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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

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MAGNOLIA

UPOV Code(s): MAGNO

Magnolia L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from China

to be considered by the

*Technical Working Party for Ornamental Plants and Forest Trees at its fifty-eighth session,
to be held virtually from 2026-07-06 to 2026-07-09*

Disclaimer: this document does not represent UPOV policies or guidance

Alternative Names:*

Botanical name	English	French	German	Spanish
<i>Magnolia</i> L., <i>Yulania</i> Spach, <i>Michelia</i> L., <i>Lirianthe</i> Spach, <i>Houpoea</i> N. H. Xia & C. Y. Wu, <i>Oyama</i> (Nakai) N. H. Xia & C. Y. Wu, <i>Manglietia</i> Blume, <i>Parakmeria</i> Hu & W. C. Cheng	Magnolia	Magnolia	Magnolie	Magnolia

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 *Magnolia* L.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of vegetatively propagated plants.

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

6 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*

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

3.1.2 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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 6 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 or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 5 plants or parts taken from each of 5 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 2.

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 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 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.

4.2.3 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 6 plants, 1 off-type is allowed.

4.3 *Stability*

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

5. Grouping of Varieties and Organization of the Growing Trial

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

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

5.3 The following have been agreed as useful grouping characteristics:

- (a) Plant: seasonality (characteristic 1)
- (b) Flowering shoot: position of flower buds (characteristic 5)
- (c) Flower: number of tepals (characteristic 19)
- (d) First whorl petaloid tepal: main color of outer side (characteristic 26) with the following groups:
 - Gr. 1: white
 - Gr. 2: green
 - Gr. 3: yellow
 - Gr. 4: red pink
 - Gr. 5: red
 - Gr. 6: purple
- (e) Time of beginning of first flowering (characteristic 43)

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 All relevant states of expression are presented in the characteristic.

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.

Example varieties

Magnolia 'Alba'

Magnolia 'Betty'

Magnolia cylindrica 'Lv Xing'

Magnolia denudata 'Jade Lamp'

Magnolia figo 'Purple Queen'

Magnolia 'Fragrant Cloud'

Magnolia 'Frank's Masterpiece'

Magnolia grandiflora 'Bracken's Brown Beauty'

Magnolia × *loebneri* 'Mag's Pirouette'

Magnolia maudiae 'Danyu'

Magnolia sargentiana 'Mossman's Giant'

Magnolia sieboldii 'Qingxin'

Magnolia × *soulangeana* 'Burgundy'

Magnolia sprengeri 'Diva'

Magnolia sprengeri 'Zipao Jiaohong'

Magnolia 'Sun Spire'

Magnolia stellata 'Chrysanthemumiflora'

Magnolia virginiana 'Tensaw'

Magnolia 'Yellow Bird'

6.5 Legend

English				français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1	2	3	4	5	6	7			
		Name of characteristics in English		Nom du caractère en français		Name des Merkmals auf Deutsch		Nombre del carácter en español	
		states of expression		types d'expression		Ausprägungsstufen		tipos de expresión	

- 1 Characteristic number
- 2 (*) sterisked characteristic – see Chapter 6.1.2
- 3 Type of expression
 QL Qualitative characteristic – see Chapter 6.3
 QN Quantitative characteristic – see Chapter 6.3
 PQ Pseudo-qualitative characteristic – see Chapter 6.3
- 4 Method of observation (and type of plot, if applicable)
 MG, MS, VG, VS – see Chapter 4.1.5
- 5 (+) See Explanations on the Table of Characteristics in Chapter 8.2
- 6 (a)-(g) See Explanations on the Table of Characteristics in Chapter 8.1
- 7 Not applicable

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

		English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo		Note/ Nota	
1.	(*)	QL	VG		(a)								
		Plant: seasonality											
		deciduous								Yellow Bird		1	
		evergreen								Bracken's Brown Beauty		2	
2.		QN	VG	(+)	(a)								
		Plant: growth habit											
		upright								Sun Spire		1	
		upright to spreading								Burgundy		2	
		spreading								Jade Lamp		3	
		drooping								Frank's Masterpiece		4	
3.		QN	VG		(a)								
		Plant: density of branches											
		sparse								Frank's Masterpiece		1	
		sparse to medium								Jade Lamp		2	
		medium								Burgundy		3	
		medium to dense								Mag's Pirouette		4	
		dense								Purple Queen		5	
4.	(*)	QN	MG/MS/VG	(+)	(b)								
		Flowering shoot: length of internodes											
		short								Purple Queen		1	
		short to medium										2	
		medium								Burgundy		3	
		medium to long										4	
		long								Frank's Masterpiece		5	
5.	(*)	PQ	VG	(+)	(b)								
		Flowering shoot: position of flower buds											
		terminal only								Frank's Masterpiece		1	
		terminal and axillary								Lv Xing		2	
		axillary only								Purple Queen		3	

		English		français		deutsch		español		Example Varieties Exemples Beispielsorten Variedades ejemplo		Note/ Nota	
6.		QN	MG/MS/VG		(b)								
		Flowering shoot: number of flowers											
		few								Frank's Masterpiece		1	
		few to medium								Yellow Bird		2	
		medium								Mag's Pirouette		3	
		medium to many								Purple Queen		4	
		many										5	
7.	(*)	QN	VG		(c)								
		Young leaf blade: anthocyanin coloration of upper side											
		absent or very weak								Bracken's Brown Beauty		1	
		weak								Mag's Pirouette		2	
		medium								Chrysanthemumiflora		3	
		strong										4	
		very strong								Zipao Jiaohong		5	
8.	(*)	QN	VG		(c)								
		Young leaf blade: pubescence on lower side											
		absent or very sparse								Diva		1	
		sparse										2	
		medium								Yellow Bird		3	
		dense										4	
		very dense								Bracken's Brown Beauty		5	
9.	(*)	QN	MG/MS/VG	(+)	(d)								
		Leaf blade: length											
		very short								Tensaw		1	
		very short to short										2	
		short								Mag's Pirouette		3	
		short to medium										4	
		medium								Burgundy		5	
		medium to long										6	
		long								Bracken's Brown Beauty		7	
		long to very long										8	
		very long										9	

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
10.		QN	MG/MS/VG	(+)	(d)				
		Leaf blade: width							
		very narrow						Tensaw	1
		very narrow to narrow							2
		narrow						Mag's Pirouette	3
		narrow to medium							4
		medium						Jade Lamp	5
		medium to broad							6
		broad						Frank's Masterpiece	7
		broad to very broad							8
		very broad							9
11.		QN	MG/MS	(+)					
		Leaf blade: ratio length/width							
		very low						Jade Lamp	1
		low						Diva	2
		medium						Betty	3
		high						Alba	4
		very high							5
12.		PQ	VG	(+)	(d)				
		Leaf blade: shape							
		ovate						Yellow Bird	1
		circular						Jade Lamp	2
		elliptic						Bracken's Brown Beauty	3
		obovate						Diva	4
13.		QL	VG		(d)				
		Leaf blade: variegation							
		absent						Yellow Bird	1
		present							9
14.		PQ	VG		(d), (e)				
		Leaf blade: main color of lower side							
		white							1
		green						Lv Xing	2
		yellow green							3
		grey green						Danyu, Qingxin	4
		grey orange							5
		yellow brown							6
		grey brown						Bracken's Brown Beauty	7

		English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo		Note/ Nota
15.		QN	MG/MS/VG		(f)							
		Flower: pedicel length										
		very short								Purple Queen		1
		short										2
		medium								Frank's Masterpiece		3
		long								Danyu		4
		very long								Qingxin		5
16.	(*)	QN	MG/MS/VG	(+)	(f)							
		Flower: diameter										
		very small								Purple Queen		1
		very small to small										2
		small								Yellow Bird		3
		small to medium										4
		medium								Betty		5
		medium to large										6
		large								Frank's Masterpiece		7
		large to very large										8
		very large								Mossman's Giant		9
17.	(*)	PQ	VG	(+)	(f), (g)							
		Flower: form										
		ovoid								Sun Spire		1
		globose								Jade Lamp		2
		narrow cup-shaped								Yellow Bird		3
		campanulate								Lv Xing		4
		broad cup-shaped								Burgundy		5
		bowl-shaped								Bracken's Brown Beauty		6
		saucer-shaped										7
		cup-saucer-shaped								Frank's Masterpiece		8
		goldfish-shaped										9
		stellate								Chrysanthemumiflora		10
		irregular										11
18.	(*)	QL	VG		(f), (g)							
		Flower: sepaloid tepal										
		absent								Bracken's Brown Beauty		1
		present								Mag's Pirouette		9

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19.	(*)	QN	MG/MS	(+)	(f)				
		Flower: number of tepals							
		very few						Purple Queen	1
		very few to few						Burgundy	2
		few							3
		few to medium						Diva	4
		medium						Jade Lamp	5
		medium to many							6
		many						Mag's Pirouette	7
		many to very many						Chrysanthemumiflora	8
		very many							9
20.		QN	VG		(f)				
		Flower: fragrance							
		absent or weak						Sun Spire	1
		medium							2
		strong						Alba	3
21.		QN	VG	(+)	(f), (g)				
		First whorl petaloid tepal: attitude of whole petaloid tepal							
		upwards						Yellow Bird	1
		outwards						Burgundy	2
		horizontal						Mag's Pirouette	3
		downwards							4
22.		PQ	VG	(+)	(f), (g)				
		First whorl petaloid tepal: curvature of upper part							
		absent						Yellow Bird	1
		incurved						Bracken's Brown Beauty	2
		recurved						Lv Xing	3

		English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo		Note/ Nota
23.	(*)	QN	MG/MS/VG		(f), (g)							
		First whorl petaloid tepal: length										
		very short								Purple Queen		1
		very short to short										2
		short								Mag's Pirouette		3
		short to medium										4
		medium								Burgundy		5
		medium to long										6
		long								Frank's Masterpiece		7
		long to very long										8
		very long								Mossman's Giant		9
24.	(*)	QN	MG/MS/VG	(+)	(f), (g)							
		First whorl petaloid tepal: width										
		very narrow								Alba		1
		very narrow to narrow										2
		narrow								Mag's Pirouette		3
		narrow to medium										4
		medium								Betty		5
		medium to broad										6
		broad								Frank's Masterpiece		7
		broad to very broad										8
		very broad								Mossman's Giant		9
25.		PQ	VG	(+)	(f), (g)							
		First whorl petaloid tepal: shape										
		circular										1
		elliptic								Purple Queen		2
		oblong										3
		broad obovate								Fragrant Cloud		4
		medium obovate								Jade Lamp		5
		narrow obovate								Chrysanthemumiflora		6
		oblanceolate								Alba		7
		broad spatulate								Diva		8
		narrow spatulate								Betty		9
26.	(*)	PQ	VG		(e), (f), (g)							
		First whorl petaloid tepal: main color of outer side										
		RHS Colour Chart (indicate reference number)										

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
27.		PQ	VG	(+)	(e), (f), (g)				
		First whorl petaloid tepal: pattern of main color of outer side							
		solid						Frank's Masterpiece	1
		flush						Betty	2
		flush and aciculate						Danyu	3
28.	(*)	PQ	VG		(e), (f), (g)				
		First whorl petaloid tepal: secondary color of outer side							
		RHS Colour Chart (indicate reference number)							
29.	(*)	PQ	VG	(+)	(e), (f), (g)				
		First whorl petaloid tepal: distribution of secondary color of outer side							
		none						Frank's Masterpiece	1
		at base only							2
		basal and partial central							3
		basal and central						Mag's Pirouette	4
		basal quarter						Betty	5
		basal quarter and partial central							6
		basal quarter and central						Lv Xing	7
		basal half							8
		basal half and central							9
		distal half							10
		distal quarter							11
		at apex only							12
		on margin only							13
		lower half and margin							14
		throughout							15
30.	(*)	PQ	VG	(+)	(e), (f), (g)				
		First whorl petaloid tepal: pattern of secondary color of outer side							
		none						Bracken's Brown Beauty	1
		flush only						Yellow Bird	2
		flush and stripes						Lv Xing	3
		flush and aciculate							4

		English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo		Note/ Nota	
31.		QL	VG		(e), (f), (g)								
		First whorl petaloid tepal: tertiary color of outer side											
		absent								Betty		1	
		present								Sun Spire		9	
32.	(*)	PQ	VG		(e), (f), (g)								
		First whorl petaloid tepal: main color of inner side											
		RHS Colour Chart (indicate reference number)											
33.		PQ	VG		(e), (f), (g)								
		First whorl petaloid tepal: secondary color of inner side											
		RHS Colour Chart (indicate reference number)											
34.		PQ	VG	(+)	(e), (f), (g)								
		First whorl petaloid tepal: distribution of secondary color of inner side											
		none								Bracken's Brown Beauty		1	
		at base only										2	
		basal quarter										3	
		basal half										4	
		distal half										5	
		distal quarter										6	
		at apex only										7	
		on margin only										8	
		lower half and margin										9	
		throughout										10	
35.		QN	VG	(+)	(f), (g)								
		Second whorl petaloid tepal: attitude of whole petaloid tepal											
		upwards								Yellow Bird		1	
		outwards								Burgundy		2	
		horizontal								Mag's Pirouette		3	
		downwards										4	

		English		français		deutsch	español	Example Varieties Exemples Beispielsorten Variedades ejemplo	Note/ Nota
36.		PQ	VG	(+)	(f), (g)				
		Second whorl petaloid tepal: curvature of upper part							
		absent						Yellow Bird	1
		incurved						Bracken's Brown Beauty	2
		recurved						Lv Xing	3
37.	(*)	PQ	VG		(e), (f), (g)				
		Second whorl petaloid tepal: main color of outer side							
		RHS Colour Chart (indicate reference number)							
38.	(*)	PQ	VG		(e), (f), (g)				
		Second whorl petaloid tepal: secondary color of outer side							
		RHS Colour Chart (indicate reference number)							
39.	(*)	PQ	VG	(+)	(e), (f), (g)				
		Second whorl petaloid tepal: distribution of secondary color of outer side							
		none						Frank's Masterpiece	1
		at base only							2
		basal and partial central							3
		basal and central						Mag's Pirouette	4
		basal quarter							5
		basal quarter and partial central							6
		basal quarter and central						Lv Xing	7
		basal half							8
		basal half and central							9
		distal half							10
		distal quarter							11
		at apex only							12
		on margin only							13
		lower half and margin							14
		throughout							15

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
40.		PQ	VG	(+)	(e), (f), (g)				
		Second whorl petaloid tepal: pattern of secondary color of outer side							
		none						Frank's Masterpiece	1
		flush only							2
		flush and stripes						Lv Xing	3
		flush and aciculate							4
41.		PQ	VG		(e), (f), (g)				
		Stamens: color of filament							
		white						Tensaw	1
		yellow						Yellow Bird	2
		red						Qingxin	3
		purple red						Lv Xing	4
		purple							5
42.		PQ	VG		(e), (f), (g)				
		Gynoecium: color of stigma							
		green							1
		yellow green						Bracken's Brown Beauty	2
		yellow						Yellow Bird	3
		red						Betty	4
		purple red						Diva	5
		purple							6
43.	(*)	QN	MG/VG	(+)					
		Time of beginning of first flowering							
		very early						Diva	1
		early						Burgundy	2
		medium						Yellow Bird	3
		late						Qingxin	4
		very late						Bracken's Brown Beauty	5
44.		QN	MG/VG	(+)					
		Length of first flowering period							
		very short						Diva	1
		short							2
		medium						Burgundy	3
		long							4
		very long						Danyu	5

		English		français		deutsch		español		Example Varieties Exemples Beispielssorten Variedades ejemplo		Note/ Nota
45.		QN	MG/VG	(+)								
		Flowering: frequency										
		low								Diva		1
		medium								Yellow Bird		2
		high								Alba		3

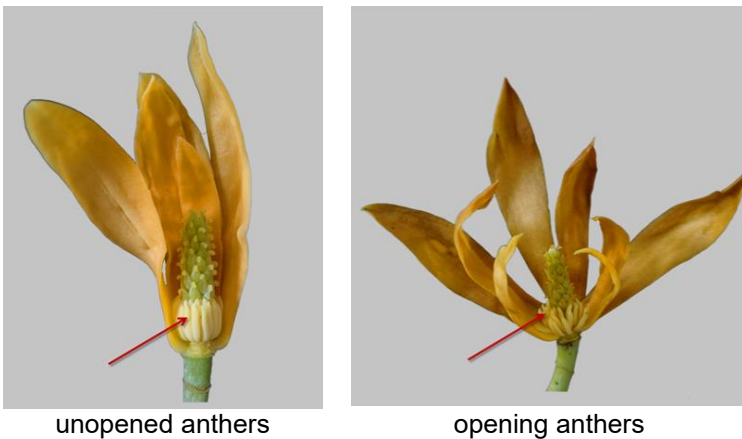
8. Explanations on the Table of Characteristics

8.1 *Explanations covering several characteristics*

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

- (a) Observations should be made on plants during dormancy.
- (b) Observations should be made at the time of beginning of flowering.
In the case of more than one flowering period, the first flowering period should be observed.
- (c) Observations should be made on new leaves at the end of a shoot in the upper half of the plant.
- (d) Observations should be made on fully developed leaves from the middle third of the current-year shoot in the upper half of the plant.
- (e) The main color is the color with the largest surface area, the secondary color is the color with the second largest surface area, and the tertiary color is the color with the third largest surface area. In cases where the area of the main and secondary color are too similar to reliably decide which color has the largest area, the darker color is considered to be the main color. In cases where the area of the secondary and tertiary color are too similar to reliably decide which color has the second largest area, the darker color is considered to be the secondary color.
- (f) Observations should be made on fully opened flowers, in the upper half of the plant, at the beginning of anther opening and anther dehiscence on a sunny day.

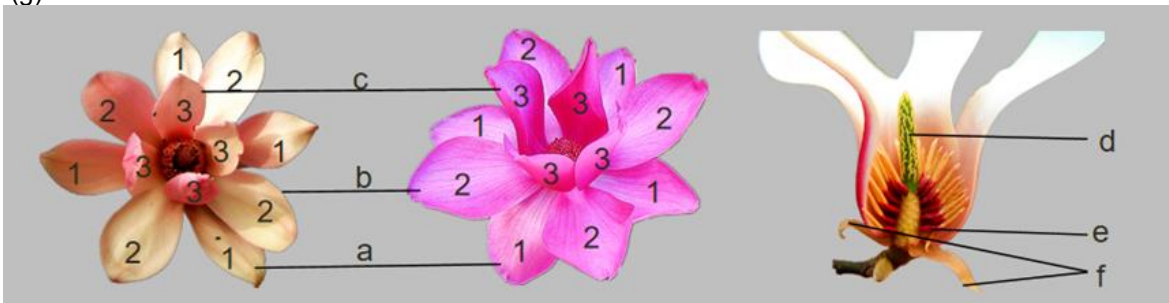
In the case of more than one flowering period, the first flowering period should be observed.



unopened anthers

opening anthers

(g) Flower structure:



- a = first whorl petaloid tepal
- b = second whorl petaloid tepal
- c = third whorl petaloid tepal
- d = stigma of the gynoecium
- e = filament of stamen
- f = sepaloid tepal

Sepaloid tepal: the smallest tepal of the first whorl with length distinctly shorter than two-thirds that of tepals in the second whorl.

8.2 Explanations for individual characteristics

Ad. 2: Plant: growth habit



1
upright



2
upright to spreading



3
spreading



4
drooping

Ad. 4: Flowering shoot: length of internodes

Observations should be made on the middle third of a flowering shoot.

Ad. 5: Flowering shoot: position of flower buds



1
terminal only



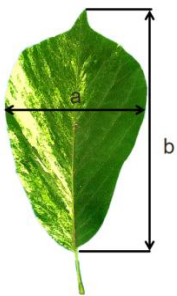
2
terminal and axillary



3
axillary only

Ad. 9: Leaf blade: length

Observations should be made excluding the petiole.



a = width
b = length

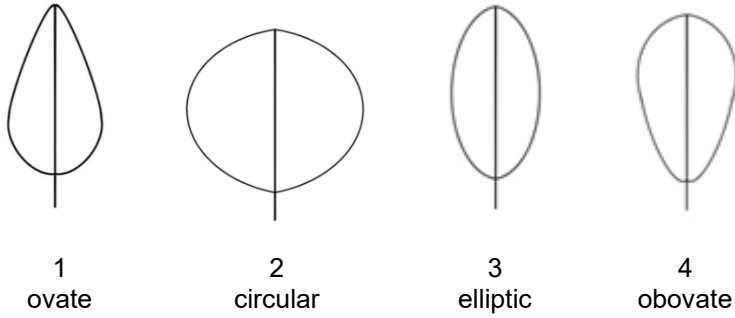
Ad. 10: Leaf blade: width

See Ad. 9.

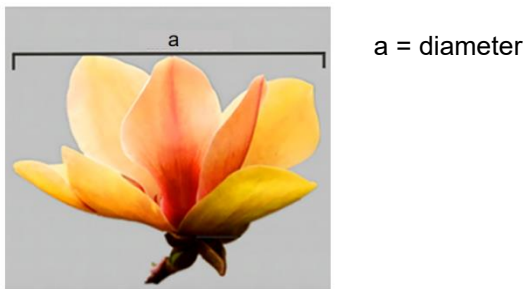
Ad. 11: Leaf blade: ratio length/width

very low: <1.5
low: ≥ 1.5 to <2.0
medium: ≥ 2.0 to <2.5
high: ≥ 2.5 to <3.0
very high: ≥ 3.0

Ad. 12: Leaf blade: shape

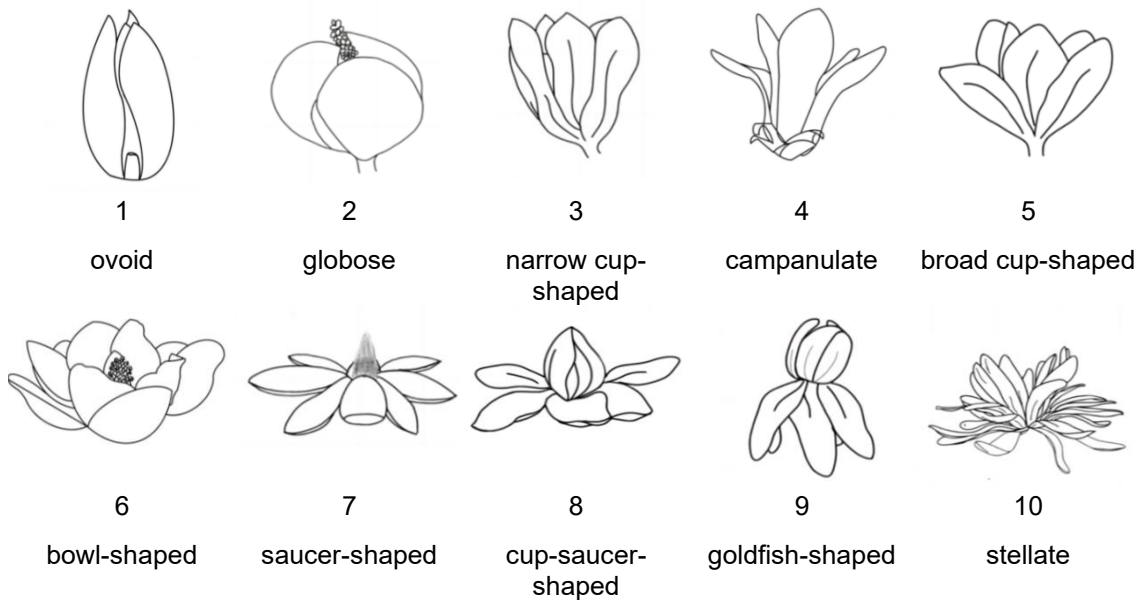












Ad. 16: Flower: diameter



Ad. 17: Flower: form

Observations should be made in lateral view.
A variety with irregular flowers has no consistency of flower type expression and has variation in flower type expression.



Flower shape	Note	Number of tepals	Attitude of first petaloid tepal*	Attitude of second petaloid tepal*	Attitude of third petaloid tepal*	Illustration
ovoid	1	6-12	upwards/incurved	upwards/incurved	none or upwards/incurved	
globose	2	9-12	outwards/incurved	outwards/incurved	outwards/incurved	
narrow cup-shaped	3	6-9	upwards/absent	upwards/absent	none or upwards/absent	
campanulate	4	6-14	upwards/recurved	upwards/recurved or outwards/recurved	none or upwards/absent or upwards/recurved	
broad cup-shaped	5	6-14	outwards/absent	upwards/absent or outwards/absent	none or upwards/absent or outwards/absent	
bowl-shaped	6	9-14	horizontal/incurved	horizontal/incurved	outwards/incurved or horizontal/incurved	
saucer-shaped	7	9-14	horizontal/absent	horizontal/absent	horizontal/absent	
cup-saucer-shaped	8	9-14	horizontal/absent	upwards/absent or upwards/incurved or outwards/absent or horizontal/absent	upwards/absent or upwards/incurved	
goldfish-shaped	9	9-16	downwards/absent or downwards/incurved	upwards/absent or upwards/incurved or downwards/absent	upwards/absent or upwards/incurved	
stellate	10	12-45	horizontal/absent	outwards/absent or horizontal/absent	outwards/absent	
irregular	11	6-12	irregular	irregular	irregular	

*attitude of whole petaloid tepal/curvature of upper part

Ad. 19: Flower: number of tepals

very few: ≤ 7

very few to few: >7 and ≤ 9

few: >9 and ≤ 11

few to medium: >11 and ≤ 13

medium: >13 and ≤ 15

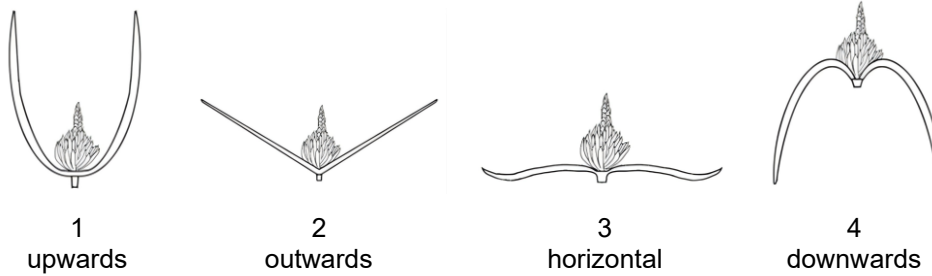
medium to many: >15 and ≤ 20

many: >20 and ≤ 30

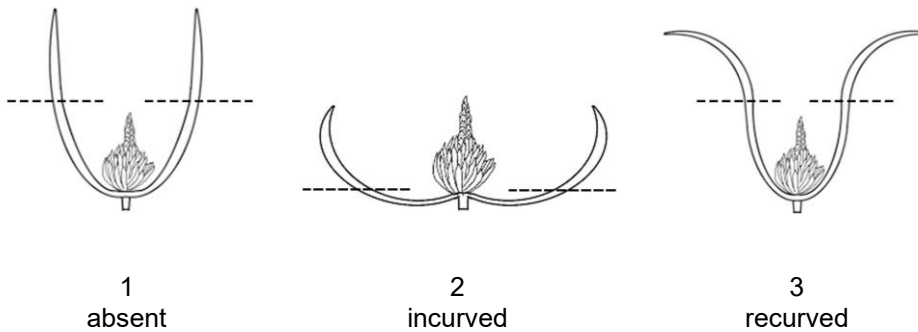
many to very many: >30 and ≤ 40

very many: >40

Ad. 21: First whorl petaloid tepal: attitude of whole petaloid tepal




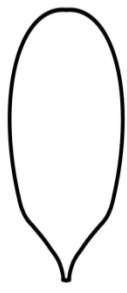



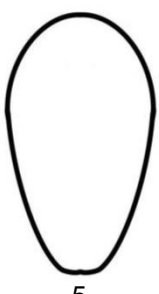
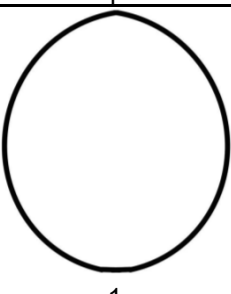


Ad. 22: First whorl petaloid tepal: curvature of upper part



Ad. 24: First whorl petaloid tepal: width

Observations should be made at the broadest part of the petaloid tepal.

Ad. 25: First whorl petaloid tepal: shape

relative width	← broadest part →		
	at middle	above middle	
narrow		 7 ob lanceolate	
medium	 3 oblong	 6 narrow obovate	 9 narrow spatulate
	 2 elliptic	 5 medium obovate	
broad	 1 circular	 4 broad obovate	 8 broad spatulate

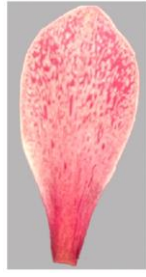
Ad. 27: First whorl petaloid tepal: pattern of main color of outer side



1
solid



2
flush



3
flush and aciculate

Ad. 29: First whorl petaloid tepal: distribution of secondary color of outer side



1
none



2
at base only



3
basal and partial
central



4
basal and
central



5
basal quarter



6
basal quarter and
partial central



7
basal quarter
and central



8
basal half



9
basal half and
central



10
distal half



11
distal quarter



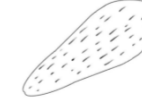
12
at apex only



13
on margin only



14
lower half and
margin



15
throughout

Ad. 30: First whorl petaloid tepal: pattern of secondary color of outer side



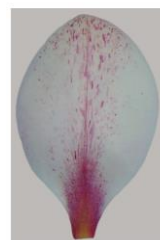
1
none



2
flush only

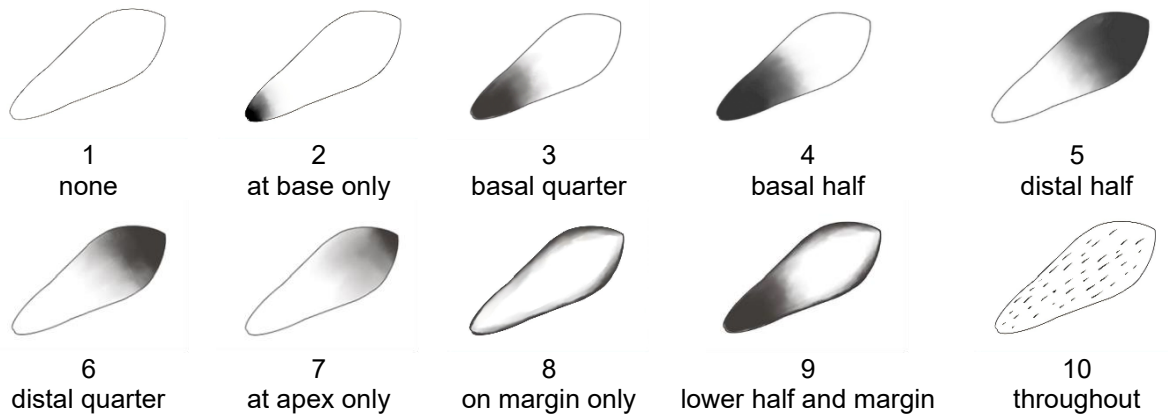


3
flush and stripes



4
flush and aciculate

Ad. 34: First whorl petaloid tepal: distribution of secondary color of inner side



Ad. 35: Second whorl petaloid tepal: attitude of whole petaloid tepal

See Ad. 21.

Ad. 36: Second whorl petaloid tepal: curvature of upper part

See Ad. 22.

Ad. 39: Second whorl petaloid tepal: distribution of secondary color of outer side

See Ad. 29.

Ad. 40: Second whorl petaloid tepal: pattern of secondary color of outer side

See Ad.30.

Ad. 43: Time of beginning of first flowering

Time of beginning of first flowering is reached when the first flower bud blooms on all plants.

Ad. 44: Length of first flowering period

Observation should be made over the full period of flowering, from the opening of the first flower through to the opening of the last flower.

Ad. 45: Flowering: frequency

The frequency is defined by the number of flowering periods within a growing season.
One flowering period is from the beginning to the end of blooming.
See Ad. 44.

9. Literature

Callaway, D. J., 1994: The World of Magnolias. Timber Press, Oregon.

Figlar, R. B., Nootboom, H. P., 2004: Notes on Magnoliaceae IV. Blumea, 49: 87-100.

Gardiner J, 2000: Magnolias: A Gardener' s Guide. Timber Press. Portland.

Lobdell, M. S., 2021: Register of Magnolia cultivars. HortScience, 56: 1614-1675.

Xia, N.H., Liu Y.H., Nootboom H.P., 2008: Magnoliaceae. In: Wu ZY et al, Flora of China Vol.7. Science Press and Missouri Botanical Garden Press, pp. 47-91.

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
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		Application date: (not to be filled in by the applicant)
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TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name

Magnolia L.

1.2 Common name

Magnolia

2. Applicant

Name

Address

Telephone No.

Fax No.

E-mail address

Breeder (if different from
applicant)

3. Proposed denomination and breeder's reference

Proposed denomination (if
available)

Breeder's reference

#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 varieties)

[]

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) Division []
- (c) Budding and grafting (please specify species and age of rootstock): []
- (d) Other (state method) []

4.2.2 Other []
(Please provide details)

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

	Characteristics	Example Varieties	Note
5.1 (1)	Plant: seasonality		
	deciduous	Yellow Bird	1 []
	evergreen	Bracken's Brown Beauty	2 []
5.2 (5)	Flowering shoot: position of flower buds		
	terminal only	Frank's Masterpiece	1 []
	terminal and axillary	Lv Xing	2 []
	axillary only	Purple Queen	3 []
5.3 (9)	Leaf blade: length		
	very short	Tensaw	1 []
	very short to short		2 []
	short	Mag's Pirouette	3 []
	short to medium		4 []
	medium	Burgundy	5 []
	medium to long		6 []
	long	Bracken's Brown Beauty	7 []
	long to very long		8 []
	very long		9 []
5.4 (16)	Flower: diameter		
	very small	Purple Queen	1 []
	very small to small		2 []
	small	Yellow Bird	3 []
	small to medium		4 []
	medium	Betty	5 []
	medium to large		6 []
	large	Frank's Masterpiece	7 []
	large to very large		8 []
	very large	Mossman's Giant	9 []
5.5 (18)	Flower: sepaloid tepal		
	absent	Bracken's Brown Beauty	1 []
	present	Mag's Pirouette	9 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:	
Characteristics	Example Varieties	Note	
5.6 (19)	Flower: number of tepals		
	very few	Purple Queen	1 []
	very few to few	Burgundy	2 []
	few		3 []
	few to medium	Diva	4 []
	medium	Jade Lamp	5 []
	medium to many		6 []
	many	Mag's Pirouette	7 []
	many to very many	Chrysanthemumiflora	8 []
	very many		9 []
5.7 (i) (26)	First whorl petaloid tepal: main color of outer side		
	RHS Colour Chart (indicate reference number)		
5.7 (ii) (26)	First whorl petaloid tepal: main color of outer side		
5.8 (i) (28)	First whorl petaloid tepal: secondary color of outer side		
	RHS Colour Chart (indicate reference number)		
5.8 (ii) (28)	First whorl petaloid tepal: secondary color of outer side		
	white		1 []
	green		2 []
	yellow		3 []
	red pink		4 []
	red		5 []
	purple		6 []

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:
Characteristics	Example Varieties	Note
5.9 (i) (37)	Second whorl petaloid tepal: main color of outer side	
	RHS Colour Chart (indicate reference number)	
5.9 (ii) (37)	Second whorl petaloid tepal: main color of outer side	
	white	1 []
	green	2 []
	yellow	3 []
	red pink	4 []
	red	5 []
	purple	6 []
5.10 (43)	Time of beginning of first flowering	
	very early	Diva 1 []
	early	Burgundy 2 []
	medium	Yellow Bird 3 []
	late	Qingxin 4 []
	very late	Bracken's Brown Beauty 5 []

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>Flower: number of tepals</i>	<i>medium</i>	<i>few</i>

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<p>Comments</p>

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

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

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

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

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

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

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

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

Yes [] No []

(b) Has such authorization been obtained?

Yes [] No []

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

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

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

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

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

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

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

Applicant's name

Signature

Date

[End of document]