Plant	Florist chrysanthemum	88(09001)	Primary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Stem length	5 plants	Measurement	cm (integer)	Stem length at the flowering stage
2	Number of nodes	5 plants	Measurement	(integer)	Number of nodes at the flowering stage
3	Stalk length of terminal flowers	5 plants	Measurement	mm (integer)	Stalk length of terminal flowers
4	Number of flowers	5 plants	Measurement	(integer)	Number of flowers on a stem
5	Date of flowering	Block	Observation	date	Date when terminal flowers of 80% of stems have bloomed in the block
6	Leaf margin serration	5 plants	Measurement	1:<=0.09 2:0.10-0.29 3:0.30-0.69 4:0.70-0.89 5:>=0.90	Measure the 10th leaf basipetally from the flag leaf
7	Number of ray florets	5 flowers	Measurement	(integer)	
8	Number of tubulous flowers	5 flowers	Measurement	(integer)	
9	Petal shape (I)	5 flowers	Observation	1:Straight 9:Others	Others are subdivided into the next item
10	Petal shape (II)	5 flowers	Observation	0:Incurved 1:Gutter shaped 2:Piped type 1 3:Piped type 2 4:Spatulate 5:Reflexed type 1 6:Reflexed type 2 7:Dentate 8:Anemone type 9:Others	Piped type 1:flat tip, piped type 2:curved tip, reflexed type 1:loosely reflexed, reflexed type 2:tightly reflexed
11	Number of tubulous flowers	5 flowers	Measurement	1:<=29 mm 2:30-49 mm 3:50-49 mm 4:70-89 mm 5:90-109 mm 6:110-149 mm 7:150-199 mm 8:200-249 mm 9:>=250 mm	Measure at the full flowering stage
12	Petal color of ray floret	5 flowers	Observation		Indicate reference number of RHS color chart

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Plant type	5 plants	Observation	3:Erect 5:Semi-erect 7:Prostrate	
2	Plant height	5 plants	Observation	1:Dwarf 3:Tall	
3	Dwarf type	5 plants	Observation	1:Type 1 3:Type 2	Type 1: without internode elongation. Type 2:repeated branching forming a globe
4	Plant height at flowering stage	5 plants	Observation	3:Low 5:Intermediate 7:High	
5	Number of lateral buds	5 plants	Observation	1:None or very few 3:Few 5:Intermediate 7:Many	
6	Branching after decapitation	5 plants	Observation	3:Few 5:Intermediate 7:Many	
7	Number of lateral buds at leaf axil	5 plants	Observation	0:One 9:Two or more	
8	Position of lateral buds	5 plants	Observation	1:Normal 9:High	High: lateral bud(s) above to leaf axil
9	Stem diameter	5 plants	Measurement	1:<=3.9 mm 2:4-5.9 mm 3:6-7.9 mm 4:>=8 mm	Measure at one third from the top of plant height
10	Internode length	5 plants	Measurement	1:<=9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:>=50 mm	Average of 5th leaf through 15th leaf basipetally from the flag leaf
11	Vertical grooves on stem surface	5 plants	Observation	3:Low 5:Intermediate 7:High	
12	Stem strength	5 plants	Observation	3:Weak 5:Intermediate 7:Tough	Observe degree of stem hanging by keeping stem horizontally
13	Stem color	5 plants	Observation	1:Light green 2:Green 3:Brown 4:Light brown 5:Purplish brown 6:Reddish purple 7:Purple 9:Others	Observe the 10th leaf basipetally from the flag leaf

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
14	Stem zigzag bend	5 plants	Observation	0:Absent 9:Present	
15	Diameter of flower stalk	5 flowers	Measurement	1:<0.9 mm 2:1.0-1.9 mm 3:2.0-2.9 mm 4:3.0-3.9 mm 5:4.0-4.9 mm 6:5.0-5.9 mm 7:6.0-6.9 mm 8:7.0-7.9 mm 9:>8.0 mm	Measure the widest diameter at one third distance from flower stalk top
16	Sprouting angle of flower stalk	5 plants	Measurement	3:<=29 4:30-39 5:40-49 6:50-59 7:>=60	
17	Frequency of secondary lateral buds	5 plants	Measurement	1:0-24% 2:25-49% 3:50-74% 4:75-99%	
18	Leaf length	5 leaves	Measurement	1:<=24 mm 2:25-49 mm 3:50-74 mm 4:75-99 mm 5:100-124 mm 6:125-149 mm 7:150-199 mm 8:>=200 mm	Measure the tenth leaf basipetally from the flag leaf (petiole is excluded)
19	Leaf width	5 leaves	Measurement	1:<=9 mm 2:10-24 mm 3:25-49 mm 4:50-74 mm 5:75-99 mm 6:100-124 mm 7:125-149 mm 8:>=150 mm	Measure the 10th leaf basipetally from the flag leaf
20	Length/width ratio of leaf	5 leaves	Measurement	1:<=0.79 2:0.8-1.19 3:1.2-1.59 4:1.6-1.99 5:>=2	Ratio of leaf length to width at the 10th leaf
21	Shape of leaf bottom	5 leaves	Observation	3:Emarginate 5:Plain 7:Convex	Observe the 10th leaf basipetally from the flag leaf
22	Shape of leaf tip	5 leaves	Observation	3:Acuminate 5:Acute 7:Obtuse	Observe the 10th leaf basipetally from the flag leaf
23	Petiole length/(leaf length + petiole length)	5 leaves	Measurement	1:<0.19 2:0.2-0.24 3:>0.25	
24	Secondary serration of leaf	5 leaves	Observation	1:Very slight 3:Slight 5:Intermediate 7:Severe	Observe the 10th leaf basipetally from the flag leaf
25	Base shape of primary lobation	5 leaves	Observation	3:Acute 5:Intermediate 7:Round	Observe the 10th leaf basipetally from the flag leaf

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
26	Claw in the base of sinus	5 leaves	Observation	0:None 9:Present	Observe the 10th leaf basipetally from the flag leaf
27	Margins of sinus between lobes	5 leaves	Observation	3:Diverging 5:Parallel 7:Converging	Observe the 10th leaf basipetally from the flag leaf
28	Leaf color on the adaxial side	5 leaves	Observation	3:Pale 5:Intermediate 7:Dark	Observe the 10th leaf basipetally from the flag leaf at flowering stage
29	Leaf color on the abaxial side	5 leaves	Observation	3:Pale 5:Intermediate 7:Dark	Observe the 10th leaf basipetally from the flag leaf at flowering stage
30	Leaf glossiness	5 leaves	Observation	3:Weak 5:Intermediate 7:Strong	Observe the 10th leaf basipetally from the flag leaf at flowering stage
31	Leaf thickness	5 leaves	Measurement	3:<=0.39 mm 5:0.49-0.59 mm 7:>=0.60 mm	Measure the 10th leaf basipetally from the flag leaf at flowering stage
32	Attaching angle of petiole to stem	5 leaves	Measurement	3:<=-16 5:-15-+15 7:>=+15	Measure the angle of petiole base and blade base at the 10th leaf from the flag leaf
33	Attaching angle of leaf to stem	5 leaves	Measurement	3:<=-16 5:-15-+15 7:>=+15	Measure the angle of petiole base and blade top at the 10th leaf from the flag leaf
34	Curvature of leaf blade	5 leaves	Observation	3:Upwards 5:Horizontal 7:Downwards	Observe the 10th leaf basipetally from the flag leaf at flowering stage
35	Leaf uneveness	5 plants	Observation	3:Weak 5:Intermediate 7:Strong	Observe the 10th leaf basipetally from the flag leaf at flowering stage
36	Existence of stipule	5 plants	Observation	3:Almost none 5:Half present 7:Mostly present	Evaluate the typical type
37	Distribution of stipule	5 plants	Observation	3:Mostly on one side 5:Mixed 7:Mostly on both sides	Evaluate the typical type
38	Shape of stipule	5 plants	Observation	3:Not lobar 5:Dual-lobar 7:3 or 4 lobar	Evaluate the typical type

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
39	Size of stipule	5 plants	Observation	3:Small 5:Intermediate 7:Large	Evaluate the typical type
40	Color of sucker	5 plants	Observation	1:White 2:Pale yellow brown 3:Pale pink 4:Reddish purple 5:Purple 9:Other	Observe the winter sucker under the ground
41	Shape of buds	5 plants	Measurement	1:<=0.94 2:0.95-1.04 3:>=1.05	Measure just before involucre opening (ratio:height/diameter)
42	Flower type	5 plants	Observation	1:No ray floret 2:Up to 1.5 rays 3:2 to 4 rays 4:Over 5 rays type 1 5:Over 5 rays type 2 6:Over 5 rays type 3	Type 1:open center at harvest, type 2:open center at full anthesis, type 3:not exposed
43	Diameter of tubulous flower part	5 flowers	Measurement	1:<=9 mm 2:10-14 mm 3:15-19 mm 4:20-24 mm 5:25-29 mm 6:30-39 mm 7:40-49 mm 8:50-59 mm 9:>=60 mm	Observe for the cultivar with open center by anthesis
44	Distribution of tubulous flowers	5 flowers	Observation	1:Centered 9:Sparse	
45	Length of tubulous flowers	5 flowers	Measurement	1:<=4.9 mm 2:5.0-5.9 mm 3:6.0-6.9 mm 4:7.0-7.9 mm 5:8.0-8.9 mm 6:9.0-9.9 mm 7:>=10.0 mm	Include pistil and ovary
46	Shape of petal tip in ray floret	5 flowers	Observation	1:Acute 2:Round 3:Dentate 4:With mucro	
47	Longitudinal axis of outer ray floret	5 flowers	Observation	1:Straight 2:Reflexed 3:Incurved 4:Twisted 5:Broken 6:Drooping	Observe the longitudinal direction to select the typical rank
48	Longitudinal axis of inner ray floret	5 flowers	Observation	1:Straight 2:Reflexed 3:Incurved 4:Twisted 5:Broken 6:Drooping	Observe the longitudinal direction to select the typical rank
49	Length of ray floret petal	5 flowers	Measurement	1:<=9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:50-69 mm 7:70-89 mm 8:90-109 mm 9:>=110 mm	Measure the outermost ray floret petal
50	Width of ray floret petal	5 flowers	Measurement	1:<=1.9 mm 2:2.0-4.9 mm 3:5.0-9.9 mm 4:10.0-14.9 mm 5:15.0-19.9 mm 6:20.0-29.9 mm 7:30.0-39.9 mm 8:>=40.0 mm	Measure the outermost ray floret petal in natural condition

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
51	Angle of outer ray floret	5 flowers	Measurement	1:<=-31 2:-30 - -16 3:-15 - +15 4:>=16	Measure at the full flowering stage
52	Angle of outer ray floret at the beginning of flowering time	5 flowers	Measurement	1:<=+15 2:+16 - +30 3:+31 - +45 4:>=+46	For cut, observe at harvest stage. For others, observe when the outermost rays elongate and expand.
53	Length from involucre to the top of flower	5 flowers	Measurement	1:<=9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:50-59 mm 7:60-79 mm 8:80-99 mm 9:>=100 mm	Measure at the full flowering time
54	Position of involucre	5 flowers	Measurement	1:Normal 9:Attached among florets	
55	Diameter of involucre	5 flowers	Measurement	1:<9 mm 2:10-19 mm 3:20-29 mm 4:30-39 mm 5:40-49 mm 6:>50 mm	Measure at the full flowering in natural condition
56	Coloration on top side of ray floret	5 flowers	Observation	1:Uniform 2:Variegated on top 3:Mottled 4:Striped 5:Variegated on bottom 6:White or pale bottom 7:Other	
57	Color of ray floret petal	5 flowers	Observation		Indicate reference number of RHS color chart
58	Color at the flower center	5 flowers	Observation	1:Same as outermost 9:Not same as outermost	Only for double or anemone type. Rank 9 is subdivided in the next item.
59	Color at the flower center	5 flowers	Observation	0:Pink 1:Purple 2:Red 3:Orange 4:Pale yellow 5:Yellow 6:Yellow green 7:Green 8:Brown 9:White	
60	Color of flower disk	5 flowers	Observation	1:Green 2:Yellow green 3:Yellow 4:Brown 9:Other	For open center cultivars, observe center before dehiscence
61	Diameter of receptacle	5 flowers	Measurement	1:<=4.9 mm 2:5.0-7.4 mm 3:7.5-9.9 mm 4:10.0-12.4 mm 5:12.5-14.9 mm 6:15.0-17.4 mm 7:17.5-29.9 mm 8:20.0-24.9 mm 9:>=25 mm	

Plant	Florist chrysanthemum	88(09001)	Primary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
62	Shape of receptacle	5 flowers	Observation	1:Dome type 1 2:Dome type 2 3:Conical type 1 4:Conical type 2	Dome type 1:flat dome, dome type 2:convex dome, conical type 1:flat conical, conical type 2:convex conical
63	Shape of inflorecence	5 plants	Observation	1:Concave 2:Flat 3:Conical 4:Cylindrical	Observe by keeping lateral buds until

Plant	Florist chrysanthemum	88(09001)	Secondary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Response period to short day treatment	5 plants	Measurement	Weeks (round to the 1st decimal place)	Weeks from the start of short day treatment to anthesis
2	Rosetting	5 plants	Observation	2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong	Observe under low temperature and short day conditions
3	Flowering ability under low temperature	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
4	Flowering ability under high temperature	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	Delay of flowering under high temperature
5	Resistance to white rust	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
6	Juvenility	5 plants	Observation	2:Very weak 3:Weak 4:Slightly weak 5:Intermediate 6:Slightly strong 7:Strong 8:Very strong	

Plant	Florist chrysanthemum	88(09001)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Critical day length	5 plants	Measurement	Hour (round to the 1st decimal place)	Critical day length under the optimal temperature
2	Optimum critical day length	5 plants	Measurement	Hour (round to the 1st decimal place)	Optimum critical day length under the optimal temperature
3	Position of crown bud	5 plants	Observation	3:Low 5:Intermediate 7:High	Observe under long day condition
4	Stem elongation under low temperature	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly low 7:High 8:Very high	
5	Freezing tolerance	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
6	Tolerance to winter exposure	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
7	Anthocyanin development under low temperature	5 flowers	Observation	0:Absent 9:Present	Observe anthocyanin pigmentation under low temperature for white on yellow flowers
8	Anthocyanin discoloration under high temperature	5 flowers	Observation	0:Absent 9:Present	Observe anthocyanin discoloration under high temperature for red or pink cultivars
9	Disease resistance	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	Resistance to diseases other than white rust
10	Pest resistance	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
11	Tolerance to excessive moisture	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	

Plant	Florist chrysanthemum	88(09001)	Secondary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
12	Tolerance to high planting density	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	
13	Tolerance to drought	5 plants	Observation	2:Very low 3:Low 4:Slightly low 5:Intermediate 6:Slightly high 7:High 8:Very high	

Plant	Florist chrysanthemum	88(09001)	Tertiary essential character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Yield	Block	Measurement	Per square meter (integer)	
2	Cut flower longevity	5 stems	Observation	2:Very poor 3:Poor 4:Slightly poor 5:Intermediate 6:Slightly good 7:Good 8:Very good	
3	Propagating ability	Block	Observation	1:Easy 9:Difficult	

Plant	Florist chrysanthemum	88(09001)	Tertiary optional character

No	Characters	No. of samples	Methods	Rank or measurement unit	Remarks
1	Fragrance	5 plants	Sensory	0:Absent 9:Present	