

UPOV

TG/59/7(proj.5)

ORIGINAL: English

DATE: 2009-11-07

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

LILY

UPOV Code: LILIU

Lilium L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

*prepared by experts from the Netherlands**to be considered by the Enlarged Editorial Committee at its meeting
to be held in Geneva, Switzerland, on January 7, 2010*

Alternative Names:*

Botanical name	English	French	German	Spanish
<i>Lilium L.</i>	Lily	Lys	Lilie	Lily, azucena, lirio

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.]

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
1. SUBJECT OF THESE TEST GUIDELINES.....	3
2. MATERIAL REQUIRED	3
3. METHOD OF EXAMINATION.....	3
3.1 Number of Growing Cycles	3
3.2 Testing Place	3
3.3 Conditions for Conducting the Examination.....	3
3.4 Test Design	3
3.5 Number of Plants / Parts of Plants to be Examined.....	3
3.6 Additional Tests	3
4. ASSESSMENT OF DISTINCTNESS, UNIFORMITY AND STABILITY	3
4.1 Distinctness	3
4.2 Uniformity.....	3
4.3 Stability	3
5. GROUPING OF VARIETIES AND ORGANIZATION OF THE GROWING TRIAL.....	3
6. INTRODUCTION TO THE TABLE OF CHARACTERISTICS	3
6.1 Categories of Characteristics.....	3
6.2 States of Expression and Corresponding Notes.....	3
6.3 Types of Expression.....	3
6.4 Example Varieties	3
6.5 Legend.....	3
7. TABLE OF CHARACTERISTICS/TABLEAU DES CARACTÈRES/MERKMALSTABELLE/TABLA DE CARACTERES.....	3
8. EXPLANATIONS ON THE TABLE OF CHARACTERISTICS	3
8.1 Explanations covering several characteristics	3
8.2 Explanations for individual characteristics	3
9. LITERATURE	3
10. TECHNICAL QUESTIONNAIRE	3

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Lilium* L. of the family *Liliaceae*.

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 In the case of vegetatively propagated varieties, the material is to be supplied in the form of bulbs of sufficient size to show full flowering in the first year (hybrids with an Oriental parent: circumference of 16-18 cm; all other types circumference of 14-16 cm). The bulbs should have only one vegetation point. In the case of seed-propagated varieties, the seed should have a germination capacity of at least 50%.

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

vegetatively propagated varieties: 20 bulbs

seed-propagated varieties: 300 seeds

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

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

3. Method of Examination

3.1 *Number of Growing Cycles*

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

3.2 *Testing Place*

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

3.3 *Conditions for Conducting the Examination*

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

3.3.2 Unless otherwise indicated, all observations should be made at the time of anther dehiscence of the first flower.

3.3.3 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a

room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background.

3.4 *Test Design*

3.4.1 Each test should be designed to result in a total of at least 20 plants for vegetatively propagated varieties and 50 plants for seed-propagated varieties.

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 *Number of Plants / Parts of Plants to be Examined*

3.5.1 Vegetatively propagated varieties: unless otherwise indicated, 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.

3.5.2 Seed-propagated varieties: unless otherwise indicated, all observations on single plants should be made on 30 plants or parts taken from each of 30 plants and any other observations made on all plants in the test.

3.6 *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.

4.2 *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.

4.2.3 The assessment of uniformity for seed-propagated varieties should be according to the recommendations for cross-pollinated varieties in the General Introduction.

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 tested, either by growing a further generation, or by testing a new seed or plant stock to ensure that it exhibits the same characteristics as those shown by the previous material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 The selection of varieties of common knowledge to be grown in the trial with the candidate varieties and the way in which these varieties are divided into groups to facilitate the assessment of distinctness are aided by the use of grouping characteristics.

5.2 Grouping characteristics are those in which the documented states of expression, even where produced at different locations, can be used, either individually or in combination with other such characteristics: (a) to select varieties of common knowledge that can be excluded from the growing trial used for examination of distinctness; and (b) to organize the growing trial so that similar varieties are grouped together.

5.3 The following have been agreed as useful grouping characteristics:

- (a) Flower: attitude of perianth (excluding pedicel) (characteristic 15)
- (b) Flower: shape of perianth (excluding pedicel) (characteristic 16)
- (c) Flower: tepal: main color of central part (characteristic 19)
- (d) Flower: fragrance (characteristic 26)
- (e) Tepal: number of papillae and/or spots (characteristic 27)
- (f) Tepal: color of papillae and/or spots (characteristic 29)
- (g) Time of flowering (characteristic 40)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction.

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*

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.

6.3 *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

(a)-(d) 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. (*) (+)	Plant: height	Plante : hauteur	Pflanze: Höhe	Planta: altura		
QN	short	basse	niedrig	baja	Orange Pixie	3
	medium	moyenne	mittel	media	Casablanca	5
	tall	haute	hoch	alta	Golden Tycoon	7
2. (*) (+)	Stem: anthocyanin coloration	Tige : pigmentation anthocyannique	Stengel: Anthocyanfärbung	Tallo: pigmentación antociánica		
QN	(a) absent or weak	absente ou faible	fehlend oder gering	ausente o débil	Casablanca, White Europe, Zanlophator	1
	medium	moyenne	mittel	media		2
	strong	forte	stark	fuerte	Conception, Tresor	3
3.	Stem: number of leaves	Tige : nombre de feuilles	Stengel: Anzahl Blätter	Tallo: número de hojas		
QN	(a) few	petit	gering	bajo		3
	medium	moyen	mittel	medio		5
	many	grand	groß	alto		7
4. (*) (+)	Leaf: arrangement	Feuilles : disposition	Blatt: Anordnung	Hoja: disposición		
QL	alternate	alternées	wechselständig	alternada	Casablanca	1
	opposite (decussate)	opposées	gegenständig (gekreuzt)	opuesta (decusa)	Aristo, Vedeá	2
	whorled	verticillées	quirilig	en verticilos	Kurumayuri	3
5.	Leaf: length	Feuille : longueur	Blatt: Länge	Hoja: longitud		
QN	(a) short	courte	kurz	corta	Denia, Peach Dwarf	3
	medium	moyenne	mittel	media	Lorina, Mero Star, Vedeá	5
	long	longue	lang	larga	White Europe, Zanlophator	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
6.	Leaf: width	Feuille : largeur	Blatt: Breite	Hoja: anchura		
(+)						
QN	(a) narrow	étroite	schmal	estrecha	Pink Pixie	3
	medium	moyenne	mittel	media	Golden Tycoon, White Europe	5
	broad	large	breit	ancha	Acapulco, Helvetia	7
7.	Leaf: variegation	Feuille : panachure	Blatt: Panaschierung	Hoja: variegación		
(*)						
QL	absent	absente	fehlend	ausente	Acapulco	1
	present	présente	vorhanden	presente	Chotaro	9
8.	Leaf: glossiness of upper side	Feuille : lustre de la face supérieure	Blatt: Glanz der Oberseite	Hoja: brillo del haz		
QN	absent or very weak	nul ou très faible	fehlend oder sehr gering	ausente o muy débil		1
	weak	faible	gering	débil	Acapulco, Vedeá	3
	medium	moyen	mittel	medio	White Elegance	5
	strong	fort	stark	fuerte	Golden Tycoon	7
	very strong	très fort	sehr stark	muy fuerte		9
9.	Leaf: cross section	Feuille : section transversale	Blatt: Querschnitt	Hoja: sección transversal		
(+)						
QL	(a) flat	droite	flach	plana	Vedeá	1
	V-shaped	en v	V-förmig	en forma de V	Da Vinci	2

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
10. (+)	Flower bud: main color	Bouton : couleur principale	Blütenknospe: Hauptfarbe	Botón floral: color principal		
PQ	white	blanc	weiß	blanco		1
	green	vert	grün	verde		2
	yellow green	vert-jaune	gelbgrün	verde amarillento		3
	yellow	jaune	gelb	amarillo		4
	orange	orange	orange	anaranjado		5
	orange pink	orange-rose	orangerosa	rosa anaranjado		6
	pink	rose	rosa	rosa		7
	red	rouge	rot	rojo		8
	purple red	rouge-pourpre	purpurrot	rojo purpúreo		9
	purple	pourpre	purpurn	púrpura		10
	purple brown	brun-pourpre	purpurbraun	marrón purpúreo		11
11. (* (+)	Inflorescence: type of branching	Inflorescence : type de ramification	Blütenstand: Art der Verzweigung	Inflorescencia: tipo de ramificación		
QL	only racemose	seulement en racème	nur traubenartige	sólo racimosa	Helvetia, Vedeá	1
	umbellate and racemose	en ombelle et en racème	doldenartig und traubenartig	umbelada y racimosa	Pavia	2
12.	Inflorescence: number of flowers	Inflorescence : nombre de fleurs	Blütenstand: Anzahl Blüten	Inflorescencia: número de flores		
QN	one or very few	une ou très petit	eine oder sehr wenige	una o muy pocas		
	few	petit	wenige	pocas	Brindisi, Zanlophator	3
	medium	moyen	mittel	número medio	Golden Tycoon, Siberia	5
	many	grand	viele	muchas	Monte Negro	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
13.	Inflorescence: pubescence	Inflorescence : pilosité	Blütenstand: Behaarung	Inflorescencia: pubescencia		
QN	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	Val di Sole, White Europe	1
	weak	faible	gering	débil	Helvetia, Vedeá	3
	medium	moyenne	mittel	media	Ceb Crimson	5
	strong	forte	stark	fuerte	Tiny Scyline	7
	very strong	très forte	sehr stark	muy fuerte		9
14.	Flower: type	Fleur : type	Blüte: Typ	Flor: tipo		
(+)						
QL	single	simple	einfach	simple	Golden Tycoon	1
	semi double	semi-double	halbgefüllt	semidoble		2
	double	double	gefüllt	doble	Little Kiss	3
15.	Flower: attitude of perianth (excluding pedicel)	Fleur : port du périanthe (sans le pédoncule)	Blüte: Haltung der Blütenhülle (ohne Blütenstiel)	Flor: porte del perianto (excluido el pedicelo)		
PQ	erect	dressé	aufrecht	erecto	Tresor	1
	erect to horizontal	dressé à horizontal	aufrecht bis waagrecht	erecto a horizontal	Siberia, Stargazer	2
	horizontal (outward facing)	horizontal (orientation perpendiculaire)	waagrecht (nach außen gerichtet)	horizontal (orientado hacia el exterior)	Casablanca, White Heaven	3
	drooping	retombant	hängend	colgante	Galloway	4
16.	Flower: shape of perianth (excluding pedicel)	Fleur : forme du périanthe (sans le pédoncule)	Blüte: Form der Blütenhülle (ohne Blütenstiel)	Flor: forma del perianto (excluido el pedicelo)		
PQ	trumpet	en trompette	trompetenförmig	en corneta	White Elegance	1
	bowl	en coupe	schüsselförmig	cratiforme	Siberia	2
	flat	plat	flach	PLANO	Sugar Jewel	3
	recurved	recurvé	zurückgebogen	RECURVADO	Belletti	4

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
17.	Flower: length of tepal	Fleur : longueur du tépale	Blüte: Länge des Perigonblattes	Flor: longitud del tépalo		
QN (b)	short	court	kurz	CORTA	Tresor, Val di Sole	3
	medium	moyen	mittel	MEDIA	Casablanca, Siberia	5
	long	long	lang	LARGA	White Elegance, Zanlophator	7
18.	Flower: width of tepal	Fleur : largeur du tépale	Blüte: Breite des Perigonblattes	Flor: anchura del tépalo		
QN (b)	narrow	étroit	schmal	estrecha	Helvetia	3
	medium	moyen	mittel	media	Siberia, White Europe, White Lace	5
	broad	large	breit	ancha	Zanlophator	7
19. (* (+)	Flower: tepal: main color of central part	Fleur : tépale : couleur principale de la partie centrale	Blüte: Perigonblatt: Hauptfarbe des mittleren Teils	Flor: tépalo: color principal de la parte central		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
20. (* (+)	Flower: tepal: main color of basal part	Fleur : tépale : couleur principale de la partie basale	Blüte: Perigonblatt: Hauptfarbe des basalen Teils	Flor: tépalo: color principal de la parte basal		
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)		

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
21. (* (+)	Flower: tepal: color of zone bordering on nectar furrow	Fleur : tépale : couleur de la zone bordant le sillon nectarifaire	Blüte: Perigonblatt: Farbe der an die Nektarfurche angrenzenden Zone	Flor: tépalo: color de la zona que bordea el surco nectarial		
PQ	(c) white	blanc	weiß	blanco	Vedea	1
	green	vert	grün	verde	Brindisi	2
	yellow green	vert-jaune	gelbgrün	verde amarillento	Val di Sole	3
	yellow	jaune	gelb	amarillo	Pavia	4
	orange	orange	orange	anaranjado	Tresor	5
	orange pink	rose-orange	orangerosa	rosa anaranjado	Olina	6
	pink	rose	rosa	rosa	Vedea	7
	red	rouge	rot	rojo	Mero Star	8
	purple red	rouge-pourpre	purpurrot	rojo purpúreo	Cilagon	9
	purple	pourpre	purpurn	púrpura	Take Five	10
	purple brown	brun-pourpre	purpurbraun	marrón purpúreo	Tiny Padhye	11
22. (* (+)	Flower: tepal: main color of distal part	Fleur : tépale : couleur principale de la partie distale	Blüte: Perigonblatt: Hauptfarbe des distalen Teils	Flor: tépalo: color principal de la parte distal		
PQ	RHS Colour Chart (indicate reference number)	Code RHS des couleurs (indiquer le numéro de référence)	RHS-Farbkarte (Nummer angeben)	Carta de colores RHS (indíquese el número de referencia)		
23. (* (+)	Flower: tepal: main color of marginal zone	Fleur : tépale : couleur principale de la zone marginale	Blüte: Perigonblatt: Hauptfarbe der Randzone	Flor: tépalo: color principal de la zona marginal		
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)		
24. (+)	Flower: main color of outer side of inner tepal	Fleur : couleur principale de la face externe du tépale interne	Blüte: Hauptfarbe der Außenseite des inneren Perigonblattes	Flor: color principal de la parte exterior del tépalo interno		
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)		

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
25. (+)	Flower: color of nectar furrow	Fleur : couleur du sillon nectarifaire	Blüte: Farbe der Nektarfurche	Flor: color del surco nectarial		
PQ	white	blanc	weiß	blanco	Imperia, Pyramid	1
	green	vert	grün	verde	Helvetia, Vede	2
	yellow green	vert-jaune	gelbgrün	verde amarillento	Double Surprise	3
	yellow	jaune	gelb	amarillo	Mero Star	4
	orange	orange	orange	anaranjado	Tresor	5
	orange pink	rose-orange	orangerosa	rosa anaranjado		6
	pink	rose	rosa	rosa	Minerva, Vermeer	7
	red	rouge	rot	rojo		8
	purple red	rouge-pourpre	purpurrot	rojo purpúreo		9
	purple	pourpre	purpurn	púrpura		10
	purple brown	brun-pourpre	purpurbraun	marrón purpúreo		11
26.	Flower: fragrance	Fleur : parfum	Blüte: Duft	Flor: fragancia		
QN	absent or weak	absent ou faible	fehlend oder gering	ausente o débil	Nemo	1
	medium	moyen	mittel	media	Jetaime	2
	strong	fort	stark	fuerte	Saltarello	3
27. (* (+)	Tepal: number of papillae and/or spots	Tépale : nombre de papilles ou de taches	Perigonblatt: Anzahl Papillen und/oder Flecken	Tépalo: número de papilas y/o puntos		
QN (d)	absent or very few	nul ou très petit	fehlend oder sehr gering	ausentes o muy pocos	Siberia, White Europe	1
	few	petit	gering	pocos	Vedea, Vermeer	3
	medium	moyen	mittel	número medio	Purple Rain, Stargazer	5
	many	grand	groß	muchos	Pink Mystery	7

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
28. (*) (+)	Tepal: size of area with papillae and/or spots	Tépale : taille de la surface à papilles ou tachetée	Perigonblatt: Größe der Zone mit Papillen und/oder Flecken	Tépalo: tamaño de la superficie que presenta papilas y/o puntos		
QN (d)	absent or very small	nulle ou très petite	fehlend oder sehr klein	ausente o muy pequeña		1
	small	petite	klein	pequeña	Pink Supreme	3
	medium	moyenne	mittel	media	Minerva, Vedeá	5
	large	grande	groß	grande	Purple Rain	7
29. (*) (+)	Tepal: color of papillae and/or spots	Tépale : couleur des papilles ou des taches	Perigonblatt: Farbe der Papillen und/oder Flecken	Tépalo: color de las papilas y/o los puntos		
PQ	white	blanc	weiß	blanco	Siberia	1
	yellow	jaune	gelb	amarillo	Conca d'Or	2
	brown yellow	jaune-brun	braungelb	amarillo amarronado	Windsor	3
	brown	brun	braun	marrón	Fenice	4
	red brown	rouge-brun	rotbraun	marrón rojizo	Pirandello	5
	pink	rose	rosa	rosa	Camaiore	6
	red	rouge	rot	rojo	Nippon	7
	purple red	rouge-pourpre	purpurrot	rojo purpúreo	Dizzy	8
30.	Tepal: ribbing	Tépale : côtes	Perigonblatt: Rippung	Tépalo: acostillado		
QN (d)	absent or weak	absentes ou faibles	fehlend oder gering	ausente o débil		1
	medium	moyennes	mittel	medio		2
	strong	fortes	stark	fuerte		3
31. (+)	Tepal: undulation of margin	Tépale : ondulation du bord	Perigonblatt: Randwellung	Tépalo: ondulación del borde		
QN (b)	absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil		1
	weak	faible	gering	débil		3
	medium	moyenne	mittel	media		5
	strong	forte	stark	fuerte	Vedeá	7
	very strong	très forte	sehr stark	muy fuerte		9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
32. (+)	Tepal: type of undulation of margin	Tépale : type de l'ondulation du bord	Perigonblatt: Art der Randwellung	Tépalo: tipo de ondulación del borde		
PQ	(b) fine only	seulement fine	nur fein	sólo fina	Vedea	1
	coarse only	seulement grossière	nur grob	sólo gruesa	Casablanca	2
	fine and coarse	fine et grossière	fein und grob	fina y gruesa		3
33. (*)	Tepal: degree of recurving	Tépale : degré de recourbure	Perigonblatt: Stärke der Biegung	Tépalo: grado de curvatura		
QN	(c) weak	faible	gering	débil		3
	medium	moyen	mittel	medio	Vedea	5
	strong	fort	stark	fuerte	Casablanca	7
34.	Stamen: length	Étamine : longueur	Staubgefäß: Länge	Estambre: longitud		
QN	short	courte	kurz	corta	Fangio	3
	medium	moyenne	mittel	media	Mero Star	5
	long	longue	lang	larga	Casablanca	7
35. (*) (+)	Stamen: main color of filament	Étamine : couleur principale du filet	Staubgefäß: Hauptfarbe des Staubfadens	Estambre: color principal del filamento		
PQ	white	blanc	weiß	blanco	Verdi, Zanlophator	1
	green	vert	grün	verde	Casablanca, White Europe	2
	yellow green	vert-jaune	gelbgrün	verde amarillento	Yelloween	3
	yellow	jaune	gelb	amarillo	Golden Tycoon	4
	orange	orange	orange	anaranjado	Tresor	5
	orange pink	rose-orange	orangerosa	rosa anaranjado	Olina	6
	pink	rose	rosa	rosa	Vermeer	7
	red	rouge	rot	rojo	Marianne Timmer	8
	purple red	rouge-pourpre	purpurrot	rojo purpúreo	Red Alert	9
	purple	pourpre	purpurn	púrpura	Tamburo	10
	purple brown	brun-pourpre	purpurbraun	marrón purpúreo	Original Love	11

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
36. (*)	Stamen: color of anther	Étamine : couleur des anthères	Staubfaden: Farbe der Anthere	Estambre: color de la antera		
PQ	orange brown	brun-orange	orangebraun	marrón anaranjado	Landini	1
	orange yellow	orange-jaune	orangegelb	amarillo anaranjado	Premium Blond	2
	reddish brown	rouge-brun	rötlichbraun	marrón rojizo	Paradero	3
	brown	brunes	braun	marrón	Etosha	4
	purple	pourpres	purpurn	púrpura	Mero Star	5
	purple-red	rouge-pourpre	purpurrot	rojo purpúreo	Bacardi	6
37.	Pollen: color	Pollen : couleur	Pollen: Farbe	Polen: color		
PQ	light yellow	jaune clair	hellgelb	amarillo claro		1
	medium yellow	jaune moyen	mittelgelb	amarillo medio		2
	orange	orange	orange	anaranjado	Pink Supreme	3
	light brown	brun clair	hellbraun	marrón claro		4
	medium brown	brun moyen	mittelbraun	marrón medio	Zanlophator	5
	orange brown	brun-orange	orangebraun	marrón anaranjado	Casablanca, Sorbonne	6
	red brown	brun-rouge	rotbraun	marrón rojizo	Brindisi	7
	dark brown	brun foncé	dunkelbraun	marrón oscuro	Fangio	8

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
38. (*)	Style: main color	Style : couleur principale	Griffel: Hauptfarbe	Estilo: color principal		
PQ	white	blanc	weiß	blanco	Litouwen	1
	green	vert	grün	verde	Casablanca, White Europe	2
	yellow green	vert-jaune	gelbgrün	verde amarillento	Pink Supreme	3
	yellow	jaune	gelb	amarillo	Golden Tycoon	4
	orange	orange	orange	anaranjado	Brindisi	5
	orange pink	rose-orange	orangerosa	rosa anaranjado	Amateras	6
	pink	rose	rosa	rosa	Arbatex	7
	red	rouge	rot	rojo	Marianne Timmer	8
	purple red	rouge-pourpre	purpurrot	rojo purpúreo	Red Alert	9
	purple	pourpre	purpurn	púrpura	Landini	10
	purple brown	brun-pourpre	purpurbraun	marrón purpúreo	Orfeo	11
39.	Stigma: color	Stigmate : couleur	Narbe: Farbe	Estigma: color		
PQ	grey	gris	grau	gris	d'Oleron	1
	grey-green	gris-vert	graugrün	verde grisáceo		2
	green	vert	grün	verde	White Europe	3
	yellow	jaune	gelb	amarillo		4
	orange	orange	orange	anaranjado		5
	purple red	rouge-pourpre	purpurrot	rojo purpúreo	Casablanca	6
	purple	pourpre	purpurn	púrpura		7
	dark purple	pourpre foncé	dunkelpurpurn	púrpura oscuro		8
	brown	brun	braun	marrón		9

	English	français	deutsch	español	Example Varieties/ Exemples/ Beispielssorten/ Variedades ejemplo	Note/ Nota
40.	Time of flowering	Époque de floraison	Zeitpunkt der Blüte	Época de floración		
QN	very early	très précoce	sehr früh	muy temprana		1
	early	précoce	früh	temprana		3
	medium	moyenne	mittel	media	Vedea	5
	late	tardive	spät	tardía		7
	very late	très tardive	sehr spät	muy tardía	Mero Star	9

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

- (a) To be examined on middle third of the stem
- (b) Unless otherwise indicated, all measurements on shape and size should be made on outer tepals.
- (c) Unless otherwise indicated, all observations on color should be made on the inner side of inner tepal, excluding papillae, spots and nectar furrow.
- (d) Unless otherwise indicated, all observations on papillae and/or spots and ribbing should be made on the inner side of inner tepal.

8.2 *Explanations for individual characteristics*

Ad. 1: Plant height

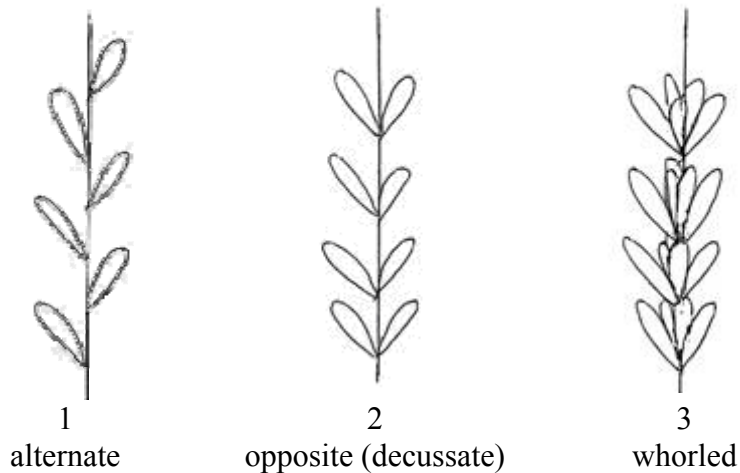
To be observed from the bottom of the plant to the top of the inflorescence.

Ad. 2: Stem: anthocyanin coloration

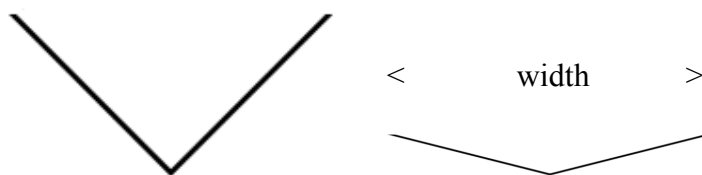
strong	3
medium	2
absent or weak	1



Ad. 4: Leaf: arrangement

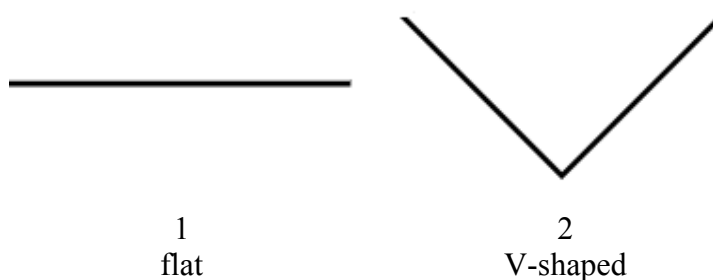


Ad. 6: Leaf: width



The width of V-shaped leaves should be observed when held flat

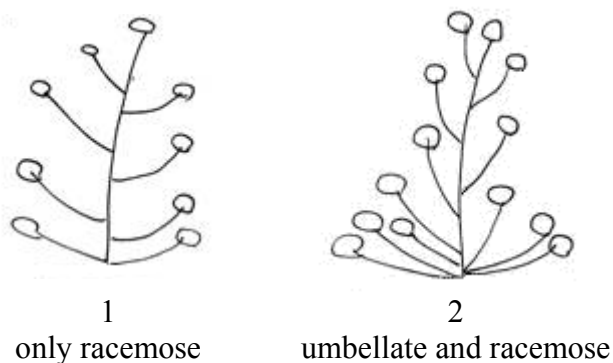
Ad. 9: Leaf: cross section



Ad. 10: Flower bud: main color

The main color is the color with the largest surface area. The main color should be observed just before the opening of the flower.

Ad. 11: Inflorescence: type of branching



In the case of varieties with umbellate and racemose branching (note 2), the first (lowest) branches are umbellate and the upper (higher) branches are racemose.

Ad. 14: Flower type

1≤6 tepals should be described as single
7≤11 tepals should be classified as semi-double
≥12 tepals should be described as double

Ad. 15: Flower: attitude of perianth (excluding pedicel)



1
erect



2
erect to horizontal

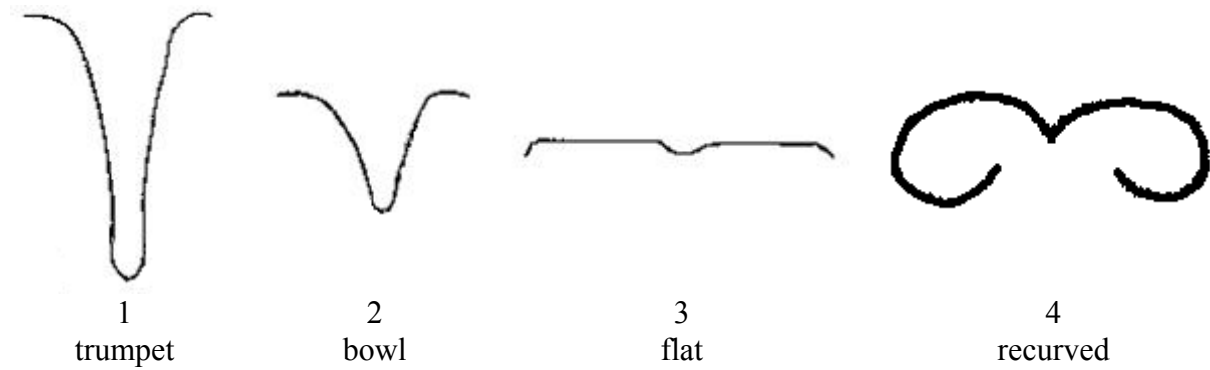


3
horizontal (outward facing)



4
drooping

Ad. 16: Flower: shape of perianth (excluding pedicel)



Ad. 19: Flower: tepal: main color of central part

Ad. 20: Flower: tepal: main color of basal part

Ad. 21: Flower tepal: color of zone bordering on nectar furrow

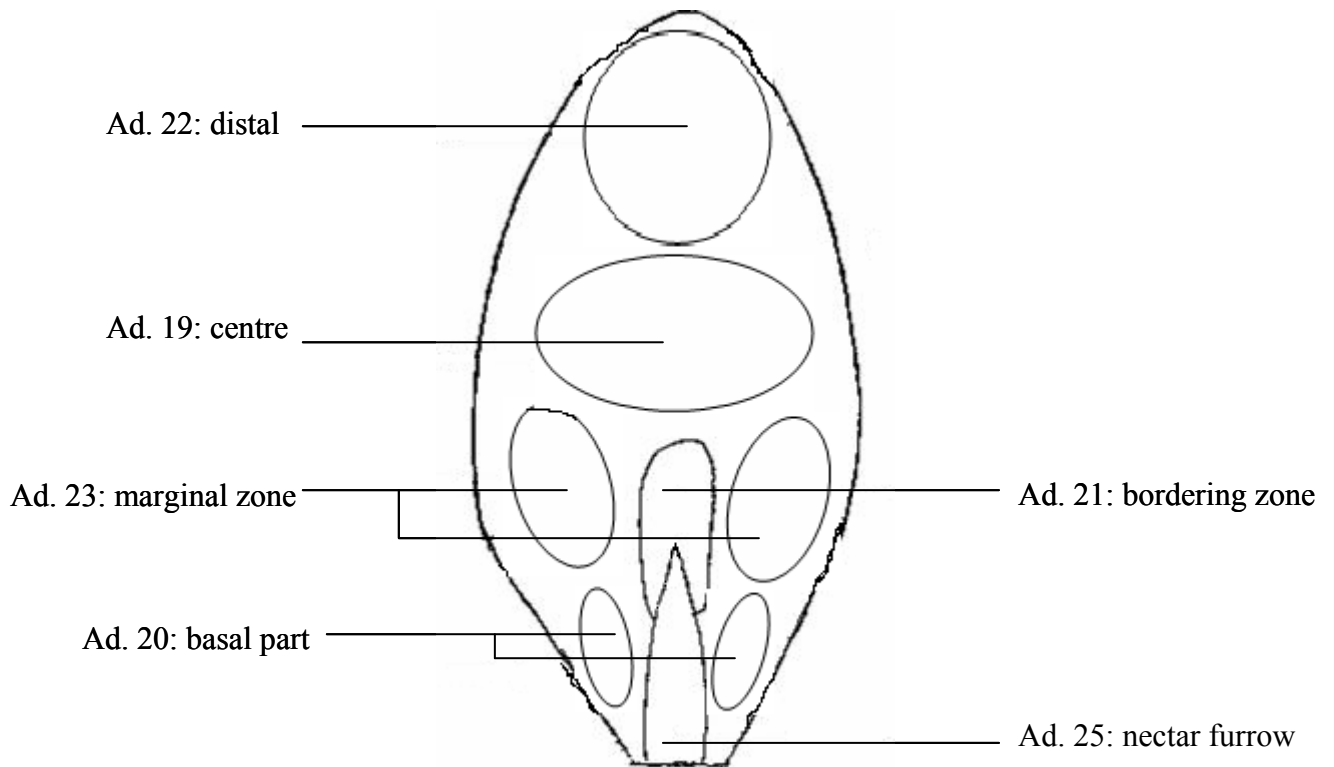
Ad. 22: Flower: tepal: main color of distal part

Ad. 23: Flower tepal: main color of marginal zone

Ad. 24: Flower: main color of outer side of inner tepal

Ad. 25: Flower: color of nectar furrow

The main color of a part or zone is the color with the largest surface area on the part or zone concerned.



Ad. 27: Tepal: number of papillae and/or spots

Ad. 28: Tepal: size of area with papillae and/or spots

Ad. 29: Tepal: color of papillae and/or spots

Papillae: pimples, with small, rounded, soft to firm, unequal bumps



Spots: small areas of another color than the background color



Ad. 31: Tepal: undulation of margin



3
weak

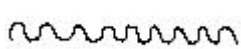


5
medium



7
strong

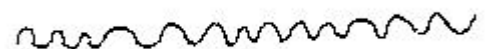
Ad. 32: Tepal: type of undulation of margin



1
fine only



2
coarse only



3
fine and coarse

Ad. 36: Stamen: main color of filament

The main color is the color with the largest surface area.

9. Literature

Tsukamoto, Y., 1991: The Grand Dictionary of Horticulture. Volume 5, The Shogakukan Ltd., Tokyo, JP, pp.198 to 211.

Kunishige, M., 1993: Lily: Breeding and Cultivation. The Seibundo-Shinkou Ltd., Tokyo, JP.

Shimizu, M., 1987: The Lilies of Japan: Species and Hybrid. The Seibundo-Shinkou Ltd., Tokyo, JP.

Tukamoto, Y., 1978: The Color Dictionary of Horticulture. The Hoiku Ltd., Tokyo, JP, pp. 93 to 125.

Leslie, A.C., 1982: The International Lily Register. RHS, London, GB, and yearly supplements [First (1983) to Twentieth (2002)].

Victoria Matthews: The International Lily Register and Checklist 2007, RHS, London, GB.

Feldmaier, C., McRae, J., 1982: Lilien. Eugen Ulmer, Stuttgart, DE.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
		Application date: (not to be filled in by the applicant)
TECHNICAL QUESTIONNAIRE to be completed in connection with an application for plant breeders' rights		
1. Subject of the Technical Questionnaire		
1.1 Botanical name	<input type="text" value="Lilium L."/>	
1.2 Common name	<input type="text" value="Lily"/>	
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:
-------------------------	-----------------	-------------------

#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)
- (b) partially known cross []
(please state known parent variety(ies))
- (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)

4.2 Method of propagating the variety

4.2.1 Vegetative propagation

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

4.2.2 Seed []

4.2.3 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:	
<p>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).</p>			
Characteristics	Example Varieties	Note	
<p>5.1 Flower: attitude of perianth (excluding pedicel) (15)</p>			
erect	Tresor	1[]	
erect to horizontal	Siberia, Stargazer	2[]	
horizontal (outward facing)	Casablanca, White Heaven	3[]	
drooping	Galloway	4[]	
<p>5.2 Flower: shape of perianth (excluding pedicel) (16)</p>			
trumpet	White Elegance	1[]	
bowl	Siberia	2[]	
flat	Sugar Jewel	3[]	
recurved	Belletti	4[]	
<p>5.3 Flower: tepal: main color of central part (19)</p>			
<p>RHS Colour Chart (indicate reference number)</p>			
<p>5.4 Flower: fragrance (26)</p>			
absent or weak	Nemo	1[]	
medium	Jetaime	2[]	
strong	Saltarello	3[]	
<p>5.5 Tepal: number of papillae and/or spots (27)</p>			
absent or very few	Siberia, White Europe	1[]	
few	Vedea, Vermeer	3[]	
medium	Purple Rain, Stargazer	5[]	
many	Pink Mystery	7[]	

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

Characteristics	Example Varieties	Note
5.6 Tepal: color of papillae and/or spots (29)		
white	Siberia	1[]
yellow	Conca d'Or	2[]
brown yellow	Windsor	3[]
brown	Fenice	4[]
red brown	Pirandello	5[]
pink	Camaiore	6[]
red	Nippon	7[]
purple red	Dizzy	8[]
5.7 Time of flowering (40)		
very early		1[]
early		3[]
medium	Vedea	5[]
late		7[]
very later	Mero Star	9[]

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

6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the similar variety(ies)	Describe the expression of the characteristic(s) for your candidate variety
<i>Example</i>	<i>Flower bud: main color</i>	<i>yellow</i>	<i>orange</i>

Comments:

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

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

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

Yes [] No []

(If yes, please provide details)

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

Yes [] No []

(If yes, please provide details)

7.3 Other information

7.3.1 Main use

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

7.3.2 A representative color photograph 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.

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:
-------------------------	-----------------	-------------------

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]