



**European Union
Community Plant Variety Office**

PROTOCOL FOR DISTINCTNESS, UNIFORMITY AND STABILITY TESTS

Dendrobium Sw.

DENDROBIUM

UPOV Species Code: DNDRB

Adopted on 14th November 2007

I - SUBJECT OF THE PROTOCOL

The protocol describes the technical procedures to be followed in order to meet the requirement of Council Regulation (EC) No. 2100/94 on Community Plant Variety Rights. The technical procedures have been agreed by the Administrative Council and are based on general UPOV Document TG/1/3 and UPOV Guideline TG/209/1 Corr. dated 9th April 2003 and 5th April 2006 for the conduct of tests for Distinctness, Uniformity and Stability and conclusions of the ornamental experts' meeting of 19th and 20th September 2007. This protocol applies to all varieties of sect. *Bractyanthe*, sect. *Callista*, sect. *Calyplochilus*, sect. *Ceratobium*, sect. *Dendrocoryne*, sect. *Eleutheroglossum*, sect. *Eugenanthe*, sect. *Latourea*, sect. *Oxygenianthe*, sect. *Oxyglossum*, sect. *Pedilonum*, sect. *Phalaenanthe*, sect. *Stachyobium*, of ***Dendrobium*** Sw. of the family *Orchidaceae* and their hybrids.

II - SUBMISSION OF PLANT MATERIAL

1. The Community Plant Variety Office (CPVO) is responsible for informing the applicant of

- the closing date for the receipt of plant material;
- the minimum amount and quality of plant material required;
- the Examination Office to which material is to be sent.

The applicant is responsible for ensuring compliance with any customs and plant health requirements.

2. Final dates for receipt of documentation and material by the Examination Office

The final dates for receipt of requests, technical questionnaires and the final date or submission period for plant material will be decided by the CPVO and each Examination Office chosen.

The Examination Office is responsible for immediately acknowledging the receipt of requests for testing, and technical questionnaires. If no or unsatisfactory plant material is submitted the CPVO should be informed as soon as possible.

3. Plant material requirements

Information with respect to closing dates and submission requirements of plant material for the technical examination of varieties can be found on the CPVO website (www.cpvo.europa.eu) and in the special Issue S2 of the Official Gazette of the Office published yearly in the month of September.

Quality :..... The plant material supplied should be visibly healthy, not lacking in vigour or affected by any important pest or disease, especially virus, as laid down in Council Directive 2000/29/EC and its amendments, or organisms impairing quality as indicated in Council Directive 98/56/EEC and Commission Directive 93/49/EEC and their amendments.

The plant material must not have undergone any treatment unless the CPVO and the examination office allow or request such treatment. If it has been treated, full details of the treatment must be given.

Labelling of sample: - Species
- File number of the application allocated by the CPVO
- Breeder's reference
- Examination reference (if known)
- Name of applicant
- The phrase "On request of the CPVO"

III - CONDUCT OF TESTS

1. Variety collection

A variety collection will be maintained for the purpose of establishing distinctness of the candidate varieties in test. A variety collection may contain both living material and descriptive information. A variety will be included in a reference collection only if plant material is available to make a technical examination.

Pursuant to Article 7 of Council Regulation (EC) No. 2100/94, the basis for a collection should be the following:

- varieties listed or protected at the EU level or at least in one of the EEA Member States;
- varieties protected in other UPOV Member States;
- any other variety in common knowledge.

It is the responsibility of Examination Office to keep the variety collection up to date.

2. Material to be examined

Candidate varieties will be directly compared with other candidates for Community plant variety rights tested at the same Examination Office, and with appropriate varieties in the variety collection. When necessary an Examination Office may also include other candidates and varieties.

3. Characteristics to be used

The characteristics to be used in DUS tests and preparation of descriptions shall be those referred to in Annex 1. All the characteristics shall be used, providing that observation of a characteristic is not rendered impossible by the expression of any other characteristic, or the expression of a characteristic is prevented by the environmental conditions under which the test is conducted. In the latter case, the CPVO should be informed. In addition the existence of some other regulation e.g. plant health, may make the observation of the characteristic impossible.

The Administrative Council empowers the President, in accordance with Article 23 of Commission Regulation (EC) No. 1239/95, to insert additional characteristics and their expressions in respect of a variety.

4. Grouping of varieties

The varieties and candidates to be compared will be divided into groups to facilitate the assessment of distinctness. Characteristics which are suitable for grouping purposes are those which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states of expression are fairly evenly distributed throughout the collection. In the case of continuous grouping characteristics overlapping states of expression between adjacent groups is required to reduce the risks of incorrect allocation of candidates to groups. The characters used for grouping are the following ones:

- (a) Plant: size (characteristic 1)
- (b) Inflorescence: position of flowers (characteristic 17)
- (c) Flower: length in front view (characteristic 26)
- (d) Flower: width in front view (characteristic 27)
- (e) Lip: presence of lateral lobe (characteristic 70)
- (f) Lip: eye (characteristic 76)
- (g) Lip: colour pattern (except middle part, eye and throat) (characteristic 79)
- (h) Lip: main colour (characteristic 81) with the following groups:
 - Gr. 1: green
 - Gr. 2: white
 - Gr. 3: yellow
 - Gr. 4: pink
 - Gr. 5: red
 - Gr. 6: purple
 - Gr. 7: reddish brown

5. Trial designs and growing conditions

The minimum duration of tests will normally be one growing cycle if the results on distinctness and uniformity are conclusive. Tests will be carried out under conditions ensuring normal growth. The size of the plots will be such that plants or parts of plants

may be removed for measuring and counting without prejudice to the observations which must be made up to the end of the growing period.

The test design is as follows:

As a minimum, each test should include a total of 10 plants. Separate plots for observation and for measuring can only be used if they have been subject to similar environmental conditions.

All observations on single plants determined by measurement or counting should be made on 10 plants or parts taken from each of 10 plants and any other observations on all plants in the test.

All observations should be made on plants during flowering.

The test should normally be conducted at one place.

The test should be carried out in the greenhouse under conditions ensuring normal growth.

6. Special tests

In accordance with Article 83(3) of Council Regulation No. 2100/94 an applicant may claim either in the Technical Questionnaire or during the examination that a candidate variety has a characteristic which would be helpful in establishing distinctness. If such a claim is made and is supported by reliable technical data, a special test may be undertaken providing that a technically acceptable test procedure can be devised.

Special tests will be undertaken, with the agreement of the President of CPVO, where distinctness is unlikely to be shown using the characters listed in the protocol.

7. Standards for decisions

a) **Distinctness**

A candidate variety will be considered to be distinct if it meets the requirements of Article 7 of Council Regulation (EC) No. 2100/94.

b) **Uniformity**

For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% with an acceptance probability of at least 95% should be applied.

For a sample size between 6 and 35 plants for vegetatively propagated varieties, only 1 off-type is allowed.

For the assessment of uniformity of seed propagated open pollinated and hybrid varieties, relative uniformity standards should be applied.

c) Stability

A candidate will be considered to be sufficiently stable when there is no evidence to indicate that it lacks uniformity.

IV - REPORTING OF RESULTS

After each growing cycle the results will be summarised and reported to the CPVO in the form of a UPOV model interim report in which any problems will be indicated under the headings distinctness, uniformity and stability. Candidates may meet the DUS standards after one growing cycle but in some cases two or more growing cycles may be required. When tests are completed the results will be sent by the Examination Office to the CPVO in the form of a UPOV model final report.

If it is considered that the candidate complies with the DUS standards, the final report will be accompanied by a variety description in the format recommended by UPOV. If not the reasons for failure and a summary of the test results will be included with the final report.

The CPVO must receive interim reports and final reports from the Examination Office by the date agreed between the CPVO and the examination office.

Interim reports and final examination reports shall be signed by the responsible member of the staff of the Examination Office and shall expressly acknowledge the exclusive rights of disposal of CPVO.

V - LIAISON WITH THE APPLICANT

If problems arise during the course of the test the CPVO should be informed immediately so that the information can be passed on to the applicant. Subject to prior agreement, the applicant may be directly informed at the same time as the CPVO particularly if a visit to the trial is advisable.

The interim report and final report shall be sent by the Examination Office to the CPVO.

ANNEXES TO FOLLOW

ANNEX I	<u>PAGE</u>
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<u>Legend:</u>	
QL: Qualitative characteristic	
QN: Quantitative characteristic	
PQ: Pseudo-qualitative characteristic	
(a-e) See Explanations on the Table of Characteristics	
(+) : See Explanations on the Table of Characteristics	
(*) : Important characteristic to be included in the UPOV variety description	
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ANNEX II

Technical Questionnaire

ANNEX I

TABLE OF CHARACTERISTICS

CPVO N°	UPOV N°	Characteristics	Examples	Note	
1.	1. (* QN	Plant: size	very small	Enobi Komachi 'Shirayukihime'	1
			small	<i>Dendrobium kingianum</i>	3
			medium	Wave King 'Akebono'	5
			large	Lucky Girl 'Emiko'	7
			very large		9
2.	2. (* QN	(a) Pseudobulb: attitude	erect	'Formidable'	1
			semi-erect		3
			horizontal		5
			semi-drooping		7
			drooping		9
3.	3. (* QN	(a) Pseudobulb: length	very short	Enobi Komachi 'Shirayukihime'	1
			short	<i>Dendrobium kingianum</i>	3
			medium	Wave King 'Akebono'	5
			long	Snow Cap 'Love Song'	7
			very long		9

CPVO N°	UPOV N°	Characteristics	Examples	Note	
4.	4. (* QN	(a) Pseudobulb: thickness	very thin	1	
			thin	Enobi Komachi 'Shirayukihime'	3
			medium	Enobi Parade 'Milky Way'	5
			thick		7
			very thick		9
5.	5. (* PQ	(a) Pseudobulb: shape in longitudinal section	linear	'Formidable'	1
			lanceolate		2
			ovate		3
6.	6. PQ	(a) Pseudobulb: shape in cross section	elliptic		1
			circular	'Formidable'	2
			angular	<i>Dendrobium densiflorum</i>	3
7.	8. (* QN	(b) Leaf: length	short	Stardust 'Chiyomi'	3
			medium	Wave King 'Akebono'	5
			long		7
8.	9. (* QN	(b) Leaf: width	narrow	Stardust 'Chiyomi'	3
			medium	Wave King 'Akebono'	5
			broad	Snow Cap 'Love Song'	7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
9.	10. (* (+ PQ	(b) Leaf: shape	narrow elliptic	1	
			elliptic	2	
			narrow ovate	3	
			narrow obovate	4	
			spatulate	5	
10.	11. QN	(b) Leaf: main green colour	light	3	
			medium	Enobi Komachi 'Shirayukihime'	5
			dark	Enobi Parade 'Milky Way'	7
11.	12. QL	(b) Leaf: presence of variegation	absent	Enobi Komachi 'Shirayukihime'	1
			present		9
12.	13. (+ QL	(b) Leaf: type of variegation	brindled		1
			spotted		2
			striped		3
			centered		4
			edged		5
13.	14. QL	(b) Leaf: colour of variegation	white		1
			yellow		2
			yellow green		3
			white and yellow		4
			white and yellow green		5
			yellow and yellow green		6

CPVO N°	UPOV N°	Characteristics	Examples	Note	
14.	15. QL	(b) Leaf: pubescence	absent	1	
			present	'Formidable'	9
15.	16. QL	(b) Leaf: colour of pubescence	white	1	
			black	'Formidable'	2
16.	17. (* QL	Inflorescence: position of adherence to pseudobulb	along whole length	1	
			top part only	<i>Dendrobium kingianum</i>	2
17.	18. (* QL	Inflorescence: position of flowers	along peduncle	Snow Cap 'Love Song'	1
			apex only	Pink Beauty 'Queen'	2
18.	19. (* QN	Inflorescence: number of flowers	few	Enobi Komachi 'Shirayukihime'	3
			medium	Snow Cap 'Love Song'	5
			many		7
19.	20. (* (+) QN	Peduncle: length	short	Lucky Girl 'Emiko'	3
			medium	Enobi Parade 'Milky Way'	5
			long	Queen Southeast 'Crystal Queen'	7
20.	21. (* QN	Peduncle: thickness	thin		3
			medium	Lucky Girl 'Emiko'	5
			thick		7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
21.	22. (* QN	Peduncle: attitude	erect	Enobi Komachi 'Shirayukihime'	1
			semi-erect	Snow Cap 'Love Song'	2
			horizontal		3
			recurving		4
22.	23. (* (+ QN	Pedicellate-ovary: length	short	Wave King 'Akebono'	3
			medium	Snow Cap 'Love Song'	5
			long		7
23.	24. (* QN	Pedicellate-ovary: thickness	thin	Wave King 'Akebono'	3
			medium		5
			thick		7
24.	25. (* PQ	(c) Flower: general appearance of petals and sepals	all incurving		1
			some incurving, some spreading	Stardust 'Chiyomi'	2
			all spreading		3
			some spreading, some reflexing	Enobi Komachi 'Shirayukihime'	4
			all reflexing		5
			some incurving, some reflexing		6
25.	26. QN	(d) Flower: length of mentum	short	<i>Dendrobium kingianum</i>	3
			medium	'Formidable'	5
			long		7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
26.	27. (* (+ QN	(d) Flower: length in front view	short	Enobi Komachi 'Shirayukihime'	3
			medium	Lucky Girl 'Emiko'	5
			long		7
27.	28. (* (+ QN	(d) Flower: width in front view	narrow	Enobi Komachi 'Shirayukihime'	3
			medium	Lucky Girl 'Emiko'	5
			broad		7
28.	29. QL	(c) Flower: fragrance	absent		1
			present	Snow Cap 'Love Song'	9
29.	30. (* QN	(c) Dorsal sepal: curvature of longitudinal axis	strongly incurving		1
			moderately incurving		3
			straight	Snow Cap 'Love Song'	5
			moderately recurving	Enobi Komachi 'Shirayukihime'	7
			strongly recurving		9
30.	31. (* QN	(d) Dorsal sepal: length	short	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			long		7
31.	32. (* QN	(d) Dorsal sepal: width	narrow	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			broad		7

CPVO N°	UPOV N°	Characteristics	Examples	Note	
32.	33. (* (+) PQ	(d) Dorsal sepal: shape	narrow elliptic	Stardust 'Chiyomi'	1
			elliptic	Lucky Girl 'Emiko'	2
			ovate		3
			obovate		4
			transverse elliptic		5
			spatulate		6
33.	34. (* (+) QN	(c) Dorsal sepal: shape in cross section	strongly concave		1
			moderately concave		3
			flat	Snow Cap 'Love Song'	5
			moderately convex		7
			strongly convex	Pink Beauty 'Queen'	9
34.	35. (* QN	(c) Dorsal sepal: twisting	absent or very weak		1
			weak	Stardust 'Chiyomi'	3
			medium		5
			strong		7
			very strong		9
35.	36. (* QN	(c) Dorsal sepal: undulation of margin	absent or very weak		1
			weak		3
			medium	Pink Beauty 'Queen'	5
			strong		7
			very strong		9

CPVO N°	UPOV N°	Characteristics	Examples	Note	
36.	37. (* QN	(c) Lateral sepal: curvature of longitudinal axis	strongly incurving	1	
			moderately incurving	3	
			straight	Snow Cap 'Love Song'	5
			moderately recurving	Enobi Komachi 'Shirayukihime'	7
			strongly recurving	9	
37.	38. (* QN	(d) Lateral sepal: length	short	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			long	7	
38.	39. (* QN	(d) Lateral sepal: width	narrow	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			broad	7	
39.	40. (* (+) PQ	(c) Lateral sepal: shape	narrow elliptic	1	
			elliptic	Enobi Komachi 'Shirayukihime'	2
			ovate	3	
			obovate	4	
			transverse elliptic	5	
			spatulate	6	

CPVO N°	UPOV N°	Characteristics	Examples	Note	
40.	41. (* (+ QN	(c) Lateral sepal: shape in cross section	strongly concave		1
			moderately concave	Stardust 'Chiyomi'	3
			straight	Enobi Parade 'Milky Way'	5
			moderately convex		7
			strongly convex		9
41.	42. (* QN	(c) Lateral sepal: twisting	absent or very weak		1
			weak	Stardust 'Chiyomi'	3
			medium		5
			strong		7
			very strong		9
42.	43. (* QN	(c) Lateral sepal: undulation of margin	absent or very weak		1
			weak	Wave King 'Akebono'	3
			medium	Pink Beauty 'Queen'	5
			strong		7
			very strong		9
43.	44. (* QL	(c) (e) Sepal: number of colours	one		1
			two	Snow Cap 'Love Song'	2
			three		3
			more than three		4

CPVO N°	UPOV N°		Characteristics	Examples	Note	
44.	45. (* QL	(c) (e)	Sepal: colour pattern	self-coloured	Stardust 'Chiyomi'	1
				shaded	Snow Cap 'Love Song'	2
				edged	Holy Night 'Yumeji'	3
				striped		4
				netted		5
				spotted		6
				shaded and striped		7
				shaded and netted		8
				shaded and spotted		9
45.	46. PQ	(c) (e)	Sepal: main colour	RHS Colour Chart (indicate reference number)		
46.	47. QN	(c) (e)	Varieties with shaded sepals only: Sepal: extent of shading	small		3
				medium	Snow Cap 'Love Song'	5
				large		7
47.	48. PQ	(c) (e)	Varieties with shaded sepals only: Sepal: colour of shading	RHS Colour Chart (indicate reference number)		
48.	49. PQ	(c) (e)	Varieties with edged sepals only: Sepal: colour of edging	RHS Colour Chart (indicate reference number)		
49.	50. PQ	(c) (e)	Varieties with striped sepals only: Sepal: colour of stripes	RHS Colour Chart (indicate reference number)		
50.	51. PQ	(c) (e)	Varieties with netted sepals only: Sepal: colour of netting	RHS Colour Chart (indicate reference number)		
51.	52. PQ	(c) (e)	Varieties with spotted sepals only: Sepal: colour of spots	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°	Characteristics	Examples	Note	
52.	53. (* QN	(c) Petal: curvature of longitudinal axis	strongly incurving	1	
			moderately incurving	3	
			straight	Lucky Girl 'Emiko'	5
			moderately recurving	Enobi Komachi 'Shirayukihime'	7
			strongly recurving	9	
53.	54. (* QN	(d) Petal: length	short	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			long	7	
54.	55. (* QN	(d) Petal: width	narrow	Enobi Parade 'Milky Way'	3
			medium	Wave King 'Akebono'	5
			broad	7	
55.	56. (* (+) PQ	(c) Petal: shape	narrow elliptic	1	
			elliptic	Stardust 'Chiyomi'	2
			ovate	3	
			obovate	4	
			transverse elliptic	5	
			spatulate	6	

CPVO N°	UPOV N°	Characteristics	Examples	Note	
56.	57. (* (+ QN	(c) Petal: shape in cross section	strongly concave	1	
			moderately concave	3	
			straight	Enobi Parade 'Milky Way'	5
			moderately convex	7	
			strongly convex	9	
57.	58. (* QN	(c) Petal: twisting	absent or very weak	1	
			weak	Pink Beauty 'Queen'	3
			medium	5	
			strong	7	
			very strong	9	
58.	59. (* QN	(c) Petal: undulation of margin	absent or very weak	1	
			weak	Stardust 'Chiyomi'	3
			medium	Wave King 'Akebono'	5
			strong	Pink Beauty 'Queen'	7
			very strong	9	
59.	60. (* QL	(c) Petal: number of colours (e)	one	1	
			two	Holy Night 'Yumeji'	2
			three	3	
			more than three	4	

CPVO N°	UPOV N°		Characteristics	Examples	Note	
60.	61. (* QL	(c) (e)	Petal: colour pattern	self-coloured	Holy Night 'Yumeji'	1
				shaded		2
				edged		3
				striped		4
				netted		5
				spotted		6
				shaded and striped		7
				shaded and netted		8
				shaded and spotted		9
61.	62. PQ	(c) (e)	Petal: main colour	RHS Colour Chart (indicate reference number)		
62.	63. QN	(c) (e)	<u>Varieties with shaded petals</u> <u>only: Petal: extent of shading</u>	small	3	
				medium	5	
				large	7	
63.	64. PQ	(c) (e)	<u>Varieties with shaded petals</u> <u>only: Petal: colour of shading</u>	RHS Colour Chart (indicate reference number)		
64.	65. PQ	(c) (e)	<u>Varieties with edged petals</u> <u>only: Petal: colour of edging</u>	RHS Colour Chart (indicate reference number)		
65.	66. PQ	(c) (e)	<u>Varieties with striped petals</u> <u>only: Petal: colour of stripes</u>	RHS Colour Chart (indicate reference number)		
66.	67. PQ	(c) (e)	<u>Varieties with netted petals</u> <u>only: Petal: colour of netting</u>	RHS Colour Chart (indicate reference number)		
67.	68. PQ	(c) (e)	<u>Varieties with spotted petals</u> <u>only: Petal: colour of spots</u>	RHS Colour Chart (indicate reference number)		

CPVO N°	UPOV N°		Characteristics	Examples	Note	
68.	69. (* QN	(c) (d)	Lip: length	short	Enobi Parade 'Milky Way'	3
				medium	Wave King 'Akebono'	5
				long		7
69.	70. (* QN	(c) (d)	Lip: width	narrow	Enobi Parade 'Milky Way'	3
				medium	Himezakura 'Fujikko'	5
				broad	Wave King 'Akebono'	7
70.	71. (* QL	(c)	Lip: presence of lateral lobe	absent	Stardust 'Chiyomi'	1
				present	<i>Dendrobium bellatulum</i>	9
71.	72. (* (+) PQ	(c)	<u>Varieties without lateral lobes</u> <u>only: Lip: shape</u>	elliptic	Stardust 'Chiyomi'	1
				circular	Pink Beauty 'Queen'	2
				transverse elliptic		3
72.	73. (* (+) QL	(c)	<u>Varieties without lateral lobes</u> <u>only: Lip: overlapping of</u> <u>basal part</u>	absent	Stardust 'Chiyomi'	1
				present		9
73.	74. (* (+) PQ	(c)	<u>Varieties with lateral lobes</u> <u>only: Lip: shape of lateral lobe</u>	triangular		1
				ovate		2
				narrow trapezoid		3
				broad trapezoid		4

CPVO N°	UPOV N°	Characteristics	Examples	Note	
74.	75. (* (+ PQ	(c) <u>Varieties with lateral lobes</u> <u>only: Lip: shape of apical lobe</u>	reniform	1	
			rhombic	2	
			transverse elliptic	3	
			elliptic	4	
75.	76. (* (+ PQ	(c) Lip: type of curving	type I	1	
			type II	2	
			type III	3	
			type IV	4	
			type V	5	
			type VI	6	
76.	77. (* (+ QL	(c) Lip: eye	absent	Enobi Komachi 'Shirayukihime'	1
			present	Fantasia 'King'	9
77.	78. (* (+ PQ	(c) Lip: shape of eye	type I	1	
			type II	2	
			type III	3	
			type IV	4	
78.	79. (* QL	(c) Lip: number of colours (e) (except eye and throat)	one	1	
			two	Snow Cap 'Love Song'	2
			three	3	
			four	4	

CPVO N°	UPOV N°	Characteristics	Examples	Note
			five	5
			more than five	6
79.	80. (* QL	(c) Lip: colour pattern (except (e) middle part, eye and throat)	self-coloured	1
			shaded	Snow Cap 'Love Song' 2
			edged	Pink Beauty 'Queen' 3
			striped	4
			netted	5
			spotted	6
			shaded and striped	7
			shaded and netted	8
			shaded and spotted	9
80.	81. QN	(c) <u>Varieties with shaded lips</u> (e) <u>only: Lip: extent of shading</u>	small	3
			medium	5
			large	Snow Cap 'Love Song' 7
81.	82. PQ	(c) Lip: main colour (e)	RHS Colour Chart (indicate reference number)	
82.	83. (+ PQ	(c) Lip: colour of middle part (if (e) different from 81)	RHS Colour Chart (indicate reference number)	
83.	84. PQ	(c) <u>Varieties with shaded lips</u> (e) <u>only: Lip : colour of shading</u>	RHS Colour Chart (indicate reference number)	
84.	85. PQ	(c) <u>Varieties with edged lips only:</u> (e) Lip: colour of edging	RHS Colour Chart (indicate reference number)	
85.	86. PQ	(c) <u>Varieties with striped lips</u> (e) <u>only: Lip: colour of stripes</u>	RHS Colour Chart (indicate reference number)	

CPVO N°	UPOV N°	Characteristics	Examples	Note
86.	87. PQ	(c) <u>Varieties with netted lips only:</u> (e) Lip: colour of netting	RHS Colour Chart (indicate reference number)	
87.	88. PQ	(c) <u>Varieties with spotted lips</u> (e) <u>only:</u> Lip: colour of spots	RHS Colour Chart (indicate reference number)	
88.	89. PQ	(c) <u>Varieties with eye only:</u> Lip: (e) colour of eye	RHS Colour Chart (indicate reference number)	
89.	90. PQ	(c) <u>Varieties with different</u> (e) <u>coloured throat only:</u> Lip: colour of throat	RHS Colour Chart (indicate reference number)	
90.	91. (* QN	(c) Lip: twisting	absent or weak Enobi Komachi 'Shirayukihime'	1
			intermediate	2
			strong	3
91.	92. (* QN	(c) Lip: undulation of margin	absent or weak Enobi Parade 'Milky Way'	1
			intermediate Stardust 'Chiyomi'	2
			strong Pink Beauty 'Queen'	3
92.	93. (* QN	(c) Lip: fringing of margin	absent or very fine Enobi Komachi 'Shirayukihime'	1
			fine	3
			medium	5
			coarse	7
93.	94. (* QL	(c) Lip: callus	absent	1
			present <i>Dendrobium bellatulum</i>	9

CPVO N°	UPOV N°	Characteristics	Examples	Note
94.	95. (* QN	(c) Lip: pubescence	absent or weak	1
			intermediate	2
			strong	<i>Dendrobium 'Parishii'</i>
95.	96. (* QN	(c) Column: length	short	3
			medium	5
			long	7
96.	97. (+ PQ	(c) Column: colour of anther cap	RHS Colour Chart (indicate reference number)	
97.	98. (* PQ	(c) Time of flowering	very late	1
			early	2
			spring	3
			summer	4
			medium	5

EXPLANATIONS ON THE TABLE OF CHARACTERISTICS

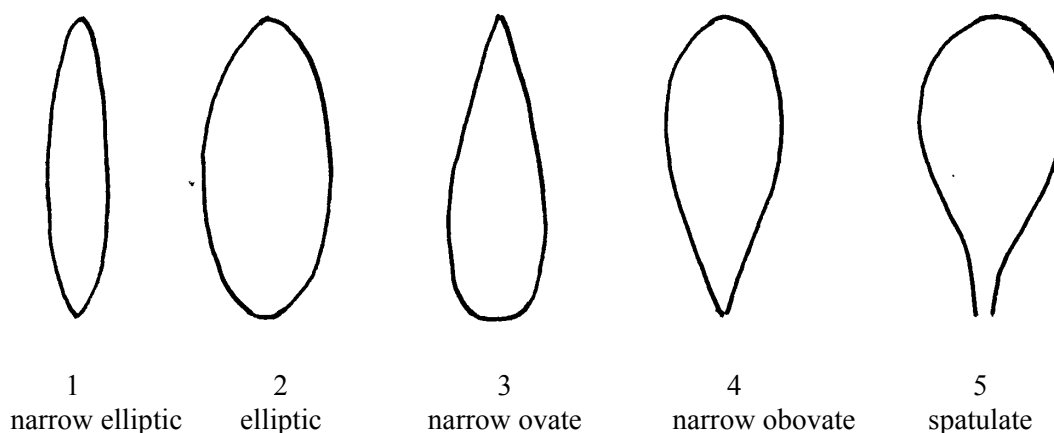
Explanations covering several characteristics

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

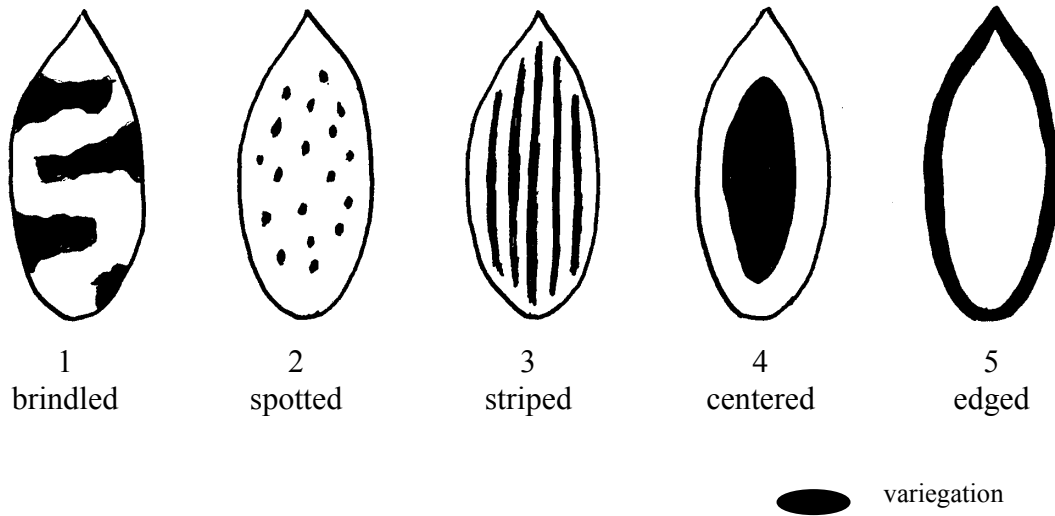
- (a) Observations on the pseudobulb should be made on the flowering pseudobulb.
- (b) Observations on the leaf should be made on the longest leaf of a flowering pseudobulb.
- (c) To be assessed on the most recently opened flower on the inflorescence, before the colour starts to fade, at the time when 50% of the flowers on the inflorescence have opened.
- (d) Observations on the length and width of the flower should be made on the unextended organ. Observations on the length and width on parts of the flower should be made on the extended organ
- (e) Observations on the colour of the sepal, the petal and the lip should be made on the inner side.

Explanations for individual characteristics

Ad. 9 (UPOV 10): Leaf: shape

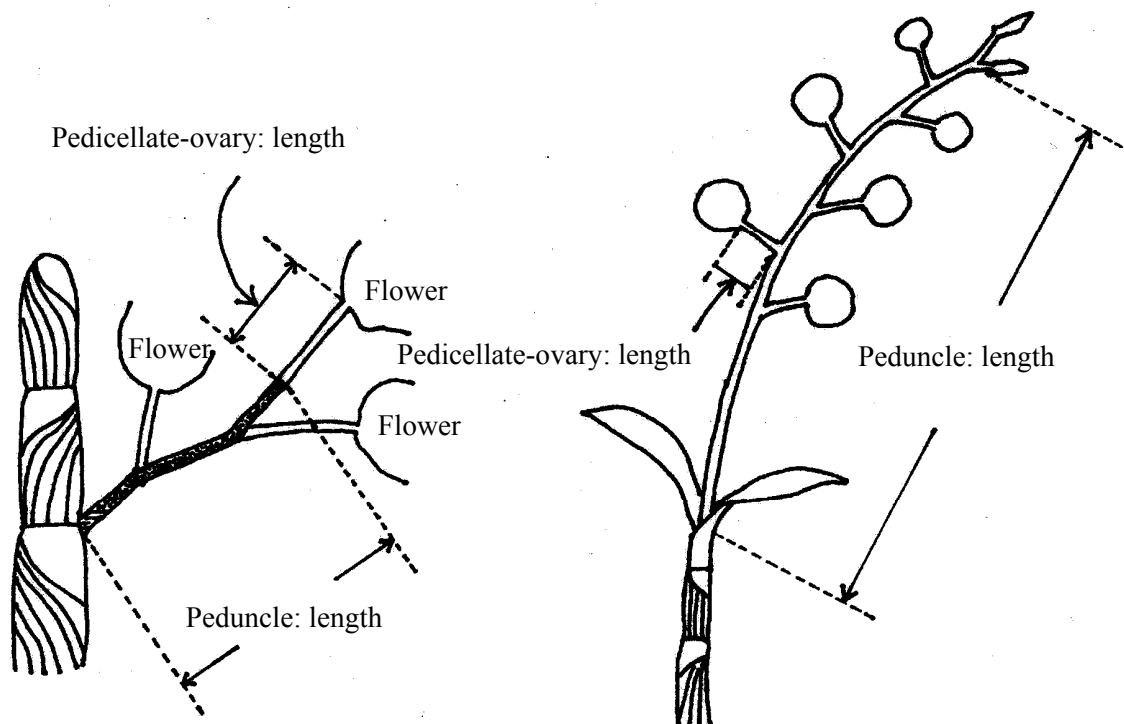


Ad. 12 (UPOV 13): Leaf: type of variegation

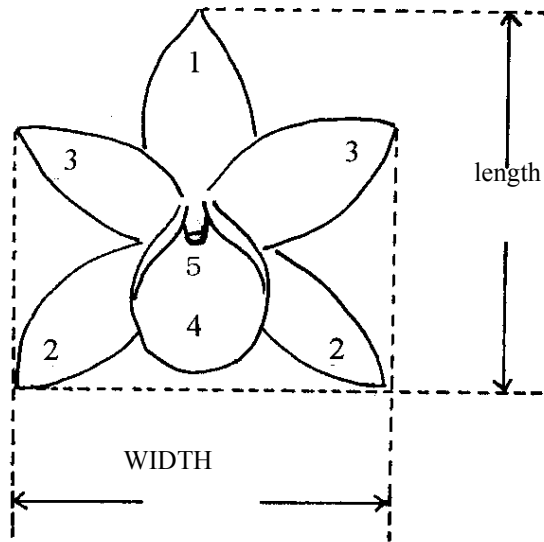


Ad. 19 (UPOV 20): Peduncle: length

Ad. 22 (UPOV 23): Pedicellate-ovary: length

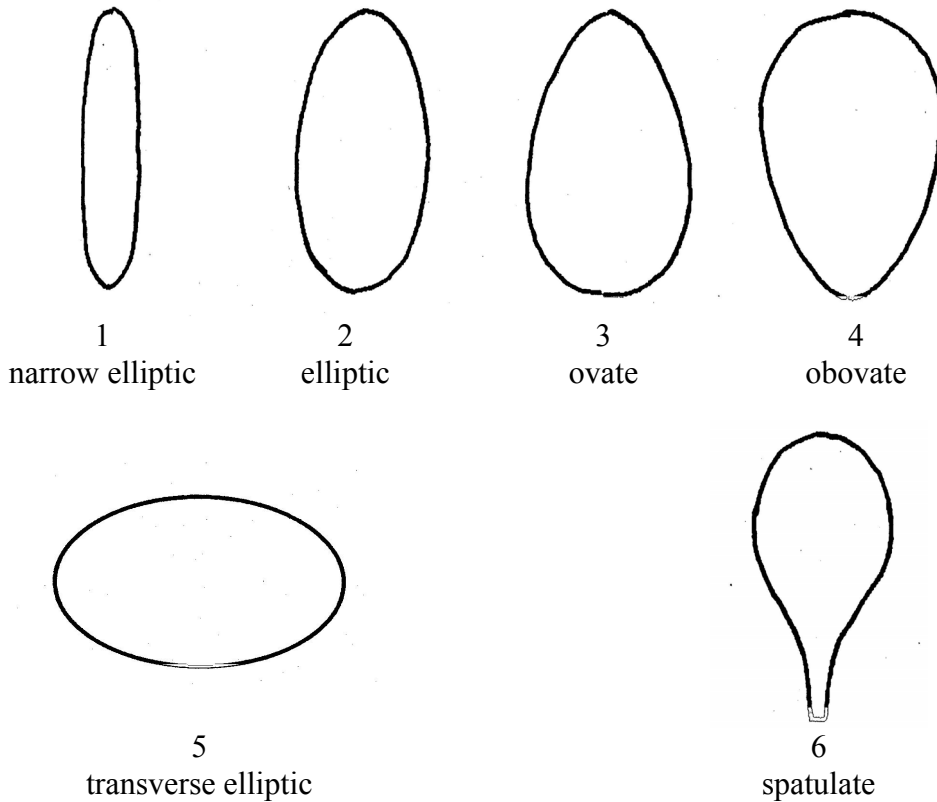


Ad. 26 (UPOV 27): Flower: length in front view
Ad. 27 (UPOV 28): Flower: width in front view



- 1: Dorsal sepal
- 2: Lateral sepal
- 3: Petal
- 4: Lip
- 5: Column

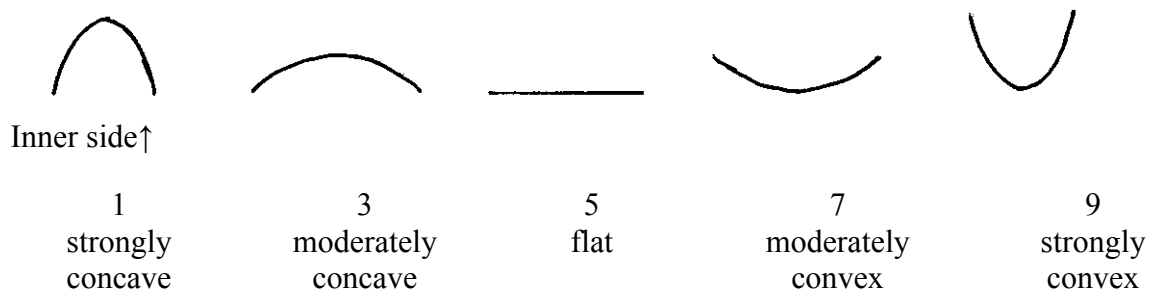
Ad. 32 (UPOV 33): Dorsal sepal: shape
Ad. 39 (UPOV 40): Lateral sepal: shape
Ad. 55 (UPOV 56): Petal: shape



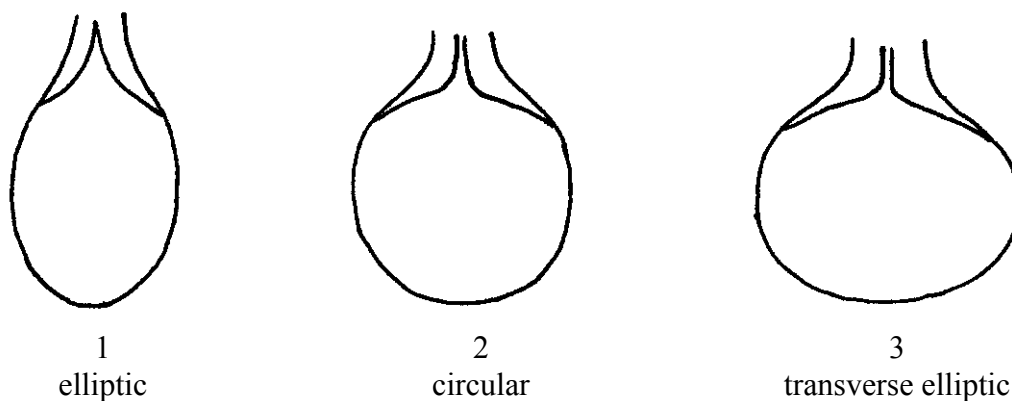
Ad. 33 (UPOV 34): Dorsal sepal: shape in cross section

Ad. 40 (UPOV 41): Lateral sepal: shape in cross section

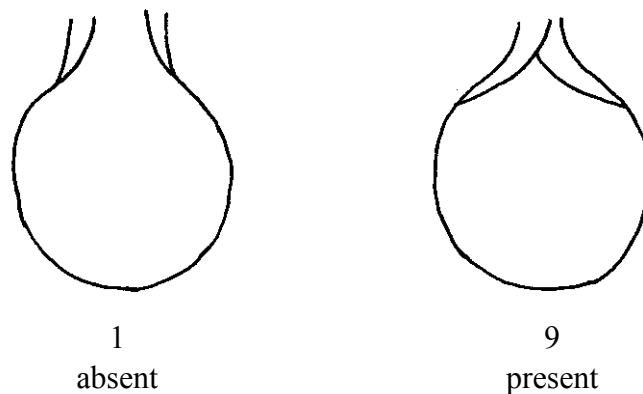
Ad. 56 (UPOV 57): Petal: shape in cross section



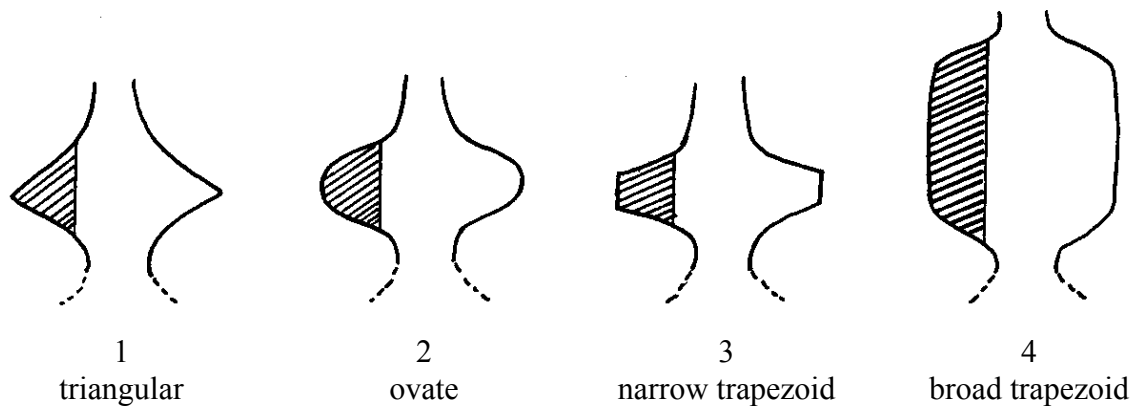
Ad. 71 (UPOV 72): Varieties without lateral lobes only: Lip: shape



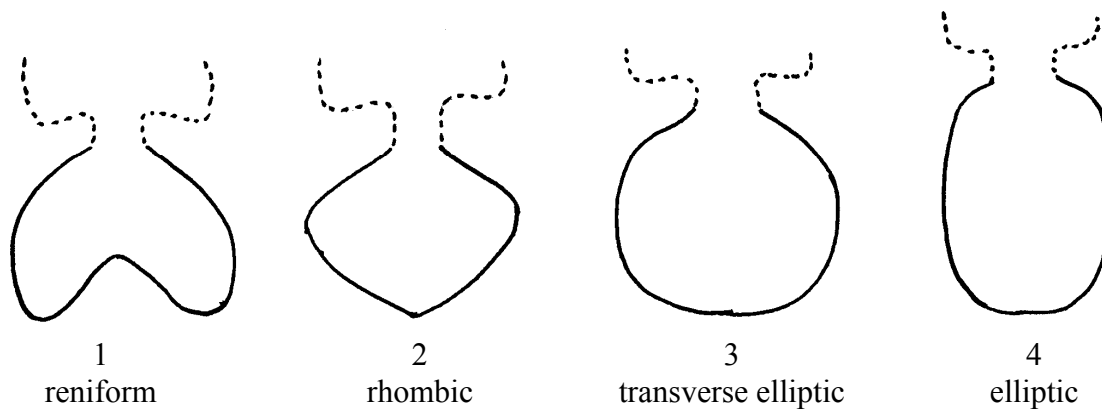
Ad. 72 (UPOV 73): Varieties without lateral lobes only: Lip: overlapping of basal part



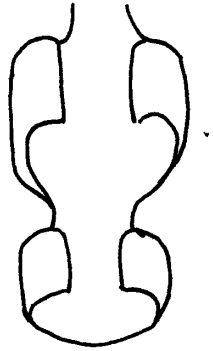
Ad. 73 (UPOV 74): Varieties with lateral lobes only: Lip: shape of lateral lobe



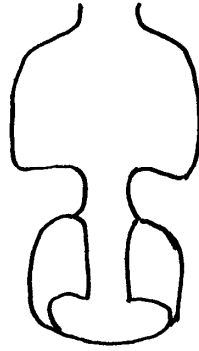
Ad. 74 (UPOV 75): Varieties with lateral lobes only: Lip: shape of apical lobe



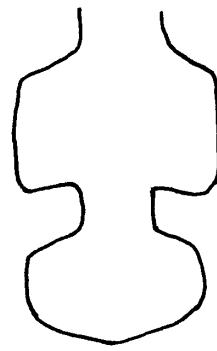
Ad. 75 (UPOV 76): Lip: type of curving



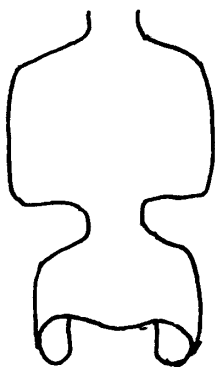
1
type I



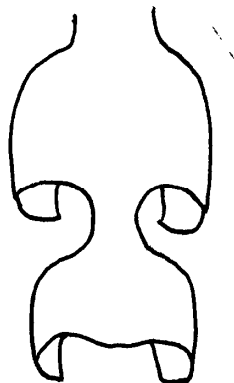
2
type II



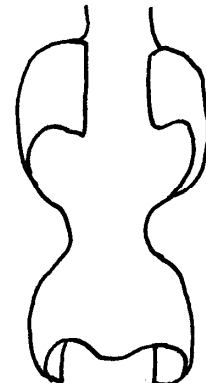
3
type III



4
type IV



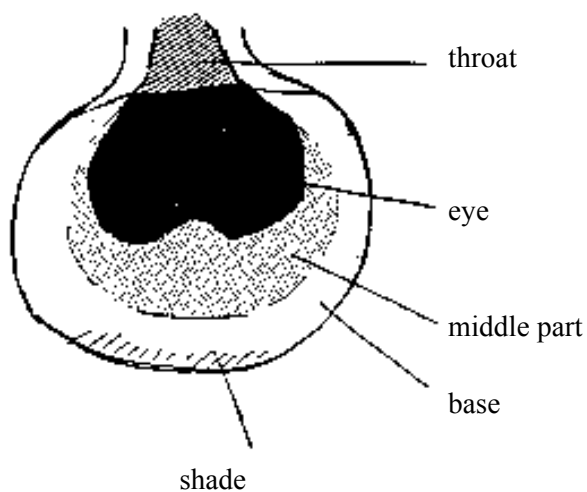
5
type V



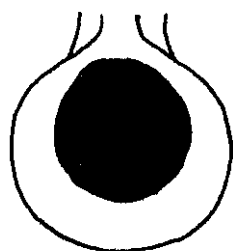
6
type VI

Ad. 76 (UPOV 77): Lip: eye

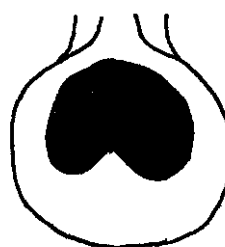
Ad. 82 (UPOV 83): Lip: colour of middle part



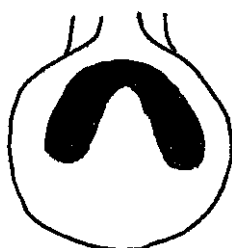
Ad. 77 (UPOV 78): Lip: shape of eye



1
type I



2
type II



3
type III



4
type IV

Ad. 96 (UPOV 97): Column: colour of anther cap

Observations on the colour of the column should be made on the dorsal side.

LITERATURE

Encyclopedia of Horticulture, Seibun-Do Shinkosha, Tokyo, Japan (in Japanese), JP.

Karasawa, K., 1994: "Orchid Atlas", Vol. 4, Dendrobium, Orchid Atlas Publishing Society, c/o Yasaka Syobo, Inc., Tokyo, Japan, JP.

ANNEX II



European Union
Community Plant Variety Office

TECHNICAL QUESTIONNAIRE

to be completed in connection with an application for Community Plant Variety Rights
Please answer all questions. A question without any answer will lead to a non-attribution
of an application date. In cases where a field / question is not applicable, please state so.

1. Botanical taxon: Name of the genus, species or sub-species to which the variety belongs and common name:

Genus *Dendrobium Sw.*

DENDROBIUM

Species

2. Applicant(s): Name(s) and address(es), phone and fax number(s), Email address, and where appropriate name and address of the procedural representative

.....

.....

3. Variety denomination

a) Where appropriate proposal for a variety denomination:

.....

b) Provisional designation (breeder's reference):

.....

4. Information on origin, maintenance and reproduction of the variety

4.1 Origin

(a) Seedling (indicate parent varieties)..... []

.....
.....
.....

(b) Mutation (indicate parent variety)..... []

.....
.....
.....

(c) Discovery (indicate where, when
and how the variety has been developed): []

.....
.....
.....

(d) Other (please specify) []

.....
.....
.....

4.2 Method of propagation

(a) Cuttings..... []

(b) *In vitro* propagation []

(c) Seed []

(d) Other (please specify): []

.....
.....
.....
.....
.....

4.3 Other information:

In the case of seed propagated varieties: method of production:

(a) Self-pollinated []

(b) Cross-pollinated (please give details)..... []

.....
.....
.....
.....

(c) Hybrid (please give details)..... []

.....
.....
.....
.....

4.4 Geographical origin of the variety: the region and the country in which the variety was bred or discovered and developed

.....

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in the CPVO Protocol; please mark the state of expression which best corresponds).

Characteristics		Example Varieties	Note
5.1 (1)	Plant: size		
	very small	Enobi Komachi ‘Shirayukihime’	1 []
	small	<i>Dendrobium kingianum</i>	3 []
	medium	Wave King ‘Akebono’	5 []
	large	Lucky Girl ‘Emiko’	7 []
	very large		9 []
5.2 (17)	Inflorescence: position of flowers		
	along peduncle	Snow Cap ‘Love Song’	1 []
	apex only	Pink Beauty ‘Queen’	2 []

Characteristics		Example Varieties	Note
5.3 (26)	Flower: length in front view		
	short	Enobi Komachi 'Shirayukihime'	3 []
	medium	Lucky Girl 'Emiko'	5 []
	long		7 []
5.4 (27)	Flower: width in front view		
	narrow	Enobi Komachi 'Shirayukihime'	3 []
	medium	Lucky Girl 'Emiko'	5 []
	broad		7 []
5.5 (70)	Lip: presence of lateral lobe		
	absent	Stardust 'Chiyomi'	1 []
	present	<i>Dendrobium bellatulum</i>	9 []
5.6 (76)	Lip: eye		
	absent	Enobi Komachi 'Shirayukihime'	1 []
	present	Fantasia 'King'	9 []
5.7 (79)	Lip: colour pattern (except middle part, eye and throat)		
	self-coloured		1 []
	shaded	Snow Cap 'Love Song'	2 []
	edged	Pink Beauty 'Queen'	3 []
	striped		4 []
	netted		5 []
	spotted		6 []
	shaded and striped		7 []
	shaded and netted		8 []
shaded and spotted		9 []	

Characteristics		Example Varieties	Note
Please fill in point (i) if possible, otherwise point (ii).			
5.8 i (81)	Lip: main colour		
		RHS Colour Chart (please indicate reference number)	
		
5.8 ii (81)	Lip: main colour		
	green		1 []
	white	Enobi Komachi 'Shirayukihime'	2 []
	yellow	Stardust 'Chiyomi'	3 []
	pink	Snow Cap 'Love Song'	4 []
	red		5 []
	purple	Queen Southeast 'Crystal Queen'	6 []
	reddish brown		7 []
	other colour (indicate)	8 []
6 Similar varieties and differences from these varieties:			
Denomination of similar variety	Characteristic in which the similar variety is different ¹⁾	State of expression of similar variety	State of expression of candidate variety
¹⁾ In the case of identical states of expressions of both varieties, please indicate the size of the difference			

7. Additional information which may help to distinguish the variety

A representative print-out colour photo of the variety **must** be added to the Technical Questionnaire.

7.1 Resistance to pests and diseases

.....

7.2 Special conditions for the examination of the variety

7.2.1 Submission period of the plant material

Indicate the best suitable start date for technical examination of the variety (plants should have induced an inflorescence, preferably budded but NOT flowering in any case, at the start of technical examination i.e. date of submission):

- January []
- August..... []

7.2.2. Other conditions:

[] YES, please specify

[] NO

7.3 Other information

[] YES, please specify

[] NO

8. GMO-information required

The variety represents a Genetically Modified Organism within the meaning of Article 2(2) of Council Directive 2001/18/EC of 12/03/2001.

YES NO

If yes, please add a copy of the written attestation of the responsible authorities stating that a technical examination of the variety under Articles 55 and 56 of the Basic Regulation 2100/94 does not pose risks to the environment according to the norms of the above-mentioned Directive.

9. Information on plant material to be examined

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 <input type="checkbox"/> | No <input type="checkbox"/> |
| (b) Chemical treatment (e.g. growth retardant or pesticide) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (c) Tissue culture | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| (d) Other factors | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

Please provide details of where you have indicated "Yes":

.....
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I/we hereby declare that to the best of my/our knowledge the information given in this form is complete and correct.

Date

Signature

Name

[End of document]