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UPOV

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

DRAFT

ONCIDIUM

UPOV Code: ONCID

Oncidium Sw.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by an expert from Japan

to be considered by the
Technical Working Party for Ornamental Plants and Forest Trees
at its forty-first session, to be held in Wageningen, Netherlands, from June 9 to 13, 2008

Alternative Names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Oncidium Sw.	Oncidium			

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 *Oncidium* Sw. and hybrids between *Oncidium* Sw. and *Cochlioda* Lindl. of the family *Orchidaceae*.

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 plants that have not previously flowered, ready to show all the characteristics in the first growing season.

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

10 plants, each with at least two pseudobulbs.

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

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

3. Method of Examination

3.1 *Number of Growing Cycles*

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

3.2 *Testing Place*

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

3.3 Conditions for Conducting the Examination

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

3.3.2 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 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.

3.4.2 Each test should be designed to result in a total of at least 9 plants.

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

3.5. Unless otherwise indicated, 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.

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 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 9 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 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) Plant: size (characteristic 1)
(b) Flower: width in front view (characteristic 24)
(c) Petal: main color (characteristic 69) with the following groups:
    Gr.1: white
    Gr.2: yellow
    Gr.3: orange
    Gr.4: pink
    Gr.5: red
    Gr.6: violet
    Gr.7: brown
(d) Petal: shading (characteristic 70)
(e) Petal: blotch (characteristic 72)
(f) Petal: brindle (characteristic 74)
(g) Petal: stripes (characteristic 76)
(h) Petal: edge (characteristic 78)

(i) Lip: main color (characteristic 88) with the following groups:
Gr.1: white
Gr.2: yellow
Gr.3: orange
Gr.4: pink
Gr.5: red
Gr.6: violet
Gr.7: brown

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

6. Introduction to the Table of Characteristics

6.1 *Categories of Characteristics*

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 *States of Expression and Corresponding Notes*

States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.3 *Types of Expression*

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 *Example Varieties*

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 *Legend*

(*) Asterisked characteristic – see Chapter 6.1.2

QL: Qualitative characteristic – see Chapter 6.3
QN: Quantitative characteristic – see Chapter 6.3
PQ: Pseudo-qualitative characteristic – see Chapter 6.3

(a)-(d) See Explanations on the Table of Characteristics in Chapter 8.1
(+) See Explanations on the Table of Characteristics in Chapter 8.2

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

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1. **(*)**		**Plant: size**					
QN		small				*O.cheirophorum*	3
		medium				Kinsei Abe No.4	5
		large					7
2. **(*)**		**Pseudobulb: attitude**					
QN	**(a)**	erect					1
		semi-erect				*O.cheirophorum*	2
		horizontal					3
		pendulous				*O.rnithorhyncum*	4
3. **(*)**		**Pseudobulb: shape in longitudinal section**					
PQ	**(a)**	oblong				Kinsei Abe No.4	1
		elliptic				*O.pulvinatum*	2
		circular				*O.pulvinatum*	3
		ovate				Kukoo YMC-2	4
4.		**Pseudobulb: shape in cross section**					
PQ	**(a)**	linear				*O.ornithorhynchum*	1
		oblong				Kinsei Abe No.4	2
		elliptic				O.cheirophorum	3
		circular					4
5. **(*)**		**Pseudobulb: groove**					
QL	**(a)**	absent				Kinsei Abe No.4	1
		present				*O.onustum*	9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
6. **(*)** **(+)**		**Plant: number of below leaves of pseudobulb**					
QN		few					3
		medium					5
		many				Ella Flambeau	7
7. **(*)** **(+)**		**Plant: number of above leaves of pseudobulb**					
QN		one					1
		two				*O. cheirophorum*	2
		three				Ella Flambeau	3
		more than three					4
8. **(*)**		**Leaf: length**					
QN	**(b)**	short				*O. cheirophorum*	3
		medium				Ella Flambeau	5
		long				Kinsei Abe No.4	7
9. **(*)**		**Leaf: width**					
QN	**(b)**	narrow				*O. onustum*	3
		medium				*O. pulvinatum*	5
		broad				*O. papilio*	7
10. **(*)** **(+)**		**Leaf: shape**					
PQ	**(b)**	narrow lanceolate				Barbie Strawberry Delight	1
		linear					2
		narrow elliptic					3
		elliptic				*O.cheirophrum*	4

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11.		**Leaf: shape in cross section**					
PQ	**(b)**	concave				Kinsei	3
		flat				Ella Flambeau	5
		convex					7
12. **(*)**		**Leaf: twisting**					
QL	**(b)**	absent				Kinsei Abe No.4	1
		present				Makali Gotoh	9
13.		**Leaf: green color**					
QN	**(b)**	light					3
	(d)	medium				*O.cheirophorum*	5
		dark				Kinsei	7
14. **(*)** **(+)**		**Inflorescence: type**					
QL		raceme				*O. cheirophorum*	1
		compound panicle				Pink Sugar	2
15.		**Inflorescence: length**					
QN		short				*O. cheirophorum*	3
		medium				*O. onustum*	5
		long				Ella Flambeau	7
16.		**Inflorescence: width**					
QN		narrow				Kukoo YMC-2	3
		medium				Ella Flambeau	5
		broad					7

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
17. **(*)**		**Inflorescence:** **number of flowers**					
QN		few				*O. ornithorhyncum*	3
		medium				Kinsei Abe No.4	5
		many					7
18. **(*)** **(+)**		**Peduncle: length**					
QN		short				*O.cheirophorum*	3
		medium				*O.onustum*	5
		long				Ella Flambeau	7
19. **(*)**		**Peduncle: thickness**					
QN		thin				*O. phalaenopsis*	3
		medium				*O. cheirophorum*	5
		thick					7
20. **(*)**		**Peduncle:** **anthocyanin** **coloration**					
QL		absent				Kinsei	1
		present				Golden Sunset Taka	9
21. **(*)**		**Flower: general** **appearance of sepals**					
QN	**(c)**	incurving					1
		spreading				Kinsei	2
		reflexing					3
22. **(*)**		**Flower: general** **appearance of petals**					
QN	**(c)**	incurving					1
		spreading				Kinsei	2
		reflexing					3

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23. **(*)** **(+)**		**Flower: length in front view**					
QN	**(c)**	short				*O. ornithorhyncum*	3
		medium				*O. onustum*	5
		long				Makalii Gotoh	7
24. **(*)** **(+)**		**Flower: width in front view**					
QN	**(c)**	narrow				*O. cheirophorum*	3
		medium				Golden Sunset Taka	5
		broad				Ella Flambeau	7
25.		**Flower: fragrance**					
QL	**(c)**	absent				Pink Sugar	1
		present				Only One	9
26. **(*)**		**Dorsal sepal: length**					
QN	**(c)**	short				Kukoo YMC-2	3
		medium				Kinawi Abe No.4	5
		long				Makalii Gotoh	7
27. **(*)**		**Dorsal sepal: width**					
QN	**(c)**	narrow				*O. macropetalum*	3
		medium				Kukoo YMC-2	5
		broad				Kinsei Abe No.4	7

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28. **(*)** **(+)**		**Dorsal sepal: shape**					
PQ	**(c)**	lanceolate					1
		linear				*O. onustum*	2
		oblong				*O. macropetalum*	3
		elliptic					4
		ovate				Ella Flambeau	5
		obovate				*O. cheirophorum*	6
29. **(*)**		**Dorsal sepal: curvature of longitudinal axis**					
QN	**(c)**	strongly incurving					1
		moderately incurving				*O. macropetalum*	3
		straight				Makalii Gotoh	5
		moderately recurving				Ella Flambeau	7
		strongly recurving					9
30.		**Dorsal sepal: cross section**					
QN	**(c)**	strongly concave					1
		moderately concave					3
		flat				Kukoo YMC-2	5
		moderately convex				*O. papilio*	7
		strongly convex					9
31.		**Dorsal sepal: twisting**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present					9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
32. **(*)**		**Dorsal sepal: undulation of margin**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present				*O. ornithorhyncum*	9
33. **(*)**		**Dorsal sepal: main color**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
34. **(*)** **(+)**		**Dorsal sepal: shading**					
QL	**(c)**	absent					1
	(d)	present				*O. cheirophorum*	9
35.		**Dorsal sepal: color of shade**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
36. **(*)** **(+)**		**Dorsal sepal: blotch**					
QL	**(c)**	absent					1
	(d)	present					9
37.		**Dorsal sepal: color of blotch**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
38. **(*)** **(+)**		**Dorsal sepal: brindle**					
QL	**(c)**	absent				*O.papilio*	1
	(d)	present					9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
39.		**Dorsal sepal: color of brindle**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
40. **(*)** **(+)**		**Dorsal sepal: stripes**					
QL	**(c)**	absent					1
	(d)	present					9
41.		**Dorsal sepal: color of stripes**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
42. **(*)** **(+)**		**Dorsal sepal: edge**					
QL	**(c)**	absent					1
	(d)	present					9
43.		**Dorsal sepal: color of edge**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
44. **(*)**		**Lateral sepal: length**					
QN	**(c)**	short				Kukoo YMC-2	3
		medium				Kinsei Abe No.4	5
		long				Makalii Gotoh	7
45. **(*)**		**Lateral sepal: width**					
QN	**(c)**	narrow				*O. cheirophorum*	3
		medium				Ella Flambeau	5
		broad				Makalii Gotoh	7

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
46. **(*)**		**Lateral sepal: shape**					
PQ	**(c)**	lanceolate					1
		ovate				Makalii Gotoh	2
		curving obovate					3
		obovate				*O. cheirophorum*	4
		broad obovate				Kukoo YMC-2	5
47. **(*)**		**Lateral sepal: curvature of longitudinal axis**					
QN	**(c)**	strongly incurving					1
		moderately incurving				*O.onustum*	3
		straight				*O. cheirophorum*	5
		moderately recurving				Makalii Gotoh	7
		strongly recurving					9
48.		**Lateral sepal: cross section**					
QN	**(c)**	strongly concave					1
		moderately concave				*O. cheirophorum*	3
		flat				Ella Flambeau	5
		moderately convex					7
		strongly convex					9
49.		**Lateral sepal: twisting**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present				*O. papilio*	9
50. **(*)**		**Lateral sepal: undulation of margin**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present					9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
51. **(*)**		**Lateral sepal: main color**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
52. **(*)** **(+)**		**Lateral sepal: shading**					
QL	**(c)**	absent					1
	(d)	present				*O. cheirophorum*	9
53.		**Lateral sepal: color of shade**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
54. **(*)** **(+)**		**Lateral sepal: blotch**					
QL	**(c)**	absent					1
	(d)	present				Makalii Gotoh	9
55.		**Lateral sepal: color of blotch**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
56. **(*)** **(+)**		**Lateral sepal: brindle**					
QL	**(c)**	absent				Ella Fambeau	1
	(d)	present					9
57.		**Lateral sepal: color of brindle**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
58. **(*)** **(+)**		**Lateral sepal: stripes**					
QL	**(c)**	absent					1
	(d)	present					9
59.		**Lateral sepal: color of stripes**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
60. **(*)** **(+)**		**Lateral sepal: edge**					
QL	**(c)**	absent					1
	(d)	present				Kinsei	9
61.		**Lateral sepal: color of edge**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
62. **(*)**		**Petal: length**					
QN	**(c)**	short				*O.ornithorhyncum*	3
		medium				Ella Flambeau	5
		long				Makalii Gotoh	7
63. **(*)**		**Petal: width**					
QN	**(c)**	narrow				*O.papilio*	3
		medium				Potpourri	5
		broad				Kinsei Ake No.4	7

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
64. **(*)** **(+)**		**Petal: shape**					
PQ	**(c)**	linear				Golden Sunset Taka	1
		elliptic					2
		narrow obovate					3
		obovate					4
		rectangular					5
65. **(*)**		**Petal: curvature of longitudinal axis**					
QN	**(c)**	strongly incurving					1
		moderately incurving				Kukoo YM-2	3
		straight				*O. cheirophorum*	5
		moderately recurving				*O. papilio*	7
		strongly recurving					9
66.		**Petal: cross section**					
QN	**(c)**	strongly concave					1
		moderately concave				*O. papilio*	3
		flat				Kukoo YM-2	5
		moderately convex				*O. cheirophorum*	7
		strongly convex				Potpourri	9
67.		**Petal: twisting**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present				*O. papilio*	9
68. **(*)**		**Petal: undulation of margin**					
QL	**(c)**	absent				*O. cheirophorum*	1
		present					9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
69. **(*)**		**Petal: main color**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
70. **(*)** **(+)**		**Petal: shading**					
QL	**(c)**	absent					1
	(d)	present				*O. cheirophorum*	9
71.		**Petal: color of shade**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
72. **(*)** **(+)**		**Petal: blotch**					
QL	**(c)**	absent					1
	(d)	present				Makalii Gotoh	9
73.		**Petal: color of blotch**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
74. **(*)** **(+)**		**Petal: brindle**					
QL	**(c)**	absent				Ella Flambeau	1
	(d)	present					9
75.		**Petal: color of brindle**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
76. **(*)** **(+)**		**Petal: stripes**					
QL	**(c)**	absent					1
	(d)	present					9
77.		**Petal: color of stripes**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
78. **(*)** **(+)**		**Petal: edge**					
QL	**(c)**	absent					1
	(d)	present				Kinsei	9
79.		**Petal: color of edge**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
80. **(*)**		**Lip: curvature of longitudinal axis**					
		incurving				*O.cheiroporum*	3
		straight					5
		recurving				Kinsei	7
81. **(*)**		**Lip: length**					
QN	**(c)**	short				*O.onustum*	3
		medium				Malikalii Gothoh	5
		long				Ella Flambeau	7
82. **(*)**		**Lip: width**					
QN	**(c)**	narrow				Makalii Gotoh	3
		medium				Golden Sunset Taka	5
		broad				Kinsei Abe No.4	7

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
83. **(*)** **(+)**		**Lip: shape of apical lobe**					
PQ	**(c)**	ovate					1
		elliptic					2
		obovate					3
		orbicular					4
		semi-circular					5
		deltoid					6
		obdeltoid					7
84. **(*)** **(+)**		**Lip: emargination**					
QN	**(c)**	absent or very shallow					1
		shallow					3
		medium					5
		deep					7
85. **(*)**		**Lip: size of lateral lobe in raltion to apical lobe**					
	(c)	smaller				*O.maropetalum*	3
		same					5
		larger					7
86.		**Lip: cross section**					
QN	**(c)**	concave					3
		flat				Kinsei Abe No.4	5
		convex					7
87. **(*)**	**(c)**	**Lip: undulation of margin**					
QL		absent				*O. cheirophorum*	1
		present					9

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
88. **(*)**		**Lip: main color**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
89. **(*)** **(+)**		**Lip: shading**					
QL	**(c)**	absent					1
	(d)	present				*O. ornithorhyncum*	9
90.		**Lip: color of shade**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
91. **(*)** **(+)**		**Lip: blotch**					
QL	**(c)**	absent					
	(d)	present				Barbie Strawberry Delight	
92.		**Lip: color of blotch**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					
93. **(*)** **(+)**		**Lip: brindle**					
QL	**(c)**	absent					1
	(d)	present					9
94.		**Lip: color of brindle**					
PQ	**(c)** **(d)**	RHS Colour Chart (indicate reference number)					

		English	français	Deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
95. **(*)** **(+)**		**Lip: edge**					
QL	**(c)**	absent					1
	(d)	present				*O.papilio*	9
96.		**Lip: color of edge**					
PQ	**(c)**	RHS Colour Chart (indicate reference number)					
	(d)						
97. **(*)**		**Callus: color of middle part**					
PQ	**(c)**	white				Kinsei	1
		yellow				Golden Sunset Taka	2
		orange					3
		red				Barbie Strawberry Delight	4
		brown					5
98. **(*)**		**Callus: color of margin part**					
PQ	**(c)**	white					1
		yellow					2
		orange					3
		pink					4
		red					5
		yellow-brown					6
		brown					7

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

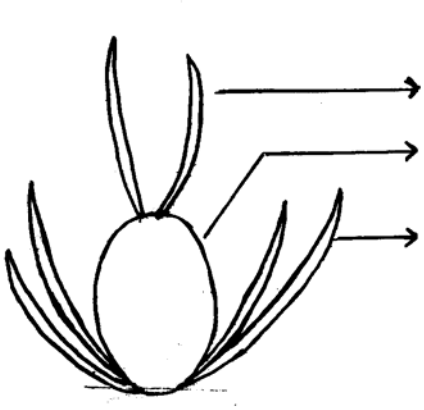
Unless otherwise noted, all characteristics should be observed when 80% of flowers have opened on the first inflorescence..

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

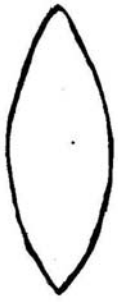
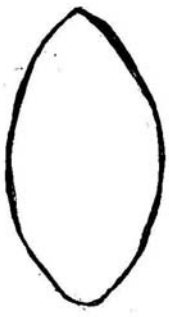
(a) Observations on the pseudobulb should be made on the flowering pseudobulb.
(b) Observations on the leaf should be made on the longest leaf of a flowering pseudobulb.
(c) Observations on flowers should be made on fully expanded flowers.
(d) Observations on the color of the leaf, the sepal, the petal and lip should be made on the upper side.

8.2 Explanations for individual characteristics

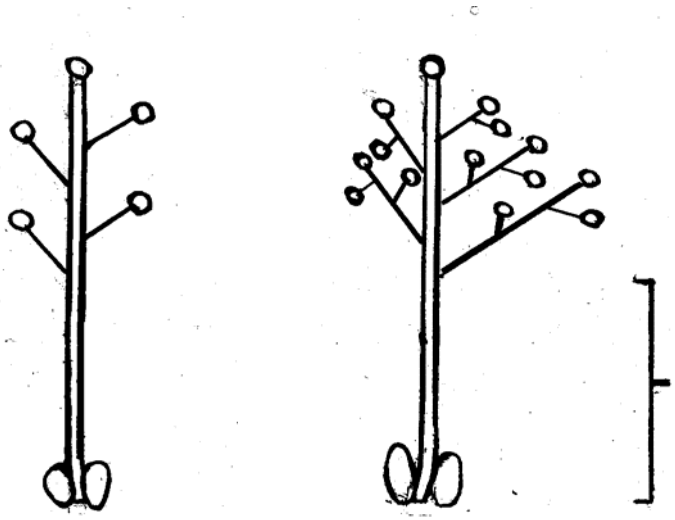
Ad. 6: Plant: number of below leaves of pseudobulb
Ad 7: Plant: number of above leaves of pseudobulb



Ad. 10: Leaf: shape

			
1	2	3	4
narrow lanceolate	linear	narrow elliptic	elliptic

Ad. 14: Inflorescence: type
Ad. 18: Peduncle : length

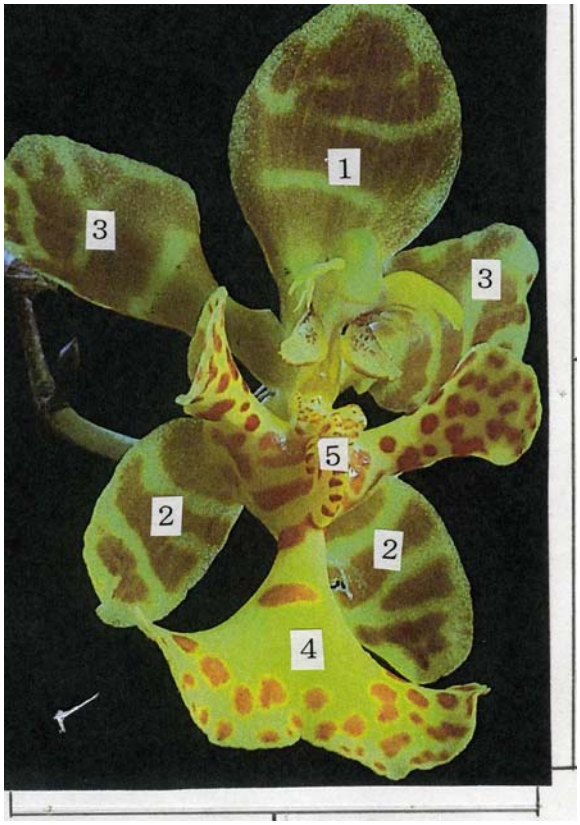


Peduncle: length

1
raceme

2
compound raceme

Ad. 23: Flower: length in front view
Ad. 24: Flower: width in front view

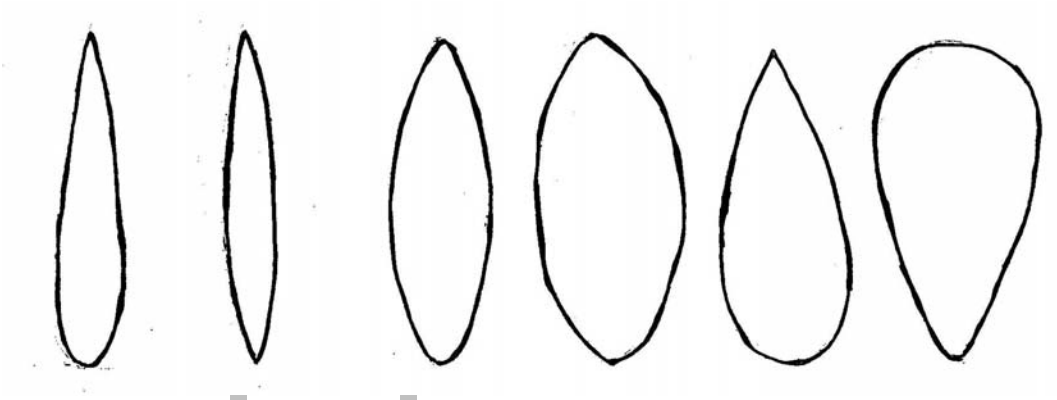


Flower: length in front view

Flower: width in front view

1 Dorsal sepal
2 Lateral sepal
3 Petal
4 Lip
5 Callus

Ad. 28: Dorsal sepal: shape



1	2	3	4	5	6
lanceolate	oblong	linear	elliptic	ovate	obovate

Ad, 34: Dorsal sepal: shading
Ad. 36: Dorsal sepal: blotch
Ad. 38: Dorsal sepal: brindle
Ad. 40: Dorsal sepal: stripes
Ad: 42: Dorsal sepal: edge

Ad. 52: Lateral sepal: shading
Ad. 54: Lateral sepal: blotch
Ad. 56: Lateral sepal: brindle
Ad. 58: Lateral sepal: stripes
Ad: 60: Lateral sepal: edge

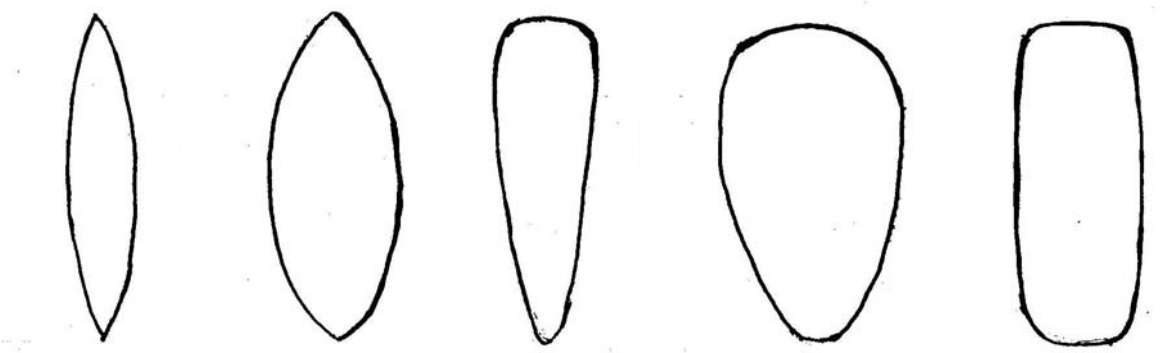
Ad. 70: Petal: shading
Ad. 72: Petal: blotch
Ad. 74: Petal: brindle
Ad. 76: Petal: stripes
Ad: 78: Petal: edge

shading blotch brindle stripes edge

Ad. 46: Lateral sepal: shape

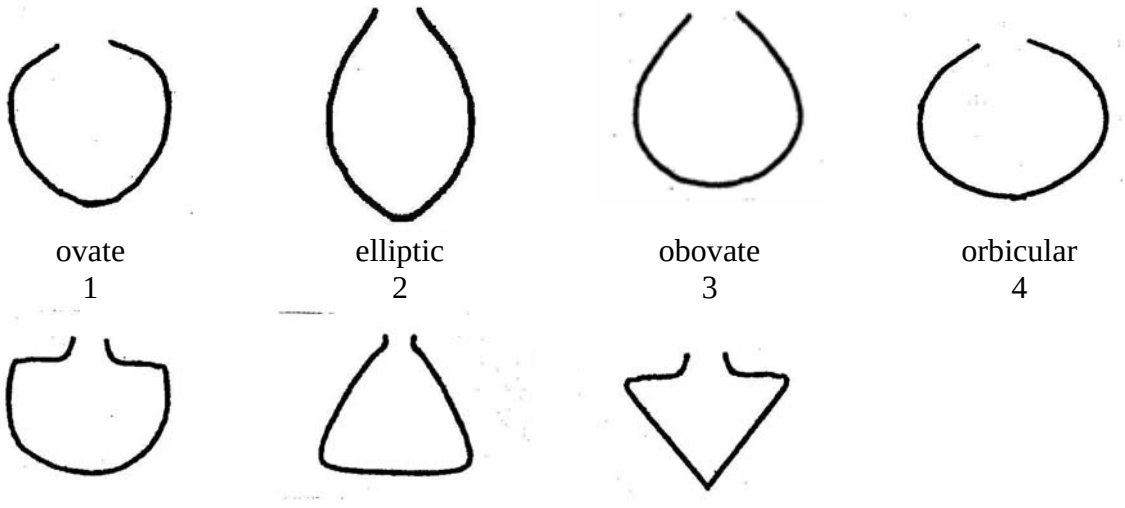
1 lanceolate | 2 ovate | 3 curving obovate | 4 obovate | 5 broad obovate

Ad. 64: Petal: shape



1 linear | 2 elliptic | 3 narrow obovate | 4 obovate | 5 rectangular

Ad. 83: Lip: shape of apical lobe



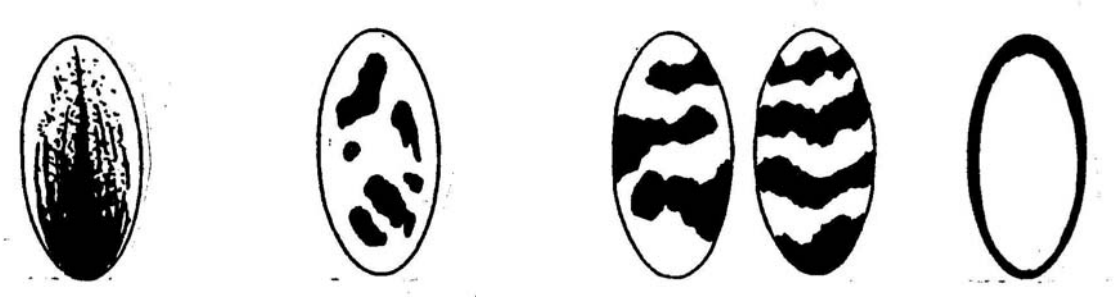
ovate 1 | elliptic 2 | obovate 3 | orbicular 4

semi-circular 5 | deltoid 6 | obdeltoid 7

Ad. 84: Lip: emargination

1	3	5	7
absent or veryshallow	shallow	medium	deep

Ad. 89: Lip: shading
Ad. 91: Lip: blotch
Ad. 93: Petal: brindle
Ad: 95: Petal: edge



shading	blotch	brindle	edge

9. Literature

Higuchi, H.,1983: Japanese Test Guideline for Oncidium. Ministry of Agriculture, Forestry and Fisheries, Tokyo,JP.

Karasawa, K., 1989: Orchid Atlas Volume7, Orchid Atlas Publishing Society., Tokyo, JP, pp.40 to 110.

Karasawa, K., 2003: Species Orchidacearum- 1 Text, Japan Broadcasting Publishing Co., Ltd., Tokyo, JP, pp.296 to 308.

Karasawa, K., 2003: Species Orchidacearum - Plates, Japan Broadcasting Publishing Co., Ltd., Tokyo, JP, pp.295 to 307.

Karasawa, K., 1996: Color Dictionary of Orchid. The Yamatokeikoku Ltd., Tokyo, JP, pp.407 to 432.

Oda, Z., 1984: Orchid-Varieties, Breeding, Cultivation and Propagation. The Hokuryu Ltd., Tokyo, JP, pp.315 to 319

Yoneda, K., 2003: The Grand Dictionary of Flower Horticulture Volume15 Orchid, The Rural Culture Association, Tokyo, JP, pp.371 to 391

10. Technical Questionnaire

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

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1	Botanical Name	*Oncidium* Sw.
1.2	Common Name	Oncidium
1.3	Species Name (Please complete)	

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	

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

(a) cuttings [ ]

(b) *in vitro* propagation [ ]

(c) other [ ]
(state method)

[#] 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:

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: size**		
	small	*O.cheirophorum*	3[ ]
	medium	Kinsei Abe No.4	5[ ]
	large		7[ ]
5.2 (24)	**Flower: width in front view**		
	narrow	*O. cheirophorum*	3[ ]
	medium	Golden Sunset Taka	5[ ]
	broad	Ella Flambeau	7[ ]
5.3 (69)	**Petal: main color**		
	white		1[ ]
	yellow		2[ ]
	orange		3[ ]
	pink		4[ ]
	red		5[ ]
	violet		6[ ]
	brown		7[ ]
5.4 (70)	**Petal: shading**		
	absent		1[ ]
	present	*O. cheirophorum*	9[ ]
5.5 (72)	**Petal: blotch**		
	absent		1[ ]
	present	Makalii Gotoh	9[ ]

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

	Characteristics	Example Varieties	Note
5.6 (74)	**Petal: brindle**		
	absent		1[ ]
	present	Ella Flambeau	9[ ]
5.7 (76)	**Petal: stripes**		
	absent		1[ ]
	present		9[ ]
5.8 (78)	**Petal: edge**		
	absent		1[ ]
	present	Kinsei	9[ ]
5.5 (88)	**Lip: main color**		
	white		1[ ]
	yellow		2[ ]
	orange		3[ ]
	pink		4[ ]
	red		5[ ]
	violet		6[ ]
	brown		7[ ]

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

6. Similar varieties and differences from these varieties

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

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example	*Flower: width in front of view*	*medium*	*broad*

Comments:

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

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

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

Yes [ ] No [ ]

(If yes, please provide details)

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

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

A representative color photograph of the variety should accompany the Technical Questionnaire.

8. Authorization for release

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

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

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

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

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

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

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

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

(a) Microorganisms (e.g. virus, bacteria, phytoplasma) Yes [ ] No [ ]

(b) Chemical treatment (e.g. growth retardant, pesticide) Yes [ ] No [ ]

(c) Tissue culture Yes [ ] No [ ]

(d) Other factors Yes [ ] No [ ]

Please provide details for where you have indicated “yes”.

……

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

Applicant’s name

Signature Date

[End of document]