

Plant		Dendrobium		494	Primary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Stem length	5 plants	Measurement	mm (integer)		Length of pseudobulb at flowering time
2	Leaf length	5 plants	Measurement	mm (integer)		Maximum leaf length
3	Leaf width	5 plants	Measurement	mm (integer)		Maximum leaf width
4	Leaf number	5 plants	Measurement	leaves (integer)		Leaf number on normal pseudobulb at flowering time
5	Flower number per pseudobulb	5 plants	Measurement	flowers (round to the 1st decimal place)		Measure at flowering time
6	Flower diameter	5 flowers	Measurement	mm (integer)		Measure at flowering time
7	Length of dorsal sepal	5 flowers	Measurement	mm (integer)		Measure at flowering time
8	Length of petal	5 flowers	Measurement	mm (integer)		Measure at flowering time
9	Length of lip	5 flowers	Measurement	mm (integer)		Measure at flowering time
10	Color of flower	5 flowers	Observation	1:White 2:Yellow 3:Orange 4:Red 5:Pink 6:Purple 7:Brown 8:Green 9:Multi colored		Observe at flowering time
11	Flowering time	5 plants	Observation	date		Observe at flowering time

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1	Shape of plant	5 plants	Observation	2:Erect 4:Prostrate 5:Semi-deflexed 8:Deflexed		Observe at flowering time
2	Shape of pseudobulb	5 plants	Observation	2:Filiform 3:Linear 4:Narrow rectangle 5:Broad linear 6:Ovate 7:Elliptic 8:Orbicular 9:Others		Front view
3	Shape of pseudobulb	5 plants	Observation	1:Linear 3:Quadrangular 4:Pentagon 6:Multangular 8:Elliptic 9:Orbicular		Cross section
4	Stem diameter	5 plants	Measurement	mm (round to the 1st decimal place)		Measure at flowering time
5	Color of pseudobulb	5 plants	Observation			Indicate reference number of JHS color chart
6	Shape of leaf	5 plants	Observation	2:Linear lanceolate 3:Broad linear 4:Lanceolate 5:Linear oblong 6:Oblong 7:Triangular 8:Clavate 9:Other		Observe at flowering time
7	Shape of leaf apex	5 plants	Observation	2:Acute 3:Unequal acute 5:Obtuse 6:Unequal obtuse 7:Emarginate 8:Unequal emarginate		Observe at flowering time
8	Thickness of leaf	5 plants	Measurement	mm (round to the 1st decimal place)		Measure at flowering time
9	Angle of leaf	5 plants	Observation	1:Erect 3:Semi-erect 5:Horizontal 7:Deflexed		Observe at flowering time
10	Color of leaf	5 plants	Observation	3:Light green 5:Green 7:Dark green 9:Other		Surface color
11	Coloration of sheath	5 plants	Observation	0:Absent 9:Present		Observe at flowering time
12	Color of sheath	5 plants	Observation			Indicate reference number of JHS color chart
13	Hairiness of leaf or sheath	5 plants	Observation	0:Absent 9:Present		Observe at flowering time
14	Color of hair	5 plants	Observation	2:White 5:Black 9:Others		Observe at flowering time
15	Number of node	5 plants	Measurement	nodes (integer)		Measure at flowering time
16	Inflorescence	5 plants	Observation	5:Raceme 7:Panicle		Observe at flowering time

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17	Length of flower stem	5 flowers	Measurement	mm (integer)		Measure at flowering time
18	Circumference of flower stem	5 flowers	Measurement	mm (round to the 1st decimal place)		Measure at flowering time
19	Color of flower stem	5 flowers	Observation			Indicate reference number of JHS color chart
20	Angle of flower stem	5 flowers	Observation	1:Erect 3:Semi-Erect 5:Horizontal 7:Deflexed		Observe at flowering time
21	Length of pedicel	5 flowers	Measurement	mm (integer)		Measure at flowering time
22	Circumference of pedicel	5 flowers	Measurement	mm (round to the 1st decimal place)		Measure at flowering time
23	Length of spur	5 flowers	Measurement	mm (integer)		Measure at flowering time
24	Shape of dorsal (upper) sepal	5 flowers	Observation	1:Linear 2:Linear-lanceolate 3:Broad linear 4:Lanceolate oblong 5:Elliptical 6:Oblong 7:Oblanceolate-oblong 8:Obovate		
25	Shape of dorsal sepal apex	5 flowers	Observation	3:Attenuate-acuminate 4:Acute 5:Mucronate 6:Truncate 7:Retuse		Observe at flowering time
26	Curvature of dorsal sepal	5 flowers	Observation	3:Inflected 5:Flat 7:Reflexed		Observe at flowering time
27	Undulation of dorsal sepal margin	5 flowers	Observation	0:Absent 3:Weak 5:Intermediate 7:Strong		Observe at flowering time
28	Rib of dorsal sepal	5 flowers	Observation	0:Absent 9:Present		Observe at flowering time
29	Width of dorsal sepal	5 flowers	Measurement	mm (integer)		Measure at flowering time
30	Shape of lateral sepal	5 flowers	Observation	2:Linear 3:Lanceolate 4:Narrow reniform 5:Lanceolate oblong 6:Oval 7:Oblanceolate-oblong 8:Deltoid		

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31	Shape of lateral sepal apex	5 flowers	Observation	3:Attenuate-acuminate 4:Acuminate 5:Mucronate 6:Truncate 7:Retuse		Observe at flowering time
32	Curvature of lateral sepal	5 flowers	Observation	3:Inflected 5:Flat 7:Reflexed		Observe at flowering time
33	Undulation of lateral sepal margin	5 flowers	Observation	0:None 3:Weak 5:Intermediate 7:Strong		Observe at flowering time
34	Rib of lateral sepal	5 flowers	Observation	0:Absent 9:Present		Observe at flowering time
35	Length of lateral sepal	5 flowers	Measurement	mm (integer)		Measure at flowering time
36	Width of lateral sepal	5 flowers	Measurement	mm (integer)		Measure at flowering time
37	Shape of petal	5 flowers	Observation	1:Linear 2:Linear-spathulate 3:Narrow lanceolate-spatulate 4:Narrow rectangle 5:Narrow-rhombate 6:Spathulate 7:Rectangle 8:Oval 9:Square		
38	Shape of petal apex	5 flowers	Observation	3:Attenuate-acuminate 4:Acuminate 5:Mucronate 6:Truncate 7:Retuse		Observe at flowering time
39	Curvature of petal	5 flowers	Observation	3:Inflected 5:Flat 7:Reflexed		Observe at flowering time
40	Undulation of petal margin	5 flowers	Observation	0:Absent 3:Weak 5:Intermediate 7:Strong		Observe at flowering time
41	Fringe (incisions) of petal margin	5 flowers	Observation	0:Absent 3:Weak 5:Intermediate 7:Strong 9:Very strong		Observe at flowering time
42	Rib of petal	5 flowers	Observation	0:Absent 9:Present		Observe at flowering time
43	Attitude of petal	5 flowers	Observation	3:Upwards 5:Semi-upwards 6:Horizontal 8:Downwards		Observe at flowering time
44	Width of petal	5 flowers	Measurement	mm (integer)		Measure at flowering time

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
45	Shape of lip	5 flowers	Observation	2:Type I 4:Type II 6:Type III 8:Type IV		Observe at flowering time
46	Curvature of vertical section of lip	5 flowers	Observation	3:Inflected 5:Flat 7:Reflexed		Observe at flowering time
47	Shape of lip apex	5 flowers	Observation	1:Acute 2:Mucronate 3:Mucronate-truncate 5:Orbicular 7:Retuse 9:Cordate		Observe at flowering time
48	Undulation of lip margin	5 flowers	Observation	0:None 3:Weak 5:Intermediate 7:Strong		Observe at flowering time
49	Fringe (incisions) of lip margin	5 flowers	Observation	0:None 3:Weak 5:Intermediate 7:Strong 9:Very strong		Observe at flowering time
50	Hair on lip	5 flowers	Observation	0:Absent 9:Present		Observe at flowering time
51	Callus on lip	5 flowers	Observation	0:None 3:Weak 5:Intermediate 7:Strong		Observe at flowering time
52	Width of lip	5 flowers	Measurement	mm (integer)		Measure at flowering time
53	Color of dorsal sepal	5 flowers	Observation			Color from apex to bottom. Indicate reference number of JHS color chart. A:netted, B:ground color, D:dotting, E:egged, F:picotee, J:vertical stripes, K:wedge, S:shading, T:tipped, V-X:multicolored, Y:horizontal stripes, example B4321, T234B4321, K3231B4321, B4321 (J3231)
54	Color of lateral sepal	5 flowers	Observation			A:netted, B:ground color, D:dotting, E:egged, F:picotee, J:vertical stripes, K:wedge, S:shading, T:tipped, V-X:multicolored, Y:horizontal stripes, example B4321, T234B4321, K3231B4321, B4321(J3231). Same as dosal sepal
55	Color of petal	5 flowers	Observation			Same as dorsal sepal

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56	Color of lip	5 flowers	Observation		Indicate reference number of JHS color chart. Position of lip (T:epicotyl, M:mesocotyle (eye), N:hypocotyl (throat) and R:continuous, Q:uncontinuous coloration around the hypocotyl), example T2344B3232V2334M4534N2312(J8910)
57	Color of column	5 flowers	Observation		Base color (B) and color of the upper part of column, example T2344B3232 column(T), 3232 (mono-color)
58	Color of pollinium	5 flowers	Observation		Base color (B) and color of the upper part of pollinium (T), example T2322B3232, 3232(mono-color)

Plant		Dendrobium		494	Secondary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Flowering habit	5 plants	Observation	1:1 year bulb only 2:2 years bulb only 3:3 years bulb only 4:1 to 2 years bulb 5:2 to 3 years bulb 6:3 to 4 years bulb 7:1 to 3 years bulb 8:2 to 4 years bulb 9:Other		Period from sprouting to flowering of previous pseudobulb
2	Sprouting date of previous flowering pseudobulb	5 plants	Observation	date		Compared with standard variety
3	Number of sprouting pseudobulbs per previous pseudobulb	5 plants	Observation	2:1 4:2 6:3 8:Over 4		Measure at flowering time
4	Time of last leaf emergence	5 plants	Observation	date		Average date
5	Time of flower bud formation	5 plants	Observation	date		Average date
6	Vegetative offshoot formation	5 plants	Observation	0:None 3:Weak 5:Intermediate 7:Strong 9:Very strong		Observe at flowering time

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Optimal temperature for flower bud initiation	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
2	Critical temperature for flower bud initiation	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
3	Days for ripening of psuedo-bulb	5 plants	Observation	2:Very short 3:Short 4:Slightly short 5:Intermediate 6:Slightly long 7:Long 8:Very long		Compared with standard variety
4	Resistance to diseases	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
5	Resistance to pest insects	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
6	Tolerance to low temperature	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
7	Tolerance to high temperature	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high		Compared with standard variety
8	Propagation efficiency	5 plants	Observation	2:Very easy 3:Easy 4:Slightly easy 5:Intermediate 6:Slightly difficult 7:Difficult 8:Very difficult		Compared with standard variety



Plant	Dendrobium		494	Tertiary essential character	
No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Longevity of flower	5 plants	Observation	2:Worst 3:Bad 4:Slightly bad 5:Intermediate 6:Slightly good 7:Good 8:Excellent	Compared with standard variety. Standard variety=`Snow Flake Red Star`

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No	Characters	No. of samples	Methods	Rank or measurement unit		Remarks
1	Fragrance of flower	5 plants	Sensory	0:None 3:Weak 5:Intermediate 7:Strong		