

## **Orchid (*Phalaenopsis* Blume)**

### **I. Subject**

These test guidelines apply to all vegetatively propagated varieties of *Phalaenopsis* Blume and alliance of the family Orchidaceae.

### **II. Plant Material Required**

5. 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.
6. For all varieties, 20 flowering size plants (10 for each Centre) shall be required for DUS testing.
7. The plant material supplied should be visibly healthy, not lacking in vigour nor affected by any pests or diseases or mechanical damage.
8. 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 Test**

8. The minimum duration of test should normally be two similar flowering seasons.
9. Test shall normally be conducted at two places. If any essential characteristic of the variety is 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 request of the applicant.

10. The test should be carried out under greenhouse conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.
11. The design of the test should be such that the plants or parts of the plants may be removed for measurement and counting without prejudice to the observations which must be made up to the end of the flowering period. Each test should be designed to a result in total of at least 10 plants.
12. Unless otherwise indicated, all observations determined by measuring or counting should be made on 10 plants or parts taken from each of 10 plants.
13. Additional tests for special purposes may be established.
14. Normally, growth regulators shall not be used.

#### **IV. Methods and Observations**

10. The characteristics described in the Table of Characteristics (Section VII) shall be used for the testing of varieties for their DUS.
11. For the assessment of Distinctiveness and Stability, all observations shall be made on 10 plants or parts taken from each of 10 plants.
12. 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.
13. All observations on the shoot shall be made on the flowering shoot.
14. All observations on the leaf shall be made on the longest leaf of a flowering shoot.
15. All observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and on the most recently fully opened flower on the inflorescence before fading of colour.
16. All observations on the length and width of the flower and parts of the flower shall be made in the spread out position.
17. All observations on the colour of sepal, petal, lip and column shall be made on the inner side.
18. For the assessment of colour characteristics, the Royal Horticultural Society (RHS) colour chart shall be used.

## V. Grouping of Varieties

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 is aided by the use of grouping characteristics.
4. 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. The following have been agreed as useful grouping characteristics:
  - e) Plant: size (Characteristic 1)
  - f) Flower size: width in front view (Characteristic 15)
  - g) Petal: colour pattern (Characteristic 38)
  - h) Petal: predominant colour (Characteristic 39)
  - e) Lip: colour pattern of apical lobe (Characteristic 50)
  - f) Lip: predominant colour of apical lobe (Characteristic 51)

## VI. Characteristics and Symbols

7. To assess Distinctness, Uniformity and Stability, the characteristics and their states as given in the Table of Characteristics shall be used.
8. Notes 1-9 (numbers) shall be used to describe the state of each character for the purpose of electronic data processing.
9. Legend
  - (\*) Characteristics that shall be observed during every growing season for 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

10. Characteristics denoted with symbols QL, QN and PQ in the first column of the Table of Characteristics shall be indicated as :

**QL:** Qualitative characteristic

**QN:** Quantitative characteristic

**PQ:** Pseudo-qualitative characteristic

11. (a)-(e) see Section VIII for explanation

12. 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 plant

**Table of Characteristics**

Sl. No	Characteristics	States	Notes	Example Varieties /Hybrids	Type of Assessment
1. (* QN	Plant: size (cm)	Very small (<3.0)	1	--	MS
		Small (3.0 – 4.5)	3	Dtps. ‘Younghome Orange Lip’, Dtps. ‘Acker’s Sweetie’, Dtps. ‘Big Red Robe’, Dtps. ‘Mount Lip Taisuco’, P. ‘Amabilis’, Dtps. ‘Tying Shin Zebra’, P. ‘Luchia Pink’, P. ‘Jin Cheng Sun’, P. ‘Sin Yuan Golden Beauty’, P. ‘Little Gem Stripe’, P. ‘Surf Song’, Dtps. ‘Lian Her Happy’, P. ‘Timothy Christopher’, Dtps. ‘Happy UFO’, P. ‘Big White Pink Stripe’, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy ‘GL’, P. Shu Long Spotted Deer, P. Ho’s Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung.	
		Medium (4.6 – 6.0)	5	Dtps. Plum Rose x Ox Black Jack, P. Memoria Francis Hunter, Dtps. Chin Ann Diamond ‘Alisun’, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen	

				Pearl 'Cx#1', P. Miki Wata Nabe, Dtps. Chian Xen Magpie	
		Large (>6.0 - 7.5)	7	Dtps. Shu Long Pearl, P. Taida Salu Red, Dtps. Shih Hua Long First Love	
		Extra large (>7.5)	9	P. Kaleidoscope, P. Strawberry, Dtps. Hsin Yang Fortune	
2. (* QN (a)	Leaf: length (cm)	Short (<10)	3	P. Big White Pink Stripe	MS
		Medium (10 -15)	5	Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, P. Medium Pink, P. Magic Kiss, Goldie, Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty.	
		Long (>15 - 20)	7	Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, Dtps. Hsin Yang Fortune, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Ivory Pearl, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Gan Lin Beauty Hsiung, P. Shu Long Spotted Deer, Dtps. Shu Long Pearl	
		Extra long(>20)		Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun'	
3. (* QN (a)	Leaf: width (cm)	Narrow (< 3.0)	1	--	MS
		Medium (3.0- 6.0)	3	P. Amabilis, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Big White Pink Stripe, P. Medium Pink, Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta	
		Broad (>6.0)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Magic Kiss, Goldie, P. Ivory pearl, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long	

				Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1, Dtps. Shu Long Pearl	
4. (* PQ (+ (a)	Leaf: shape	Oblong	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, P. Chian Xen Pearl 'Cx#1' Dtps. Chin Ann Diamond 'Alisun', P. Ho's Little Caroline	VG
		Narrow obovate	3	Dtps. Shulong Sun Beauty, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Gan Lin Fairy 'GL'	
		Suborbicular	5	--	
5. (+ PQ (a)	Leaf: apex	Acute	1	P. Memoria Francis Hunter	VG
		Notched	3	Dtps. Shih Hua Long First Love	
		Obtuse	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	

6. QL (a)	Leaf: anthocyanin colouration	Absent	1	Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, Leodora, Goldie, Roxanne, P. Ivory Pearl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Magic Kiss, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Chian Xen Pearl 'Cx#1' P. Ho's Little Caroline, P. Shu Long Spotted Deer	
7. (+) PQ (b)	Inflorescence type	Solitary	1	--	VS
		Raceme	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Panicle	5	--	
8. (* (+) QN (b)	Rachis length (cm)	Short (<10)	3	Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Little Gem Stripe, P. Surf Song, P. Timothy	MS

				Christopher Dtps. Happy UFO, Leodora, Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, , Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Medium (10 - 20)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Taida Salu Red, P. Luchia Pink, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, Goldie, Dtps. Leopard Princess M611, Dtps. Chin Ann Diamond 'Alisun', Taida Salu Red, P. Strawberry, P. Miki Wata Nabe, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Long (>20)	7	--	
9. (* QN (b)	Inflorescence: number of flowers	Few (<5)	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, Dtps. Shih Hua Long First Love, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	MS
		Medium (5-10)	5	Dtps. Hsin Yang Fortune, P. Strawberry, Dtps. Tying Shin Zebra, P. Luchia Pink, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, Leodora, P. Magic Kiss, Goldie, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shu Long Pearl, Dtps. Chin Ann Diamond 'Alisun', Taida Saln. Red	
		Many (>10)	7	Dtps. Younghome Orange Lip, Dtps. Taida Salu Red, P. Big White Pink Stripe, P. Medium Pink.	
10. (* QN (b)	Peduncle: length (cm)	Short (<10)	3	--	MS
		Medium (10 - 20)	5	Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, P. Surf Song, P. Big White Pink Stripe, P. Medium Pink, Leodora, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, P. Ho's Little Caroline	
		Long (>20 - 30)	7	Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, P. Champion Porter, , Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Dtps. Taida Salu Red, , P. Jin Cheng	



				Sun, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, Roxanne, P. Ivory pearl, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Taida Saln. Red	
		Extra long(>30)	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, Dtps. Lian Her Happy, Goldie, P. Lucyna, P. Carlotta, Dtps. Shu Long Pearl, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Chin Ann Diamond 'Alisun'	
11. QN (b)	Peduncle: thickness (cm)	Thin (<0.3)	3	--	MS
		Medium (0.3 - 0.6)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Thick (>0.6)	7	Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun'	
12. QL (b)	Peduncle: a nthocyanin colouration	Absent	1	Dtps. Mount Lip Taisuco, P. Amabilis, P. Surf Song, P. Big White Pink Stripe, P. Leodora, P. Goldie, P. Roxanne, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', Dtps. Gan Lin Diamond, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shu Long Pearl.	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her	

				Happy, P. Timothy Christopher, Dtps. Happy UFO, P. Medium Pink, P. Magic Kiss, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	
13. QL (b)	Flower: texture of the surface of sepals and petals	Smooth	1	P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	VG
		Rough	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Leodora, Goldie, Dtps. Gan Lin Beauty Hsiung, P. Ho's Little Caroline, Dtps. Gan Lin Fairy 'GL', Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl.	
14. (* ) (+) QN (c)	Flower: length in front view (cm)	Short (<4)	3	--	MS
		Medium (4-8)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Long (>8)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Kaleidoscope, P. Luchia Pink, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1',	

				P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
15. (* (+ QN (c)	Flower: width in front view (cm)	Narrow (<4)	3	--	MS
		Medium (4-8)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, P. Carlotta, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl, Dtps. Leopard Princess M611	
		Broad (>8)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Roxanne, P. Ivory Pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
16. (* (+ PQ (b)	Flower: arrangement of petals	Open	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Touching	3	P. Strawberry, Dtps. Ox Prince Thunder, Dtps. Shulong Sun Beauty	
		Overlapping	5	--	
17. QL	Flower: fragrance	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang	VS

				Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Present	9	P. Surf Song, P. Leodora, Goldie, Dtps. Acker's Sweetie	
18. (* QN (c)	Dorsal sepal: length (cm)	Short (<3)	3	P. Strawberry, Dtps. Tying Shin Zebra, P. Leodora, Goldie, P. Carlotta, P. Ho's Little Caroline, Dtps. Leopard Princess M611	MS
		Medium (3-4)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco P. Champion Porter, P. Amabilis, Dtps. Shih hua long first love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Long (>4)	7	Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory Pearl, Dtps. Acker's Sweetie, P. Memoria Francis Hunter, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Chian Xen Magpie	
19. (* QN (c)	Dorsal sepal: width (cm)	Narrow (<2)	3	Dtps. Tying Shin Zebra, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Ho's Little Caroline	MS
		Medium (2-4)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia	

				Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl, Taida Salu Red	
		Broad (>4)	7	--	
20. (* (+) PQ	Dorsal sepal: shape	Oblong	1	--	
		Ovate	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Elliptic	5	Dtps. Hsin Yang Fortune, P. Amabilis, Dtps. Tying Shin Zebra, Medium pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna	
		Obovate	7	--	
		Round	9	--	
21. (* PQ	Dorsal sepal: curvature of longitudina l axis	Incurved	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis	VG

				Hunter, Dtps. Ox Prince Thunder , Dtps. Leopard Princess M611, Dtps. Shulong Sun Beauty, P. Shu Long Spotted Deer, Dtps. Shu Long Pearl	
		Straight	3	P. Medium Pink	
		Reflexed	5	P. Taida Salu, P. Jin Cheng Sun, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
22. (* PQ	Dorsal sepal: undulation of margin	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VG
		Present	9	Dtps. Acker's Sweetie, Dtps. Shulong Sun Beauty	
23. QN (d)	Dorsal sepal: number of colours	One	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, P. Memoria Francis Hunter	VG
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond	

				'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Lian Her Happy Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Chian Xen Magpie	
24. QL (d)	Dorsal sepal: colour pattern	Uniform	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Ivory pearl, P. Memoria Francis Hunter	VS
		Shaded	2	Dtps. Acker's Sweetie, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, Dtps. Taida Salu Red, P. Jin Cheng Sun, Dtps. Lian Her Happy, P. Roxanne, Dtps. Ox Prince Thunder Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	Dtps. Big Red Robe, P. Strawberry P. Carlotta	
		Striped	4	P. kaleidoscope	
		Netted	5	Dtps. Tying Shin Zebra, P. Sin Yuan Golden Beauty	
		Spotted	6	Dtps. Plum Rose x Ox Black Jack, P. Champion Porter, P. Surf Song, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Gan Lin Fairy 'GL', Dtps. Shulong Sun Beauty, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shu Long Pearl	
		Mixed (specify)	7	P. Big White Pink Stripe (Shaded and striped), P. Taida Salu, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Brother Girl, Dtps. Chian Xen Magpie (Striped and spotted), P. Medium Pink (Edged and striped)	
25. QL (d)	Dorsal sepal: dominant colour as per RHS colour chart	Green	1	--	VS
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Dtps. Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
26. QN (c)	Lateral sepal: length (cm)	Short (<3)	3	P. Strawberry	MS
		Medium (3-4)	5	Dtps. Taida Salu Red, P. Kaleidoscope, Dtps. Shih Hua Long First Love	
		Long (>4)	7	P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
27.	Lateral	Narrow (<2)	3	P. Strawberry	MS

QN (c)	sepal: width	Medium (2-4)	5	Dtps. Taida Salu Red, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Broad (>4)	7	--	
28. (+) PQ	Lateral sepal: shape	Oblong	1	--	VG
		Ovate	3	Dtps. Taida Saln Red, P. Strawberry, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Elliptic	5	P. Kaleidoscope, P. Miki Wata Nabe	
		Obovate	7	--	
		Round	9	--	
29. QL (d)	Lateral sepal: Number of colours	One	1	Dtps. Mount Lip Taisuco, P. Amabilis	MS
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Tying Shin Zebra Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Diamond Dtps. Chian Xen Magpie	
30. QL (d)	Lateral sepal: colour pattern	Uniform	1	Dtps. Mount Lip Taisuco	VG
		Shaded	2	Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	--	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	P. Champion Porter, P. Surf Song, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Sogo Soft, Dtps. Shu Long Pearl	



		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack (spotted and edged), Dtps. Younghome Orange Lip (evenly colored and spotted at the base), Dtps. Acker's Sweetie (shaded and spotted), Dtps. Hsin Yang Fortune (evenly colored and spotted at the base), Dtps. Big Red Robe (spotted and edged), P. Miki Wata Nabe (shaded and spotted at the base), P. Amabilis (evenly colored and spotted at the base), P. Strawberry (edged and spotted), Dtps. Shih Hua Long First Love (one half evenly colored and other half shaded and spotted), P. Taida Salu (striped and spotted), Dtps. Tying Shin Zebra (netted and spotted), Dtps. Taida Salu Red (shaded and spotted), P. Kaleidoscope (shaded, striped and spotted), P. Luchia Pink (netted and spotted), P. Jin Cheng Sun (evenly coloured and shaded at the base), P. Sin Yuan Golden Beauty (netted and spotted), Dtps. Chian Xen Magpie (netted and spotted), P. Little Gem Stripe (striped and spotted), Dtps. Lian Her Happy (shaded and spotted), P. Timothy Christopher Dtps. Happy UFO (striped and spotted), P. Big White Pink Stripe (shaded, striped and spotted), P. Medium Pink (striped, spotted and edged), P. Leodora (shaded and spotted), P. Roxanne (shaded and spotted), P. Ivory pearl (evenly colored and spotted at the base), P. Brother Girl (striped and spotted), P. Memoria Francis Hunter (evenly colored and shaded at the base), P. Carlotta (Edged and spotted), Dtps. Gan Lin Fairy 'GL' (shaded and spotted), P. Shu Long Spotted Deer (shaded and spotted), P. Ho's Little Caroline (shaded and spotted), Dtps. Gan Lin Beauty Hsiung (shaded and spotted), Dtps. Chin Ann Diamond 'Alisun' (shaded and spotted), Dtps. Gan Lin Diamond (shaded and spotted), Dtps. Shulong Sun Beauty (shaded and spotted)	
31. QL (d)	Lateral sepal: dominant colour as per RHS colour chart	Green	1	--	VG
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
32. (+)	Petal: shape	Oblong	1	--	VS
		Elliptic	3	--	

PQ		Ovate	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Sub-orbicular	7	Dtps. Hsin Yang Fortune, P. Amabilis, Dtps. Tying Shin Zebra, P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, P. Lucyna, Dtps. Leopard Princess M611, Dtps. Sogo Soft., Dtps. Shih Hua Long First Love	
33. (* QN (c)	Petal: length (cm)	Short (<3.0)	3	Dtps. Younghome Orange Lip, P. Amabilis, P. Strawberry, P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline	MS
		Medium (3.0-4.5)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Dtps. Sogo Soft, Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Long (>4.5)	7	P. Miki Wata Nabe, Dtps. Tying Shin Zebra, P. Surf Song, P. Ivory pearl	
34. (* QN (c)	Petal: width (cm)	Narrow (<3.0)	3	P. Medium Pink, P. Magic Kiss, Goldie, P. Leodora, Dtps. Tying Shin Zebra, P. Lucyna, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline	MS
		Medium (3.0-4.5)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter,	

				P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, P. Surf Song, P. Timothy Christopher dtps. happy UFO, P. Big White Pink Stripe, Dtps. Sogo Soft, Dtps. Shu Long Pearl	
		Broad (>4.5)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, , P. Luchia Pink, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1'	
35. (* (+) PQ	Petal: curvature of longitudina l axis	Incurved	1	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Shulong Sun Beauty, Dtps. Sogo Soft	VG
		Straight	3	Dtps. Plum Rose x Ox Black Jack, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih hua long first love, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Luchia Pink, P. Surf Song, P. Medium Pink, Goldie, P. Roxanne, Taida Salu. Red	
		Reflexed	5	P. Taida Salu, Taida salu red, P. Jin Cheng Sun, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, P. Leodora, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
36. PQ	Petal: undulation of margin	Absent	1	Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung, Taida Saln. Red	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem	

				Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
37. QL (d)	Petal: number of colors	One	1	Dtps. Younghome Orange Lip, Dtps. Big Red Robe, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, P. Surf Song, P. Ivory pearl	VG
		Two	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, P. Miki Wata Nabe, P. Champion Porter, Dtps. Shih Hua Long First Love, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Three or more	5	Dtps. Lian Her Happy, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung, Dtps. Chian Xen Magpie	
38. (* QL (d)	Petal: color pattern	Uniform	1	Dtps. Younghome Orange Lip, Dtps. Mount Lip Taisuco, Dtps. Hsin Yang Fortune, P. Amabilis, P. Ivory pearl	VG
		Shaded	2	P. Miki Wata Nabe, P. Roxanne, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1'	
		Edged	3	P. Strawberry, P. Carlotta	
		Striped	4	--	
		Netted	5	P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie	
		Spotted	6	P. Champion Porter, P. Surf Song, P. Magic Kiss, Goldie, P. Lucyna, Dtps. Shulong Sun Beauty, Dtps. Sogo Soft, Dtps. Shu Long Pearl.	
		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack (shaded and spotted), Dtps. Acker's Sweetie (evenly colored and shaded at the base), Dtps. Big Red Robe (netted and edged), Dtps. Shih Hua Long First Love (shaded and spotted at the base and evenly colored), P. Taida Salu (netted and spotted), Dtps.	

				Lian Her Happy (shaded and spotted), Dtps. Tying Shin Zebra (netted and shaded at the base), Dtps. Taida Salu Red (shaded and spotted), P. kaleidoscope (striped and netted), P. Jin Cheng Sun (shaded and spotted), P. Little Gem Stripe (netted and spotted), P. Timothy Christopher Dtps. Happy UFO (netted and spotted), P. Big White Pink Stripe (shaded and netted), P. Medium Pink (netted and edged), P. Leodora (shaded and spotted) P. Brother Girl (netted, spotted and edged), P. Memoria Francis Hunter (evenly colored and spotted) Dtps. Gan Lin Fairy 'GL' (shaded and spotted), P. Shu Long Spotted Deer (shaded and spotted), P. Ho's Little Caroline (shaded and netted), Dtps. Gan Lin Beauty Hsiung (shaded and spotted), Dtps. ChinAnn Diamond 'Alisun' (shaded and spotted), Dtps. Gan Lin Diamond (shaded and spotted),	
39. (* QL (d)	Petal: predominant colour as per RHS colour chart	Green	1	--	VS
		White	2	P. Kaleidoscope, P. Miki Wata Nabe, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	Dtps. Taida Salu Red, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
40. QN (c)	Lip: length of apical lobe (cm)	Short (<1)	3	--	MG
		Medium (1-2)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl, Taida Saln. Red	
		Long (>2)	7	Dtps. Acker's Sweetie, Dtps. Big Red Robe, P. Miki Wata Nabe, P. Luchia Pink, Dtps. Lian Her Happy, P. Roxanne, P. Ivory pearl, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer,	

				Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
41. QN (c)	Lip: width of apical lobe (cm)	Narrow (<1)	3	--	MG
		Medium (1-2)	5	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Chin Ann Diamond 'Alisun', Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
		Broad (>2)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Amabilis, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, Dtps. Lian Her Happy, P. Big White Pink Stripe, Dtps. Ox Prince Thunder, Dtps. Gan Lin Fairy 'GL', P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer, Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
42. (+) PQ (c)	Lip: presence of whiskers	Absent	1	P. Surf Song, P. Leodora, P. Goldie	VG
		Present	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
43. PQ (c)	Lip: length of whiskers relative to length of	Smaller	3	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P.	VG

	apical lobe			Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher, Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Equal	5	P. Ivory Pearl	
		Larger	7	--	
44. (* (+) PQ	Lip: shape of apical lobe	Ovate	1	P. Ho's Little Caroline	VS
		Elliptic	2	Dtps. Hsin Yang Fortune, Dtps. Tying Shin Zebra, P. Surf Song, P. Goldie, P. Carlotta	
		Obovate	3	--	
		Semi-circular	4	--	
		Deltoid	5	P. Leodora	
		Obdeltoid	6	P. Champion Porter, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder	
		Rhombic	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, , Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl, P. Strawberry	
		Orbicular	8	--	
45. (* (+)	Lip: bump and ridge on apical	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, P.	VG

PQ	lobe			Amabilis, P. Luchia Pink, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Shu Long Spotted Deer, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Gan Lin Beauty Hsiung	
		Present	9	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Champion Porter, P. Strawberry, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. P. Leodora, P. P. Magic Kiss, P. Goldie, P. P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
46. (+) PQ	Lip: shape of lateral lobe	Semi-circular	1	P. Leodora	VG
		Oblong	3		
		Ob lanceolate	5	Dtps. Tying Shin Zebra, P. Surf Song	
		Obtriangle	7	Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Champion Porter, P. Taida Salu, P. Kaleidoscope, P. Little Gem Stripe, P. Timothy Christopher Dtps. Happy UFO, P. Magic Kiss, Goldie, P. Lucyna, P. Carlotta, Dtps. Leopard Princess M611, P. Ho's Little Caroline, Dtps. Sogo Soft	
		Sub-orbicular	9	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, P. Strawberry, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, Dtps. Lian Her Happy, P. Big White Pink Stripe, P. Medium Pink, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl.	
47. (+) PQ	Lip: curvature of lateral lobe	Slightly incurved	3	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, P. Miki Wata Nabe, P. Amabilis, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P.	VG



				Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Chian Xen Pearl 'Cx#1', P. Shu Long Spotted Deer, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung.	
		Strongly incurved	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Champion Porter, P. Strawberry, Dtps. Shih Hua Long First Love, P. Luchia Pink, P. Little Gem Stripe P. Lucyna, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, Dtps. Shu Long Pearl	
48. PQ (c)	Lip: size of lateral lobe relative to apical lobe	Smaller	3	Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl.	VS
		Equal	5	Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Luchia Pink.	
		Larger	7	Dtps. Plum Rose x Ox Black Jack, P. Medium Pink	
49. QL	Lip: number of	One	1	--	VG
		Two	3	--	

(d)	colours	Three or more	5	Dtps. Acker's Sweetie, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, P. Taida Salu, Dtps. Taida Salu Red, P. Luchia Pink, P. Jin Cheng Sun, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Magic Kiss, Goldie, P. Lucyna, Brother Girl, P. Memoria Francis Hunter, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, P. Kaleidoscope, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Leodora, P. Roxanne, P. Ivory pearl, Dtps. Ox Prince Thunder, Dtps. Sogo Soft, Dtps. Shu Long Pearl	
50. (* QL (d)	Lip: color pattern of apical lobe	Uniform	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Acker's Sweetie, P. Champion Porter, P. Strawberry, P. Big White Pink Stripe, P. Medium Pink, P. Brother Girl, P. Carlotta, Dtps. Gan Lin Fairy 'GL'	VG
		Shaded	2	Dtps. Younghome Orange Lip, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Amabilis, , Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, Dtps. Lian Her Happy, P. Leodora, P. Magic Kiss, P. Roxanne, P. Ivory pearl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Edged	3	P. Timothy Christopher Dtps. Happy UFO	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	P. Surf Song, Goldie, P. Lucyna, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond.	
		Mixed (specify)	7	--	
51. (* )	Lip: predominant	Green	1	--	VG
		White	2	P. Miki Wata Nabe, P. Miki Wata Nabe	

QL (d)	t colour of apical lobe as per RHS colour chart	Pink	3	--	
		Yellow	4	P. Memoria Francis Hunter	
		Red	5	Dtps. Hsin Yang Fortune	
		Purple	6	Dtps. Taida Salu Red, P. Kaleidoscope, P. Strawberry, Dtps. Shih Hua Long First Love, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
52. (* QL (d)	Lip: colour pattern of lateral lobe	Uniform	1	--	VG
		Shaded	2	Dtps. Lian Her Happy, P. Roxanne, P. Ivory pear, P. Memoria Francis Hunter, Dtps. Leopard Princess M611, Dtps. Shulong Sun Beauty, P. Shu Long Spotted Deer, Dtps. Sogo Soft.	
		Edged	3	--	
		Striped	4	--	
		Netted	5	--	
		Spotted	6	--	
		Mixed (specify)	7	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, Goldie, P. Lucyna, P. Brother Girl, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Gan Lin Fairy 'GL', P. Ho's Little Caroline, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl (Shaded and spotted)	
53. (* QL	Lip: dominant colour of lateral lobe as per RHS colour chart	Green	1	--	VS
		White	2	P. Miki Wata Nabe	
		Pink	3	--	
		Yellow	4	P. Memoria Francis Hunter	
		Red	5	--	
		Purple	6	Dtps. Taida Salu Red, P. Kaleidoscope, P. Strawberry, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	

		Violet	8	--	
54. (+) PQ	Lip: callus	Prominent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VS
		Flat	9	--	
55. PQ	Lip: pubescence	Absent	1	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Big Red Robe, Dtps. Mount Lip Taisuco, P. Miki Wata Nabe, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Shih Hua Long First Love, P. Taida Salu, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Kaleidoscope, P. Luchia Pink, P. Jin Cheng Sun, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Leodora, P. Magic Kiss, P. Goldie, P. Roxanne, P. Ivory Pearl, P. Lucyna, P. Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, P. Carlotta, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Chin Ann Diamond 'Alisun', Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	VS
		Present	9	--	
56. QN (c)	Column: length (cm)	Short (<0.5)	3	--	MS
		Medium (0.5-1.0)	5	Dtps. Plum Rose x Ox Black Jack, Dtps. Younghome Orange Lip, Dtps. Acker's Sweetie, Dtps. Hsin Yang Fortune, Dtps. Mount Lip Taisuco, Dtps. Big Red Robe, P. Miki Wata Nabe, Dtps. Shih Hua Long First Love, P.	

				Taida Salu, P. Champion Porter, P. Amabilis, P. Strawberry, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Luchia Pink, P. Sin Yuan Golden Beauty, Dtps. Chian Xen Magpie, P. Kaleidoscope, P. Little Gem Stripe, P. Surf Song, Dtps. Lian Her Happy, P. Timothy Christopher Dtps. Happy UFO, P. Big White Pink Stripe, P. Medium Pink, P. Roxanne, P. Lucyna, Brother Girl, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Leopard Princess M611, Dtps. Gan Lin Fairy 'GL', P. Shu Long Spotted Deer, P. Ho's Little Caroline, Dtps. Sogo Soft, Dtps. Gan Lin Beauty Hsiung, Dtps. Gan Lin Diamond, Dtps. Shulong Sun Beauty, P. Chian Xen Pearl 'Cx#1', Dtps. Shu Long Pearl	
		Long (>1.0-1.5)	7	P. Jin Cheng Sun, P. Magic Kiss, P. Leodora, Goldie, P. Ivory Pearl, P. Carlotta, Dtps. Chin Ann Diamond 'Alisun'	
		Extra long(>1.5)	9	--	
57. (* QL (e)	Column: colour as per RHS colour chart	Green	1	--	VS
		White	2	Dtps. Taida Salu Red, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Hsin Yang Fortune, Dtps. Shih Hua Long First Love, P. Memoria Francis Hunter, Dtps. Ox Prince Thunder, Dtps. Chian Xen Magpie	
		Pink	3	--	
		Yellow	4	--	
		Red	5	--	
		Purple	6	P. Strawberry, Dtps. Plum Rose x Ox Black Jack	
		Blue	7	--	
		Violet	8	--	
58. QN	Flower longevity on the plant (days)	Short (<15)	3	P. Strawberry, P. Memoria Francis Hunter.	VS
		Medium (15-30)	5	P. Lucyna, Dtps. Younghome Orange Lip, P. Ivory Pearl, Dtps. Plum Rose x Ox Black Jack	
		Long (>30)	7	Dtps. Shih Hua Long First Love, Dtps. Tying Shin Zebra, Dtps. Taida Salu Red, P. Timothy Christopher Dtps. Happy UFO, P. Surf Song, P. Medium Pink, P. Leodora, Dtps. Ox Prince Thunder, P. Jin Cheng Sun, P. Magic Kiss, P. Little Gem Stripe, Dtps. Hsin Yang Fortune, P. Kaleidoscope, P. Miki Wata Nabe, Dtps. Chian Xen Magpie	

### VIII. Explanation 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 should be examined as indicated below:

- (f) Observations on the leaf should be made on the longest leaf of flowering plant..
- (g) Observations on the inflorescence and the flower shall be made at the time when 50% of the flowers on the inflorescence have opened and the most recently fully opened flower on the inflorescence before the color starts to fade.
- (h) Observations on the length and width of the flower and parts of the flower shall be made on the spread out positions.
- (i) Observations on the color of the sepal, the petal and the lip shall be made on inner side at apex, mid and base portion.
- (j) Observations on the colour of column shall be made on inner side at apex, mid and basal region.

## 8.2 Explanation for individual characteristics

### Charcteristic 4: Leaf shape



**1**  
**Oblong**



**3**  
**Narrow obovate**



**5**  
**Suborbicular**

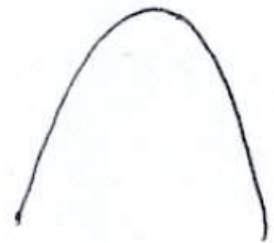
### Charcteristic 5: Leaf apex



**1**  
**Acute**



**3**  
**Notched**



**5**  
**Obtuse**

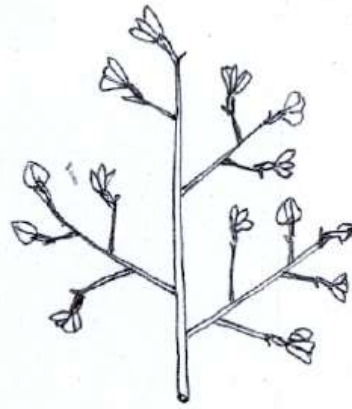
### Charcteristic 7: Inflorescence type



**1**  
**Solitary**

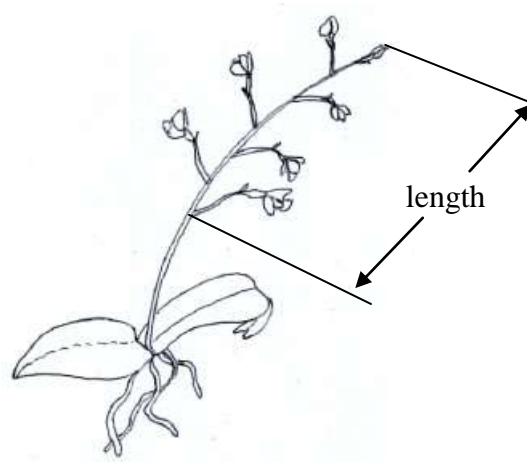


**3**  
**Raceme**



**5**  
**Panicle**

**Charcteristic 8: Rachis length**

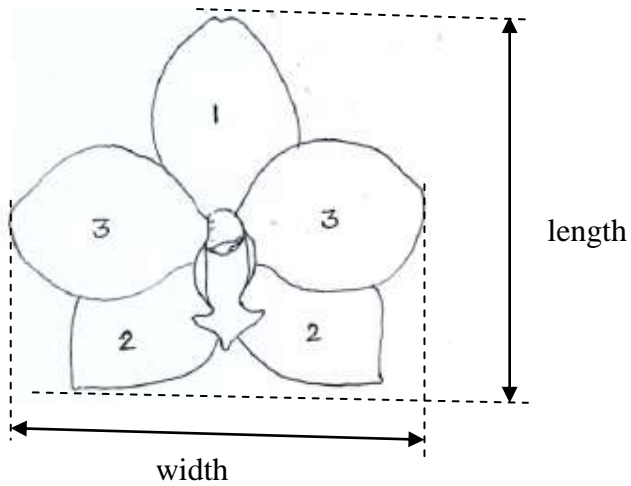


**Charcteristics 14 &15: Flower: length (14) & width (15) in front view**

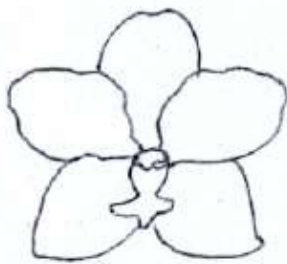
**1: Dorsal sepal**

**2: Lateral sepal**

**3: Petal**



**Charcteristic 16: Flower arrangement of petals**



1  
Open



3  
Touching



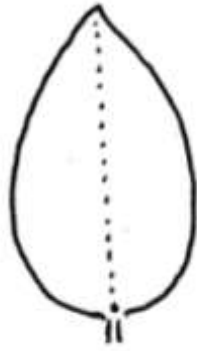
5  
Overlapping



**Charcteristics 20 & 28: Shape of Dorsal sepal (20) and Lateral sepal (28)**



**1**  
**Linear**



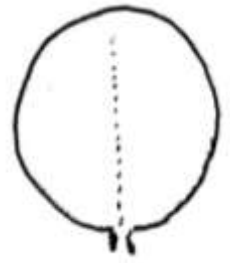
**3**  
**Ovate**



**5**  
**Elliptic**



**7**  
**Obovate**



**9**  
**Round**

**Charcteristics 21 & 35: Curvature of Dorsal sepal (21) and petal (35)**



**1**  
**Incurved**



**3**  
**Straight**

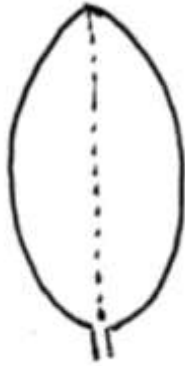


**5**  
**Reflexed**

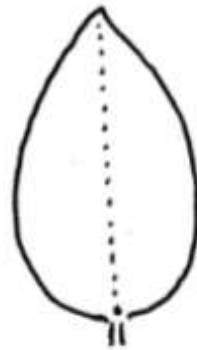
**Charcteristics 32: Petal shape**



**1**  
**Oblong**



**3**  
**Elliptic**

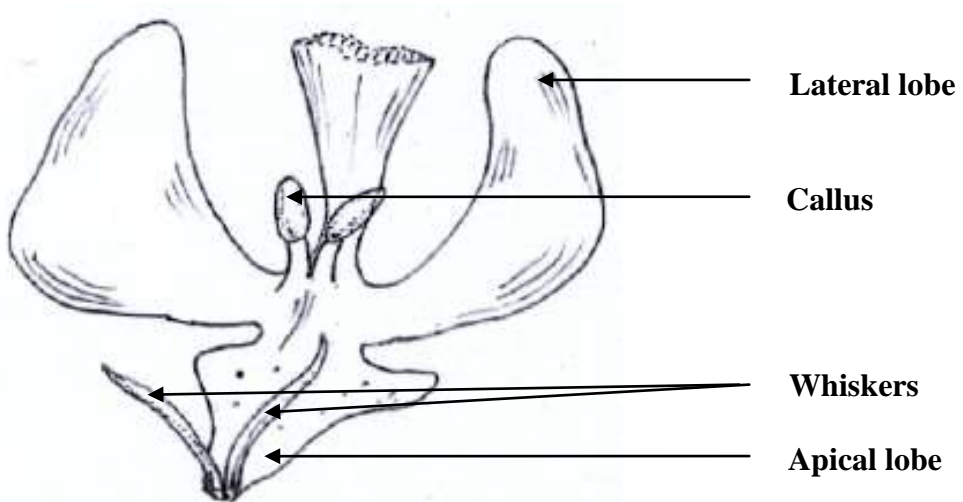


**5**  
**Ovate**



**7**  
**Suborbicular**

**Charcteristics 42 and 54: Lip: presence of whiskers (42) and callus (54)**



**Charcteristic 44: Lip: shape of apical lobe**



**1**  
**Ovate**



**2**  
**Elliptic**



**3**  
**Obovate**



**4**  
**Semi circular**



**5**  
**Deltoid**



**6**  
**Obdeltoid**

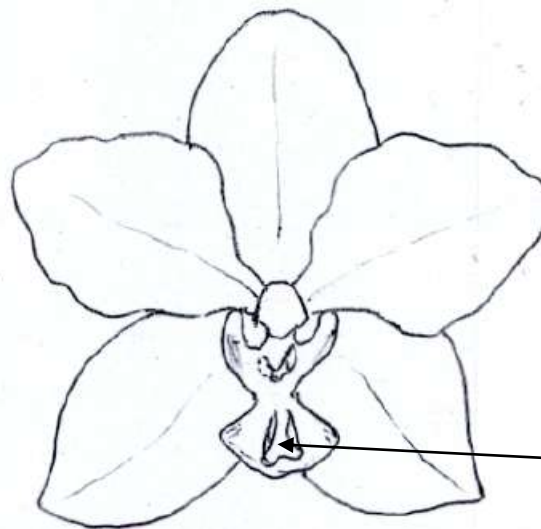


**7**  
**Rhombic**



**8**  
**Orbicular**

**Charcteristics 45: Lip: bump and ridge on apical lobe**



**Bump and ridge**

**Charcteristic 46: Lip: shape of lateral lobe**



**1**  
**Semi circular**



**3**  
**Oblong**



**5**  
**Oblanceolate**



**7**  
**Obtriangular**



**9**  
**Sub orbicular**

**Charcteristic 47: Lip: Curvature of lateral lobe**



**3**  
**Slightly incurved**



**7**  
**Strongly incurved**

**IX. Name of DUS Test Centres**

Nodal DUS test Centre	Other Test Centre
College of Horticulture, Kerala Agricultural University, Trichur	1. National Research Centre for Orchids, Pakyong-737106, Sikkim 2. Department of Floriculture and Landscaping Y.S. Parmar University of Horticulture and Forestry, Nauni, Solan, Himachal Pradesh