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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS
GENEVA

DRAFT

KALANCHOE

UPOV Code: KALAN_BLO
(KALAN_BGU; KALAN_BLA)

Kalanchoe blossfeldiana Poelln. and its hybrids

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Germany

*to be considered by the
Technical Working Party for Ornamental Plants and Forest Trees
at its fortieth session, to be held in Kunming, China, from July 2 to 6, 2007*

Alternative Names:*

<i>Botanical name</i>	<i>English</i>	<i>French</i>	<i>German</i>	<i>Spanish</i>
<i>Kalanchoe blossfeldiana</i> Poelln. and its hybrids	Kalanchoe	Kalanchoe	Flammendes Kätchen	
<i>Kalanchoe blossfeldiana</i> <i>x Kalanchoe guignardii</i>				
<i>Kalanchoe blossfeldiana</i> <i>x Kalanchoe laciniata</i>				

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 *Kalanchoe blossfeldiana* Poelln. as well as to hybrids between that species and other species of *Kalanchoe* Adans. of the family Crassulaceae.

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 unrooted cuttings.

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

20 unrooted cuttings

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. Depending on the season the plants should receive a short day treatment three to six weeks after potting. The day length during the short day treatment should be less than 10 hours for at least seven weeks.

3.3.2 The optimum stage of development for the assessment of the characteristics is when three quarters of the flowers per plant are fully open.

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.

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*

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.

3.6 *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 a population standard of 2% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 20 plants, 2 off-types are 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 tested, either by growing a further generation, or by testing a new 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: type (characteristic 18)
- (b) Corolla lobes: number of colors (characteristic 28)
- (c) Corolla lobes: main color of upper side (characteristic 29) with the following groups:
 - Gr. 1: white
 - Gr. 2: yellow
 - Gr. 3: orange
 - Gr. 4: red
 - Gr. 5: purple red
 - Gr. 6: purple
 - Gr. 7: blue pink

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

(+) See Explanations on the Table of Characteristics in Chapter 8.2.

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

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. (*)	Plant: height (including inflorescence)		Pflanze: Höhe (einschließlich Blütenstand)			
QN	very short		sehr niedrig		Avalon	1
	short		niedrig		Rarakoe	3
	medium		mittel		Amy	5
	tall		hoch		Taos	7
	very tall		sehr hoch		Petero	9
2.	Plant: width		Pflanze: Breite			
QN	narrow		schmal		Sumaco	3
	medium		mittel		Amy	5
	broad		breit		Pago	7
3. (*)	Leaf: length		Blatt: Länge			
QN	(a) short		kurz		Dark Cora	3
	medium		mittel		Amy	5
	long		lang		Avalon	7
4. (*)	Leaf: width		Blatt: Breite			
QN	(a) narrow		schmal		Arina	3
	medium		mittel		Sumaco	5
	broad		breit		Avalon	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
5.	Leaf: shape		Blatt: Form			
(+)						
PQ	(a) ovate		eiförmig			1
	elliptic		elliptisch			2
	rounded		rundlich			3
	linear		linear			5
	obovate		verkehrt eiförmig			4
	tripartite pinnate		dreizählig gefiedert			6
6.	Leaf: variegation		Blatt: Panaschierung			
(*)						
QL	(a) absent		fehlend		Rarakoe	1
	present		vorhanden		Debora	9
7.	Leaf: green color of upper side		Blatt: Grünfärbung der Oberseite			
QN	(a) light		hell			3
	medium		mittel		Taos	5
	dark		dunkel		Arina	7
8.	Leaf: anthocyanin coloration of upper side		Blatt: Anthocyanfärbung der Oberseite			
(*)						
QN	(a) absent or very weak		fehlend oder sehr gering		Amy	1
	weak		gering		Banda	3
	medium		mittel		Misunpink	5
	strong		stark		Axrose	7
9.	Leaf: cross section		Blatt: Querschnitt			
(+)						
QN	(a) concave		konkav		Dark Cora	1
	flat		gerade		Fonda	3
	convex		konvex			5

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10.	Leaf: number of incisions of margin		Blatt: Anzahl der Randeinschnitte			
(+)						
QN	(a)	absent or very few	fehlend oder sehr gering			1
		few	gering			3
		medium	mittel			5
		many	groß			7
11.	Leaf: depth of incisions of margin		Blatt: Tiefe der Randeinschnitte			
(+)						
QN	(a)	absent or very shallow	fehlend oder sehr flach			1
		shallow	flach		Amy	3
		medium	mittel		Pago	5
		deep	tief		Axrose	7
12.	Leaf: attitude of apex		Blatt: Haltung der Spitze			
(+)						
QN	(a)	incurving	aufgebogen		Rachel	1
		straight	gerade		Sumaco	3
		recurving	zurückgebogen		Hakon	5
13.	Flowering shoot: number of flowers of highest pleiochasium		Blühender Trieb: Anzahl der Blüten der obersten Trugdolde			
(+)						
QN		few	gering		Amrum	3
		medium	mittel		Fonda	5
		many	groß		Pago	7

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
14.	Flowering shoot: width of highest pleiochasium		Blühender Trieb: Breite der obersten Trugdolde			
(+)						
QN	narrow		schmal		Don Ramon	3
	medium		mittel		Sumaco	5
	broad		breit		Pago	7
15.	Young flower: number of colors of upper side of corolla lobes		Junge Blüte: Anzahl Farben der Oberseite der Kronzipfel			
(+)						
	one		eine			1
	two or more		zwei oder mehr			2
16.	Young flower: main color of upper side of corolla lobes		Junge Blüte: Hauptfarbe der Oberseite der Kronzipfel			
(+)						
PQ	(b) RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
17.	Young flower: secondary color of upper side of corolla lobes		Junge Blüte: Sekundärfarbe der Oberseite der Kronzipfel			
PQ	(b) RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
18.	Flower: type		Blüte: Typ			
(*)						
(+)						
QL	single		einfach		Dark Cora	1
	double		gefüllt		Pago	2
19.	<u>Only varieties with single flowers:</u> Flower: number of corolla lobes		<u>Nur Sorten mit einfachen Blüten:</u> Blüte: Anzahl Kronzipfel			
QN	only 4		immer 4		Dark Cora	1
	4 or 5		4 oder 5		Parina	2
	only 5		immer 5			3

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
20. (*)	<u>Only varieties with double flowers:</u> Flower: number of corolla lobes		<u>Nur Sorten mit gefüllten Blüten:</u> Blüte: Anzahl Kronzipfel			
QN	few		gering		RB 56141	3
	medium		mittel		Naomi	5
	many		hoch		Yazmin	7
21. (*)	Flower: diameter		Blüte: Durchmesser			
QN	small		klein		Arina	3
	medium		mittel		Amy	5
	large		groß		Jodie	7
22. (+)	<u>Only varieties with single flowers:</u> Corolla lobes: attitude		<u>Nur Sorten mit einfachen Blüten:</u> Kronzipfel: Haltung			
QN	(c) upwards		nach oben		Runa	1
	horizontal		horizontal		Goldie	2
	downwards		nach unten		Ingrid	3
23. (+)	Corolla lobes: rolling of margin		Kronzipfel: Umbiegung des Randes			
QL	(c) absent		fehlend		Irmin	1
	present		vorhanden		Jackie	9
24.	Corolla lobes: incisions of margin		Kronzipfel: Einschnitte des Randes			
QL	(c) absent		fehlend		Irmin	1
	present		vorhanden		Krystle	9

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
25. (*)	<u>Only varieties with single flowers:</u> Corolla lobes: length		<u>Nur Sorten mit einfachen Blüten:</u> Kronzipfel: Länge			
QN	(c) short		kurz		Debora	3
	medium		mittel		Amy	5
	long		lang		Jackie	7
26. (*)	<u>Only varieties with single flowers:</u> Corolla lobes: width		<u>Nur Sorten mit einfachen Blüten:</u> Kronzipfel: Breite			
QN	(c) narrow		schmal		Debora	3
	medium		mittel		Parina	5
	broad		breit		Dark Cora	7
27.	<u>Only varieties with single flowers:</u> Corolla lobes: ratio length/width		<u>Nur Sorten mit einfachen Blüten:</u> Kronzipfel: Verhältnis Länge/Breite			
QN	(c) small		klein			3
	medium		mittel			5
	large		groß			7
28. (*)	Corolla lobes: number of colors of upper side		Kronzipfel: Anzahl Farben der Oberseite			
QL	(c) one		eine		Amy	1
	two		zwei		Graciosa	2
	more than two		mehr als zwei		Oberon	3
29. (*) (+)	Corolla lobes: main color of upper side		Kronzipfel: Hauptfarbe der Oberseite			
PQ	(c) RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
30. (*)	Corolla lobes: secondary color of upper side		Kronzipfel: Sekundärfarbe der Oberseite			
PQ	(c)	RHS Colour Chart (indicate reference number)	RHS-Farbkarte (Nummer angeben)			
31. (*) (+)	Corolla lobes: distribution of secondary color		Kronzipfel: Verteilung der Sekundärfarbe			
PQ	(c)	at margin only	nur am Rand		Alcedo	1
		at margin and at base	am Rand und an der Basis		Mipinkstar	2
		at base only	an der Basis		Impromero	3
		at base and as median stripe	an der Basis und als Mittelstreifen		Milos	4
		median stripe	als Mittelstreifen			5
		mainly on one half	hauptsächlich auf einer Hälfte		Rewiros	6
		dotted	gepunktet		Greco	7
		brindled	gescheckt			8
32.	<u>Only varieties with single flowers:</u> Corolla lobes: color of <u>lighter</u> part of lower side		<u>Nur Sorten mit einfachen Blüten:</u> Kronzipfel: Farbe des <u>helleren</u> Teils der Unterseite			
PQ	(c)	RHS Colour Chart (indicate reference number)	RHS-Farbkarte (Nummer angeben)			
33.	<u>Only varieties with single flowers:</u> Corolla lobes: color of <u>darker</u> part of lower side		<u>Nur Sorten mit einfachen Blüten</u> Kronzipfel: Farbe des <u>dunkleren</u> Teils der Unterseite			
PQ	(c)	RHS Colour Chart (indicate reference number)	RHS-Farbkarte (Nummer angeben)			

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34. (*)	<u>Only varieties with double flowers:</u> Outer corolla lobes: number of colors of upper side		<u>Nur Sorten mit gefüllten Blüten:</u> Äußere Kronzipfel: Anzahl Farben der Oberseite			
QL	(c) one		eine			1
	two		zwei			2
	more than two		mehr als zwei			3
35. (*)	<u>Only varieties with double flowers:</u> Outer corolla lobes: main color of upper side		<u>Nur Sorten mit gefüllten Blüten:</u> Äußere Kronzipfel: Hauptfarbe der Oberseite			
PQ	(c) RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			
36.	<u>Only varieties with double flowers:</u> Outer corolla lobes: secondary color of upper side		<u>Nur Sorten mit gefüllten Blüten:</u> Äußere Kronzipfel: Sekundärfarbe der Oberseite			
PQ	(c) RHS Colour Chart (indicate reference number)		RHS-Farbkarte (Nummer angeben)			

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
37.	<u>Only varieties with double flowers:</u>		<u>Nur Sorten mit gefüllten Blüten:</u>			
(+)	Outer corolla lobes: distribution of secondary color		Äußere Kronzipfel: Verteilung der Sekundärfarbe			
PQ	(c)					
	at margin only		nur am Rand			1
	at margin and at base		am Rand und an der Basis			2
	at base		an der Basis			3
	at base and as median stripe		an der Basis und als Mittelstreifen			4
	median stripe		als Mittelstreifen			5
	mainly on one half		hauptsächlich auf einer Hälfte			6
	dotted		gepunktet			7
	brindled		gescheckt			8
38.	Time of beginning of flowering		Zeitpunkt des Blühbeginns			
QN	early		früh			3
	medium		mittel			5
	late		spät			7

8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

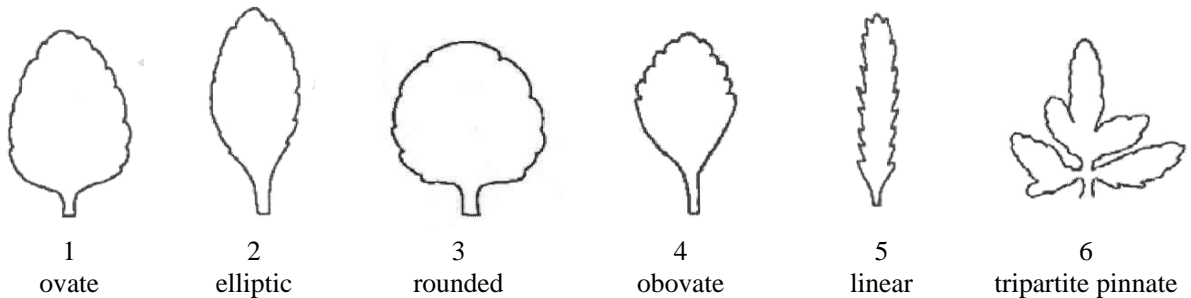
The optimum stage of development for the assessment of the characteristics is when three quarters of the flowers per plant are fully open.

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

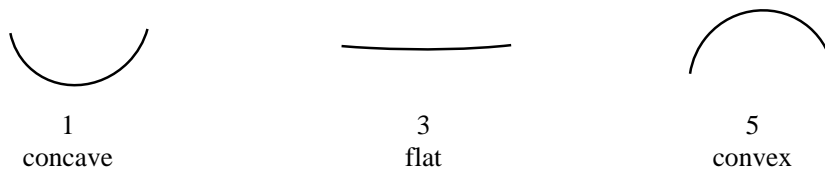
- (a) Observations on the leaf should be made on a fully developed leaf from the middle part of the plant.
- (b) Observations on the young flower of varieties with single flowers should be made when the corolla lobes have just opened. Observations on the young flower of varieties with double flowers should be made on the inner corolla lobes when these have just opened.
- (c) Observations on the corolla lobes should be made on a fully developed flower. Unless otherwise indicated observations on the corolla lobes of double flowers should be made on the inner whirl of the corolla lobes.

8.2 *Explanations for individual characteristics*

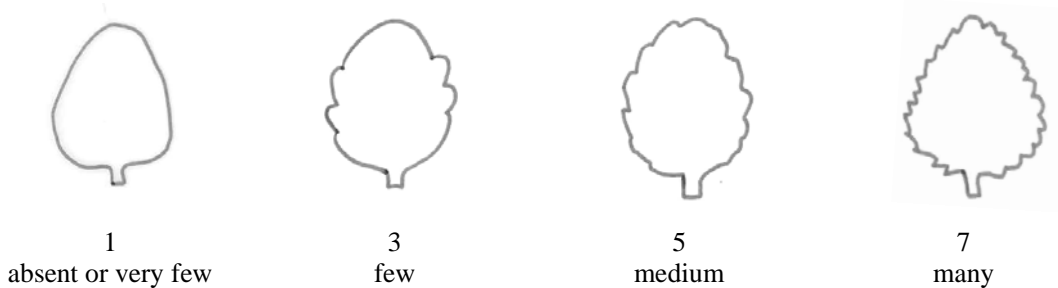
Ad. 5: Leaf: shape



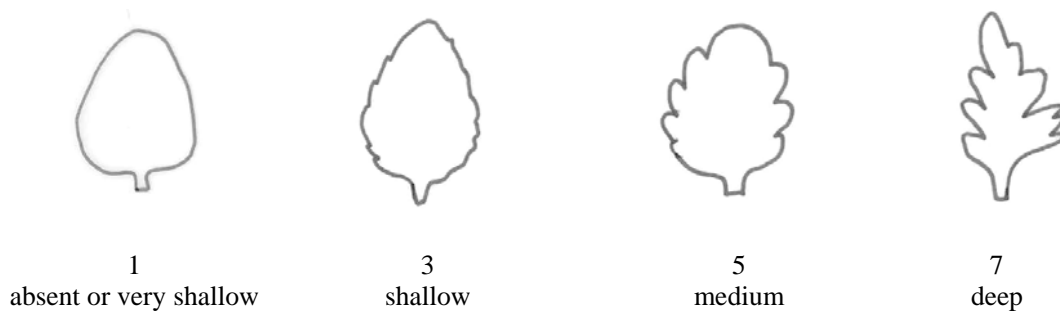
Ad. 9: Leaf: cross section



Ad. 10: Leaf: number of incisions of margin



Ad. 11: Leaf: depth of incisions of margin

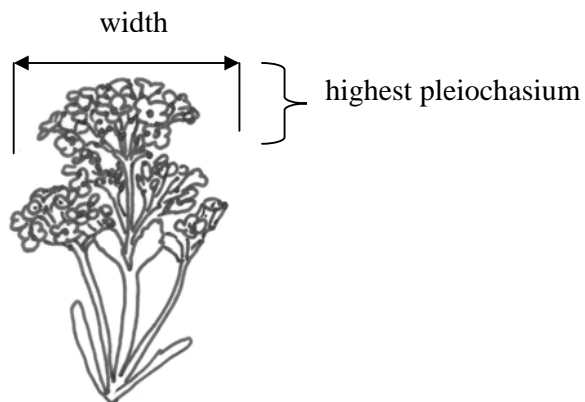


Ad. 12: Leaf: attitude of apex



Ad. 13: Flowering shoot: number of flowers of highest pleiochasium

Ad. 14: Flowering shoot: width of highest pleiochasium



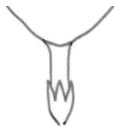
Ad. 17: Young flower: main color of upper side of corolla lobes

Main color: color of the largest area of the corolla lobe. If the area of the colors is nearly half and half, the darker color is the main color.

Ad. 18: Flower: type

A single flower has four or five corolla lobes only. A double flower has more than five corolla lobes.

Ad. 22: Only varieties with single flowers: Corolla lobes: attitude



1
upwards



2
horizontal



3
downwards

Ad. 23: Corolla lobes: rolling of margin

On corolla lobes with a rolled margin present, the color of the lower side of the corolla lobes can be seen when viewing the flower from the upper side.

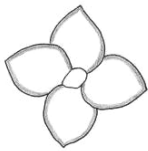
Ad. 29: Corolla lobes: main color of upper side

Ad. 35: only varieties with double flowers: outer corolla lobes: main color of upper side

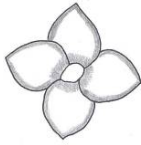
Main color: color of the largest area of the corolla lobe. If the area of the colors is nearly half and half, the darker color is the main color.

Ad. 33: Corolla lobes: distribution of secondary color

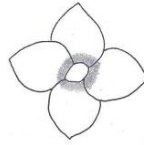
Ad. 37: Only varieties with double flowers: outer corolla lobes: distribution of secondary color



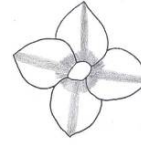
1
at margin only



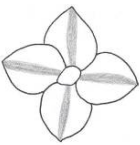
2
at margin and base



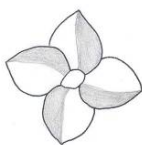
3
at base only



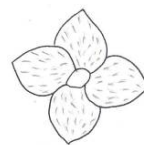
4
at base and as median stripe



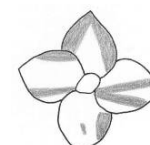
5
median stripe



6
mainly on one half



7
dotted



8
brindled

9. Literature

Sajeva, M., Costanzo, M., 1997: Succulents The Illustrated Dictionary, Timber Press

Urs, E., 1994: Sukkulente, Ulmer, Stuttgart

Urs, E., 2003: Illustrated Handbook of Succulent Plants, Springer

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		
1.1.1 Botanical name	<input type="text" value="Kalanchoe blossfeldiana Poelln."/>	[]
1.1.2 Common name	<input type="text" value="Kalanchoe"/>	
Hybrid: please indicate name(s) of species used in the crossing		
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:

#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) cuttings []
- (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:
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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 (including inflorescence) (1)		
very short	Avalon	1[]
short	Rarakoe	3[]
medium	Amy	5[]
tall	Taos	7[]
very tall	Petero	9[]
5.2 Leaf: anthocyanin coloration (8)		
absent or very weak	Amy	1[]
weak	Banda	3[]
medium	Misunpink	5[]
strong	Axrose	7[]
5.3 Flower: type (18)		
single	Dark Cora	1[]
double	Pago	2[]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5.4 Only varieties with double flowers:			
(20) Flower: number of corolla lobes			
few	RB 56141		3[]
medium	Naomi		5[]
many	Yazmin		7[]
5.5 Corolla lobes: number of colors			
(28) (For double flowers describe inner corolla lobes)			
one	Amy		1[]
two	Graciosa		2[]
more than two	Oberon		3[]
5.6i Corolla lobes: main color of upper side			
(29)			
RHS Colour Chart (indicate reference number)		
5.6ii Corolla lobes: main color of upper side			
(29)			
white	Yazmin		1[]
yellow	Ingrid		2[]
orange	Naomi		3[]
red	Bola		4[]
purple red	Dorry		5[]
purple	Kuni		6[]
blue pink	Aniak		7[]
other (indicate color)		
5.7i Corolla lobes: secondary color of upper side			
(30)			
RHS Colour Chart (indicate reference number)		

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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5.7ii Corolla lobes: secondary color of upper side			
(30)			
white	Alcedo		1[]
yellow			2[]
orange	Taos		3[]
red			4[]
purple red	Impromeru		5[]
blue pink			6[]
other (indicate color)		
5.8 Corolla lobes: distribution of secondary color			
(31)			
at margin only	Alcedo		1[]
at margin and at base	Mipinkstar		2[]
at base only	Impromeru		3[]
at base and as median stripe	Milos		4[]
median stripe			5[]
mainly on one half	Rewiros		6[]
dotted	Greco		7[]
brindled			8[]
other distribution (indicate)		

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 the 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: number of colors</i>	<i>one</i>	<i>Two</i>

#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 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.

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 of 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]