobes

Ad. 61: Corolla: length of inner lobes

Ad. 63: Corolla: color of outer side of inner lobes

Pedicel: length

Corolla: length of inner lobes



Tube: length

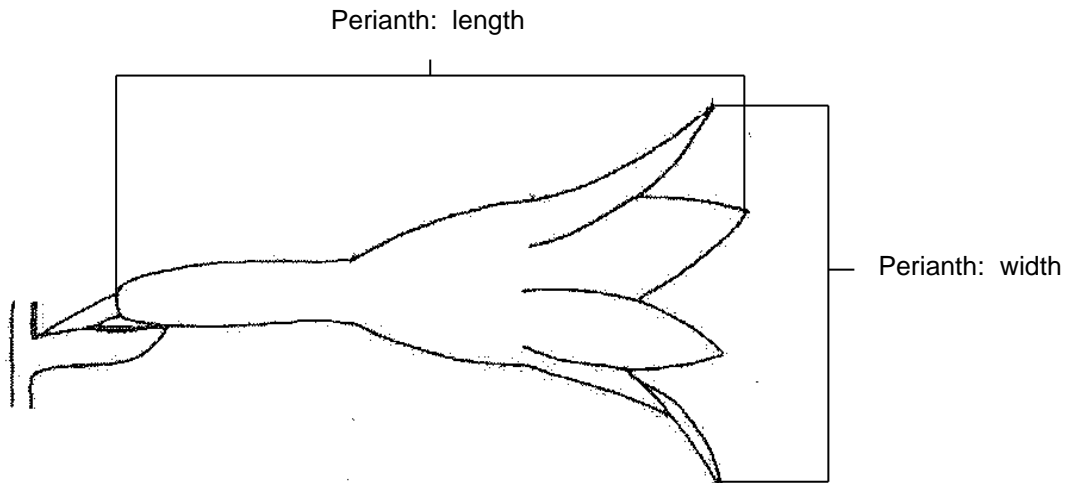
Corolla: length of outer lobes

Ad. 51: Flower: type

- (1) Single: 6 corolla lobes;
- (2) Semi-double: 7 to 11 corolla lobes
- (3) Double: 12 or more corolla lobes

Ad. 52: Perianth: length

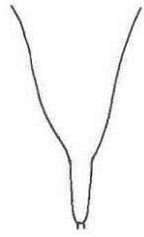
Ad. 53: Perianth: width



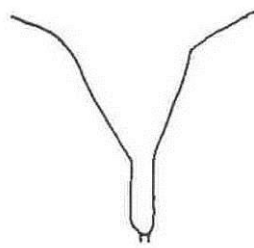
Ad. 54: Perianth: shape in lateral view



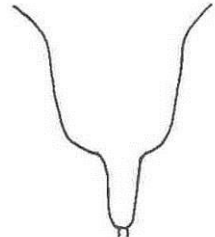
1
tubular



2
flared









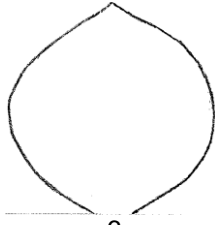
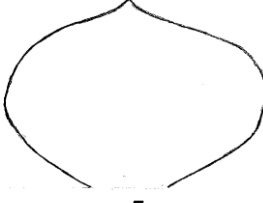
3
funnel



4
campanulate

Ad. 58: Corolla: shape of outer lobes

Ad. 62: Corolla: shape of inner lobes

		← broadest part →	
		below middle	at middle
broad (low) ← width (ratio length/width) → narrow (high)	 4 very narrow ovate		
	 3 narrow ovate	 8 narrow elliptic	
	 2 medium ovate	 7 medium elliptic	
	 1 broad ovate	 6 circular	
		 5 broad elliptic	

9. Literature

Aden, P., 1988: The Hosta Book. Timber Press Inc. Portland Oregon. US, ISBN 0-88192-260-9

Grenfell, D., Shadrack, M., 2004: The color encyclopedia of Hostas. Timber Press Inc. Cambridge, GB, ISBN 0-88192-618-3

Shadrack, M., Shadrack, K., 2010: The Book of Little Hostas. Timber Press, London, GB, ISBN 978-1-60469-060-6

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 Genus		
1.1.1 Botanical name	<input type="text" value="Hosta Tratt."/>	
1.1.2 Common name	<input type="text" value="Hosta"/>	
1.2 Species (please complete)		
1.2.1 Botanical name	<input type="text"/>	
1.2.2 Common name	<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: height of foliage (2)		
very short		1[]
very short to short		2[]
short	Great Escape	3[]
short to medium		4[]
medium	Paradise island	5[]
medium to tall		6[]
tall	Fragrant Queen	7[]
tall to very tall		8[]
very tall		9[]
5.2 Leaf blade: shape (11)		
broad ovate	Sum and Substance	1[]
medium ovate	Desert Mouse, Sagae	2[]
narrow ovate		3[]
very narrow ovate	Stiletto	4[]
transverse elliptic		5[]
circular	Abiqua Drinking Gourd	6[]
medium elliptic	Pineapple Poll	7[]
narrow elliptic	Saishu Jima	8[]
very narrow elliptic		9[]
5.3i Leaf blade: color covering the greatest surface area		
RHS Colour Chart (indicate reference number)		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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Characteristics	Example Varieties	Note
5.3ii Leaf blade: color covering the largest surface area		
white		1[]
light yellow		2[]
medium yellow		3[]
dark yellow		4[]
light green		5[]
medium green		6[]
dark green		7[]
blue green		8[]
5.4 Leaf blade: color covering the largest surface area: pattern		
flamed		1[]
striped		2[]
spotted		3[]
in sectors		4[]
marbled		5[]
marginated		6[]
solid or nearly solid		7[]
5.5i Leaf blade: color covering the second largest surface area (if present)		
RHS Colour Chart (indicate reference number)		
5.5ii Leaf blade: color covering the second largest surface area (if present)		
white		1[]
light yellow		2[]
medium yellow		3[]
dark yellow		4[]
light green		5[]
medium green		6[]
dark green		7[]
blue green		8[]

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>Leaf blade: length</i>	<i>long</i>	<i>medium</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 Other information

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.

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

.....

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes []
(please provide details as specified by the Authority)

No []

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]