

**Guidelines
for the Conduct of Test for
Distinctiveness, Uniformity and Stability**

on

Orchid
Vanda

**Protection of Plant Varieties and Farmers' Rights Authority
(PPV & FRA)
Government of India**

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I. Subject

These test guidelines shall apply to all vegetatively propagated varieties of *Vanda Jones* ex R.Br. of the family Orchidaceae.

II. Plant material required

1. The Protection of Plant Varieties and Farmers' Rights Authority (PPV & FRA) shall decide when, where and in what quantity and quality the plant material are required for testing of a variety denomination for registration under the Protection of Plant Varieties and Farmers' Rights (PPV & FR) Act, 2001. Applicants submitting such plant material from a country other than India shall make sure that all customs and quarantine requirements stipulated under relevant national legislations and regulations are complied with.
2. For all varieties, only 2 to 3 years old 20 plants (10 for each Centre) that have not flowered previously shall be required for DUS testing.
3. The plant material supplied shall be visibly healthy, not lacking in vigour or affected by any pests or diseases or mechanical damage.
4. Plant material shall not have undergone any chemical or bio-physical treatment unless the competent authority allow or request such treatment. If it has been treated, details of the treatment must be given.

III. Conduct of tests

1. A test shall normally be conducted for two growing seasons.
2. Tests shall normally be conducted at two places. If any essential characteristics of the variety are not expressed for visual observations at these places, the variety shall be considered for further examination at another appropriate test site or under special test protocol on expressed request of the applicant.
3. The tests shall be carried out in the greenhouse under conditions ensuring normal growth for the plant concerned. The size of the pots/ containers shall be such that plants or parts of plants may be removed for measurement and counting without

- prejudice to the observations which must be made up to the end of the growing period. Each test shall include a total of 10 plants.
4. Test shall be done only in pots of prescribed size. The pots shall be kept at a standard spacing recommended for each type or at the spacing specified by the applicant.
 5. Additional tests for special purposes may be established.
 6. Normally, growth regulators shall not be used.

IV. Methods and observations

1. The characteristics described in the Table of characteristics shall be used for the testing of varieties for their DUS (Section VII).
2. For the assessment of Distinctiveness and Stability, all observations shall be made on 10 plants or parts taken from each of 10 plants.
3. For the assessment of uniformity a population standard of 1% and an acceptance probability of at least 95% shall be applied. In the case of a sample size of 10 plants, the maximum number of off-types allowed would be 1.
4. All observations of on the stems shall be made on the flowering stem.
5. All observations on the leaf shall be made on the longest leaf of a flowering stem.
6. All observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened, on the most recently fully opened flower on the inflorescence before fading of colour.
7. All observations on the length and width of the flower and parts of the flower shall be made on the extended organ.
8. All observations on the colour of the sepal, the petal and the lip shall be made both on the inner side and the outer side.
9. All observations on the colour of the column shall be made on the inner and outer side.
10. For the assessment of color characteristics, it is recommended that Royal Horticultural Society (RHS) color chart shall be used.

V. Grouping of varieties

1. The candidate varieties for DUS testing shall be divided into groups for facilitate the assessment of distinctiveness. Characteristics which are known from experience not to vary, or to vary only slightly, within a variety and which in their various states are fairly evenly distributed across all varieties in the collection are suitable for grouping purpose.
2. The following characteristics shall be used for grouping of Vanda varieties:

(a) Leaf: type	(Characteristics 4)
(c) Inflorescence: length	(Characteristic 12)
(d) Flower: number	(Characteristic 16)
(e) Flower: predominant colour	(Characteristics 21)
(f) Sepal: colour pattern	(Characteristics 31)
(g) Petal : colour pattern	(Characteristics 38)
(h) Lip: mid-lobe shape	(Characteristic 41)
(i) Lip: colour pattern	(Characteristic 48)
(j) Spur: type	(Characteristics 52)
(k) Flowering season	(Characteristics 54)

VI. Characteristics and symbols

1. To assess Distinctness, Uniformity and Stability, the characteristics and their states as given in the Table of Characteristics shall be used.
2. Notes 1-9 (numbers), shall be used to describe the state of each character for the purpose of electronic data processing.
3. Legend
 - (*) Characteristics that shall be observed during every growing season for all varieties and hybrids and shall always be included in the description of the varieties and hybrids, except when the state of expression of any of these characters is rendered impossible by a preceding phenological characteristic or by the environment conditions of the testing region. Under such exceptional situation, adequate explanation shall be provided.
 - (+) See explanations on the Table of characteristics
4. Characteristics denoted with symbols QL, QN and PQ in the first column of the Table characteristics shall be indicated as :

QL - Qualitative characteristic

QN- Quantitative characteristic

PQ - Pseudo-qualitative characteristic

5. (a)-(e) See Section VIII for explanation

6. Type of assessment of characteristics indicated in column six of the Table of characteristics are as follows:

MG: Measurement by a single observation 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 observations of individual plants or parts of plants

VII. Table of characteristics

S. No.	Characteristics	States	Notes	Example Varieties /hybrids	Type of Assessment
1. QN (a)	Internode length	Short (<1.0 cm)	1	Vanda 'KS.SD', V. 'Pures Wax', V. 'Pakchong Blue'	MS
		Medium (1.0-2.0 cm)	3	V. 'Prao Sky Blue', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Roberts Delight Blue'	
		Long (>2.0 cm)	5	V. 'John Clubb' V. 'Miss Joaquim'	
2. QN (a)	Stem diameter	Thin (<1.0cm)	1	V. 'Pakchong Blue'	MS
		Thick (> 1.0cm)	3	V. 'RBSD Pink 31', V. 'Motes Indigo', V. 'Pat D', V. 'Pures Wax', V. 'RBSD Black', V. 'KS'SD', V. 'Ratch Blue Star', V. 'Prao Sky Blue', V. 'RB'SD Blue', V. 'Fuchs D', V. 'RB'S Red 358', V. 'Roberts Delight Blue'	
3.	Root location	Only at stem base	1	V. 'KS.SD',	VG

PQ				V. 'Pures Wax', V. 'RBSD Black', V. 'Sansai Blue', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		All along stem	3	V. 'Prao Sky Blue', V. 'PAT D', V. 'Motes Indigo'	
4. * (+) PQ (a)	Leaf type	Terete	1	V. 'John Clubb' V. 'Miss Joaquim'	VG
		Semi-terete	3	-	
		Channelled	5	-	
		Strap	7	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
5. QN (a)	Leaf length	Short (<10cm)	1		MS
		Medium (10-20cm)	3	V. 'Prao Sky Blue', V. 'Motes Indigo', V. 'Pakchong Blue'	
		Long (>20cm)	5	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Roberts Delight Blue'	
6. QN (a)	Leaf breadth	Narrow (<0.5cm)	1	-	MS
		Medium (0.6-1.0cm)	3	-	
		Broad (>1.0cm)	5	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Prao Sky Blue', V. 'Roberts Delight Blue'	

7. (+) PQ (a)	Leaf apex	Bilobed	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Motes Indigo'	VG
		Retuse	3	-	
		Tridentate	5	-	
		Praemorse	7	V. 'Pakchong Blue', V. 'Pures Wax', V. 'Bansai Queen', V. 'Prao Sky Blue', V. 'Roberts Delight Blue'	
		Truncate	9	-	
8. PQ (a)	Leaf orientation	Straight	1	-	VG
		Arching	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Deflexed	5	V. 'Pures Wax', V. 'PAT D', V. 'Sansai Blue'	
9. QL (a)	Leaf colour	Green	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VG
		Purple tinge	3	V. 'Pures Wax'	
		Mottle	5		
10. QL (a)	Leaf sheath pigmentation	Absent	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VG

		Present	9		
11. * QN (b)	No of inflorescences per year per plant	<Three	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VS
		Three to Six	3		
		>Six	5		
12. * QN (b)	Inflorescence length	Short (<15cm)	1		MS
		Medium (15cm-30cm)	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue'	
		Long (>30cm)	5	V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
13. QN (b)	Peduncle length	Short (<10cm)	1	V. 'Pures Wax', V. 'Roberts Delight Blue'	MS
		Medium (10cm-20cm)	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue'	
		Long (>20cm)	5	V. 'Motes Indigo', V. 'Pakchong Blue'	
14. PQ (b)	Inflorescence orientation	Erect	1	V. 'KS.SD', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Roberts Delight Blue'	VG
		Horizontal	3	V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'Pakchong Blue'	
		Drooping	5		
15. PQ (b)	Inflorescence nature	Dense	1	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D',	VG

				V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue'	
		Lax	3	V. 'Prao Sky Blue',	
16. * QN (b)	No. of flowers per inflorescence	Few (<5)	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'PAT D'	VG
		Medium (5-10)	3	V. 'Pures Wax', V. 'RBSD Black', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Many (>10)	5	-	
17. PQ (b)	Orientation of flowers	Facing in one direction	1	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black'	VG
		Facing in all directions	3	V. 'Prao Sky Blue', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
18. QN (c)	Flower width	Narrow (< 3.0cm)	1	-	MS
		Medium (3.0 cm-6.0cm)	3	-	
		Broad (>6.0cm)	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
19. QL (b)	Flower fragrance	Absent	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VG
		Present	9	-	
20.	Flower	Short (<15 days)	1	-	VG

* QN (b)	longevity on the plant	Medium (15-30 days)	3	-	
		Long (> 30 days)	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'RB'S Red 358', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
21. * QL (b)	Flower predominant colour	Red	1	V. 'RBSD Red'	VS
		Blue	3	V. 'Roberts Delight Blue', V. 'Prao Sky Blue', V. 'Sansai Blue', V. 'Pakchong Blue'	
		Violet	5	V. 'KS.SD', V. 'Pures Wax', V. 'Motes Indigo'	
		Purple	7	V. 'RBSD Black', V. 'PAT D'	
22. QN (c)	Dorsal sepal size (length x breadth)	Small (<3cm ²)	1	-	MS
		Medium (3-12cm ²)	3	V. 'KS.SD',	
		Large (>12cm ²)	5	V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
23. (+) PQ (c)	Dorsal sepal shape	Linear	1	-	VG
		Oblong	3	-	
		Elliptic	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'PAT D'	
		Obovate	7	V. 'RBSD Black', V. 'Motes Indigo', V. 'Roberts Delight Blue'	
24. (+) PQ (c)	Dorsal sepal curvature	Incurved with deflexed apex	1	-	VG
		Incurved with straight apex	3	-	

		Straight	5	V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Deflexed	7	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black'	
25. (+) PQ (c)	Dorsal sepal apex	Acute	1	-	VG
		Obtuse	3	V. 'RBSD Black',	
		Truncate	5	V. 'Roberts Delight Blue'	
		Bilobed	7	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue'	
26. QN (c)	Lateral sepal size (length x breadth)	Small (<3cm ²)	1	-	MS
		Medium (3-12cm ²)	3	-	
		Large (>12cm ²)	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
27. (+) PQ (c)	Lateral sepal shape	Linear	1	-	VS
		Oblong	3	-	
		Elliptic	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'PAT D',	
		Obovate	7	V. 'Sansai Blue', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
28. (+) PQ (c)	Lateral sepal curvature	Incurved with deflexed apex	1	V. 'Pures Wax', V. 'Motes Indigo'	VG
		Incurved with straight apex	3	V. 'PAT D', V. 'Sansai Blue', V. 'Pakchong Blue'	

		Straight	5	V. 'Roberts Delight Blue'	
		Deflexed	7	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black'	
29. (+) PQ (c)	Lateral sepal apex	Acute	1	-	VG
		Obtuse	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue',	
		Truncate	5	V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Bilobed	7	-	
30. QL (d)	Sepal colour (Nos.)	Single	1	V. 'Prao Sky Blue'(violet blue), V. 'PAT D' (purple), V. 'Pakchong Blue' (violet),	VS
		Double	3	V. 'Sansai Blue'(violet & white), V. 'Motes Indigo'(violet&white), V. 'Roberts Delight Blue'(violet& purple)	
		Triple or more	5	-	
31. * QL (d)	Sepal colour pattern	Uniform	1	-	VG
		Spotted	3	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black' V. 'PAT D'	
		Blotched	5	V. 'KS.SD', V. 'Roberts Delight Blue'	
		Streak/Striped	7	-	
		Tessellated	9	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue'	
32. * QN (c)	Petal size (length x breadth)	Small (<3cm ²)	1		MS
		Medium (3-12cm ²)	3	V. 'KS.SD',	
		Large (>12cm ²)	5	V. 'Prao Sky Blue', V. 'Pures Wax',	

				V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
33. (+) PQ (c)	Petal shape	Linear	1	-	VG
		Oblong	3	-	
		Elliptic	5	V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'PAT D'	
		Lanceolate	7	-	
		Obovate	9	V. 'Pures Wax', V. 'Motes Indigo', V. 'Roberts Delight Blue'	
34. (+) PQ (c)	Petal curvature	Incurved with deflexed apex	1	V. 'Pures Wax', V. 'RBSD Black',	VG
		Incurved with straight Apex	3	V. 'KS.SD', V. 'PAT D', V. 'Sansai Blue', V. 'Pakchong Blue'	
		Straight	5	V. 'Motes Indigo', V. 'Roberts Delight Blue'	
		Deflexed	7	V. 'Prao Sky Blue',	
		Deflexed with incurved apex	9	-	
35. (+) PQ (c)	Petal apex	Acute	1	-	VG
		Obtuse		V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black'	
		Truncate	3	V. 'Motes Indigo', V. 'Pakchong Blue'	
		Bilobed	5	V. 'Pures Wax', V. 'Roberts Delight Blue', V. 'PAT D', V. 'Sansai Blue'	
36. (+) PQ (c)	Petal margin	Entire	1	-	VS
		Undulate	3	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Erose	5	V. 'Prao Sky Blue',	

				V. 'Sansai Blue',	
37. QL (d)	Petal colour (Nos.)	Single	1	V. 'PAT D' (Purple), V. 'KS.SD' (Violet), V. 'Sansai Blue' (Violet) V. 'Pakchong Blue' (Violet)	VG
		Double	3	V. 'Prao Sky Blue' (Violet & Purple) V. 'Pures Wax' (Violet & Purple) V. 'Roberts Delight Blue' (Violet & Purple)	
		Triple or more	5	V. 'Motes Indigo' (White, Green & Violet) V. 'RBSD Black', (Purple, White & Violet)	
38. * QL (d)	Petal colour pattern	Uniform	1		VG
		Spotted	3	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Roberts Delight Blue'	
		Blotched	5		
		Streaked/ Striped	7		
		Tessellated	9	V. 'Prao Sky Blue' V. 'KS.SD', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue'	
39. QN (c)	Lip length	Small (<1.5cm)	1	-	MG
		Medium (1.5-3.0 cm)	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Large (>3.0cm)	5	-	
40. QN (c)	Lip width	Narrow (<1cm)	1	V. 'Sansai Blue'	MG
		Medium (1-2cm)	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black',	

				V. 'PAT D', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Broad (>2cm)	5	-	
41. * (+) PQ (c)	Lip: mid-lobe shape	Ovate	1	-	VS
		Lanceolate	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Roberts Delight Blue'	
		Orbicular	5		
42. (+) PQ (c)	Lip: lateral- lobe shape	Ovate	1	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Roberts Delight Blue'	VS
		Lanceolate	3	V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue',	
		Orbicular	5	-	
43. (+) PQ (c)	Lip curvature	Straight	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VG
		Deflexed with straight apex	3		
		Deflexed with incurved apex	5		
44. (+)	Lip apex	Acute	1		VG
		Obtuse	3		

PQ (c)		Bilobed	5	V. 'Pures Wax', V. 'PAT D', V. 'KS.SD', V. 'Prao Sky Blue', V. 'RBSD Black', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
45. PQ (c)	Keels No.	Absent	1		VG
		Few (< 2)	3		
		Medium (2-3)	5	V. 'KS.SD', V. 'RBSD Black',	
		Many (>3)	7	V. 'Pures Wax', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
46. PQ (c)	Lip surface	Glabrous	1	V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VS
		Pubescent	3		
47. QL (d)	Lip colour (Nos.)	Single	1	V. 'KS.SD', (violet) V. 'Prao Sky Blue', (violet) V. 'Pures Wax', (violet) V. 'Motes Indigo', (violet)	VG
		Double	3	V. 'RBSD Black' (purple & blue) V. 'PAT D', (purple & blue) V. 'Sansai Blue', (purple & violet) V. 'Pakchong Blue' (violet & blue)	
		Triple or more	5	V. 'Roberts Delight Blue' (purple, yellow & blue)	
48. * QL (d)	Lip colour pattern	Uniform	1		VG
		Spotted	3	V. 'RBSD Black', V. 'Motes Indigo'	
		Blotch	5		
		Streaked/Striped		V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax',	

				V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Tessellated	7		
49. * QN (c)	Column Length	Short (<0.5cm)	1		MS
		Medium (0.5-1.0cm)	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Long (>1.0cm)	5	-	
50. QL (e)	Column colour pattern	Uniform	1	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	VS
		Spotted	3	-	
		Blotched	5	-	
		Streaked/Striped	7	-	
51. * QN (c)	Pedicel length (with ovary)	Small (<2cm)	1	-	MS
		Medium (2-4cm)	3	-	
		Large (>4cm)	5	V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
52. * (+) PQ (c)	Spur type	Saccate	1	-	VG
		Conical	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax', V. 'RBSD Black',	

				V. 'PAT D', V. 'Sansai Blue', V. 'Motes Indigo', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Cylindric	5	-	
		Tubular	7	-	
53. * QN (c)	Spur length	Short (<0.5cm)	1		MS
		Medium (0.5-1.0cm)	3	V. 'KS.SD', V. 'Pures Wax', V. 'RBSD Black', V. 'PAT D', V. 'Pakchong Blue', V. 'Roberts Delight Blue'	
		Long (>1.0cm)	5	V. 'Prao Sky Blue', V. 'Sansai Blue', V. 'Motes Indigo'	
54. * PQ	Flowering season	Winter	1	V. 'Pakchong Blue'	VG
		Spring	3	V. 'KS.SD', V. 'Prao Sky Blue', V. 'Pures Wax'	
		Summer	5	V. 'Sansai Blue', V. 'Prao Sky Blue'	
		Rainy	7	V. 'Motes Indigo', V. 'PAT D', V. 'RBSD Black', V. 'Roberts Delight Blue'	

VIII. Explanations on the Table of Characteristics

8.1 Guidelines for recording the observations of vegetative and flowering characteristics

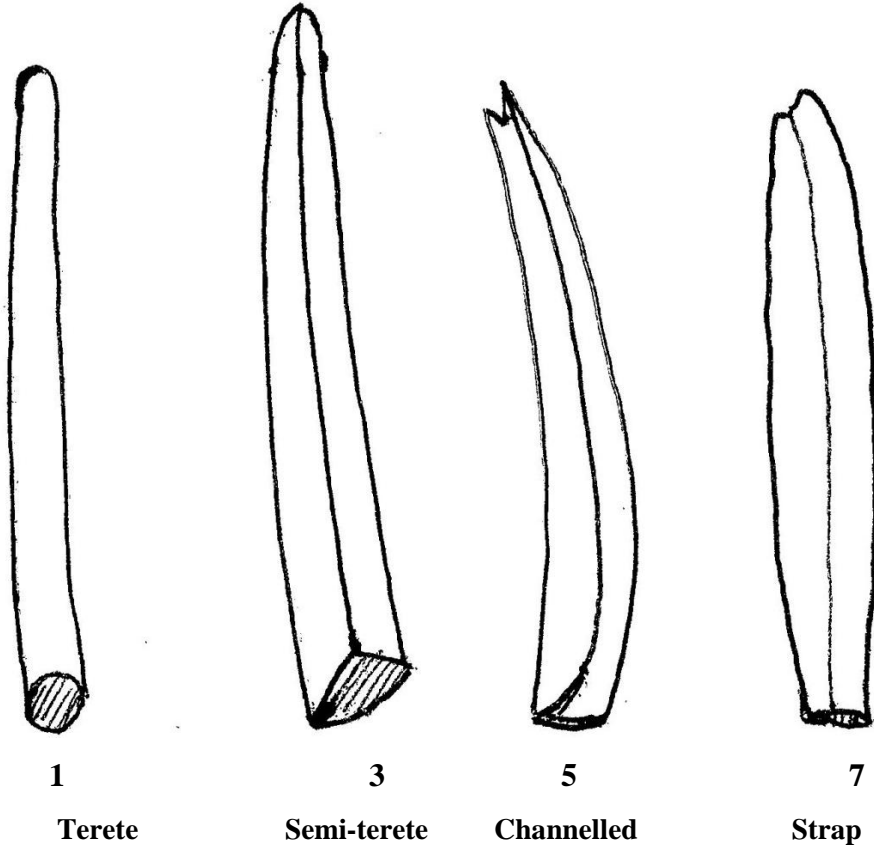
Characteristics indicated with (a), (b), (c), (d) and (e) in the first column of the Table of characteristics shall be examined as indicated below:

- (a) Observations on the leaf, stem and internode length shall be made on the flowering plants.
- (b) Observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened, on the most recently fully opened flower on the inflorescence before the color starts to fade.

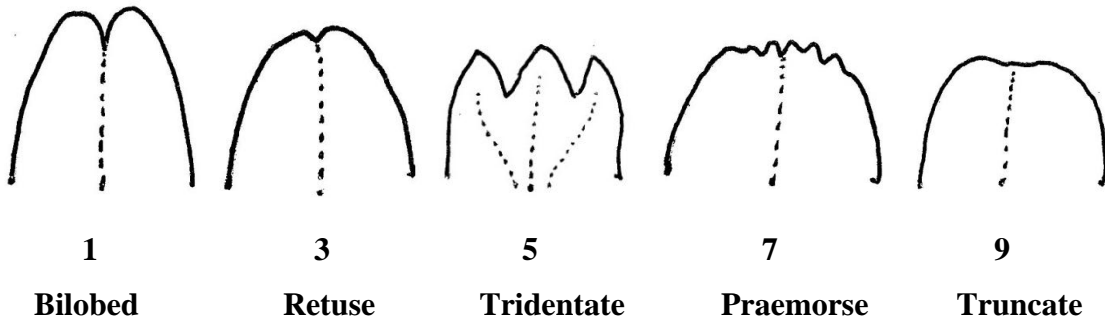
- (c) Observations on the length and width of the flower and parts of the flower shall be made on the extended organ.
- (d) Observations on the color of the sepal, the petal and the lip shall be made on the outer side and inner side at apex, mid and base portion.
- (e) Observations on the colour of column shall be made on the outer side and inner side at apex, mid and basal region.

8.2: Explanations for individual characteristics

Characteristics 4: Leaf type



Characteristics 7 : Apex of leaf



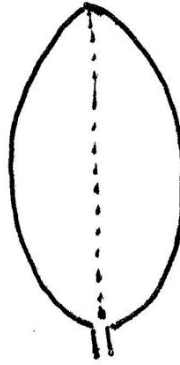
Characteristics 23 & 27: Dorsal sepal, Lateral sepal shape



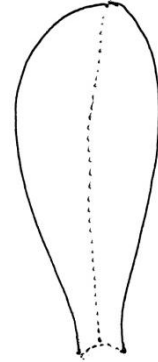
1
Linear



3
Oblong

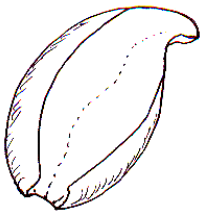


5
Elliptic

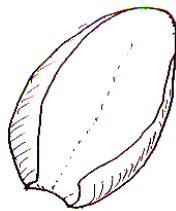


7
Obovate

Characteristics 24 & 28: Dorsal sepal, lateral sepal curvature



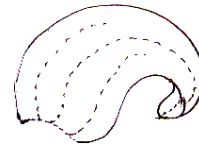
1
**Incurved with
deflexed apex**



3
**Incurved with
straight apex**



5
Straight



7
Deflexed

Characteristics 25, 29 & 35: Dorsal sepal, lateral sepal, petal apex



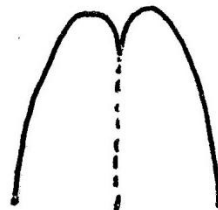
1
Acute



3
Obtuse

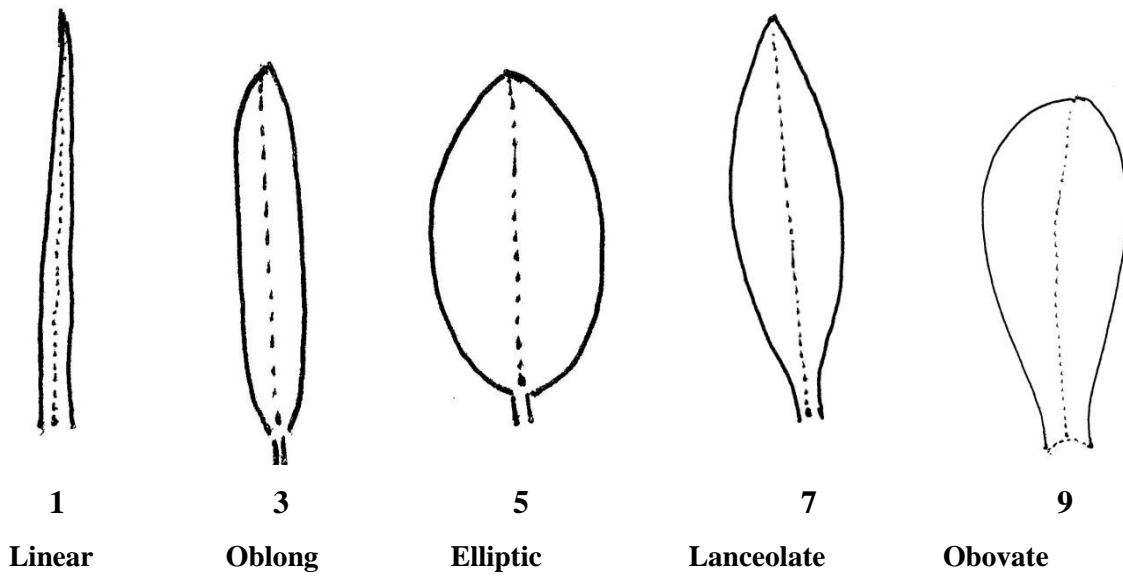


5
Truncate

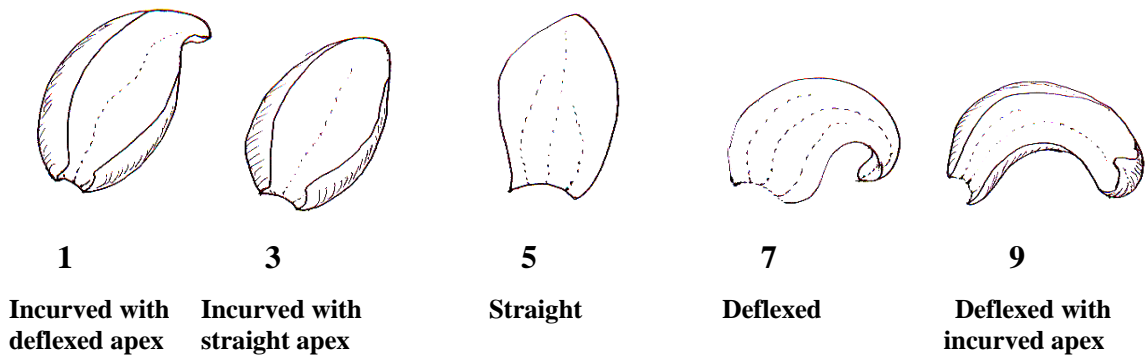


7
Bilobed

Characteristics 33: Petal shape



Characteristics 34 : Petal curvature



Characteristics 36 : Petal margin



1
Entire

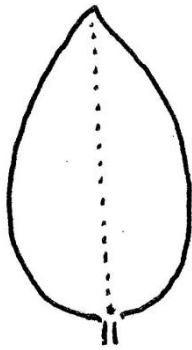


3
Undulate



5
Eroset

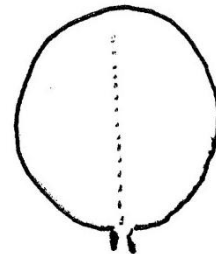
Characteristics 41 & 42 : Lip mid-lobe and lateral lobe shape



1
Ovate

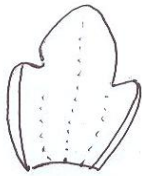


3
Lanceolate

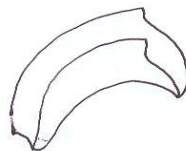


5
Orbicular

Characteristics 43: Lip mid-lobe and lateral lobe curvature



1
Straight



3
Deflexed with straight apex



5
Deflexed with incurved apex

Characteristics 44: Lip apex



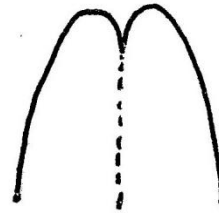
1

Acute



3

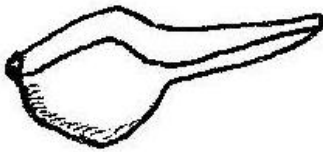
Obtuse



5

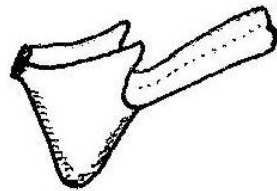
Bilobed

Characteristics 52: Spur type



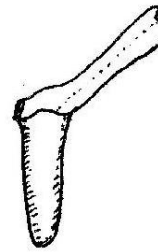
1

Saccate



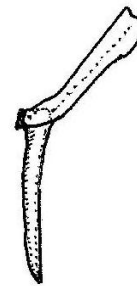
3

Conical



5

Cylindric



7

Tubular

IX. Literature

Greatwood, J., Hunt, P.F., Gribb, P.J. and Steward, J. (eds.), 1993: (4th Edition): *The handbook on orchid nomenclature and registration*. The International Orchid Commission, London, United Kingdom

Henke de Greef (2008). *Details about D.U.S. Testing for Plant Breeders Rights in Orchids in Europe*. Abstracted in Taiwan International Orchid Symposium

Karasawa, K. "*Orchid Atlas*", Vol. 6 *Cymbidium and Lycaste*, Orchid Atlas Publishing Society, c/o Yasaka Syobo, Inc. Tokyo, Japan

X. Working Group Details

These test guidelines developed by the National Core Committee in consultation with the Nodal Officer, DUS test centre, NRC for Orchids and Task Force (8/2009) constituted by the PPV & FR Authority.

Members of the Task Force (8/2009)

Dr. A.N. Rao	-	Chairman
Dr. P. K. Rajeevan	-	Member
Prof. S.K. Sood	-	Member
Dr. G.S. Rawat	-	Member
Dr. L.C. De	-	Member Secretary

Nodal Officer

Dr. L.C. De, Principal Scientist, National Research Centre for Orchids, Pakyong, Sikkim

XI. Name of DUS Test Centre

Nodal DUS Centre	Other Test Centre
National Research Centre for Orchids, Pakyong-737106, Sikkim	1. State Forest Research Institute, Chimpu, Itanagar, Arunachal Pradesh 2. College of Horticulture, Kerala Agricultural University, Trichur

