

| Plant |                         | Camellia       |             | 94(09007)   | Primary essential character |  |
|-------|-------------------------|----------------|-------------|---|-----------------------------|--|
| No    | Characters              | No. of samples | Methods     | Rank or measurement unit  |                             | Remarks  |
| 1     | Length of current shoot | 5 shoots       | Measurement | cm (integer)  |                             | Measure from base to apex in current shoot when it grows hard  |
| 2     | Leaf number             | 5 leaves       | Measurement | (integer)   |                             | Measure leaf number when current shoot grows hard  |
| 3     | Leaf shape              | 5 leaves       | Observation | 1:Lanceolate 2:Oblanceolate 3:Oblong 4:Ovate<br>5:Obovate 6:Elliptic 7:Broad ovate<br>8:Irregular 9:Other                         |                             | Observe in middle of the current shoot   |
| 4     | Leaf size               | 5 leaves       | Measurement | 1:Very small 3:Small 5:Intermediate 7:Large<br>9:Very large   |                             | Measure in middle of the current shoot. Very small:<=1.9 cm, small:2.0-3.9 cm, intermediate:4.0-6.9 cm, large:7.0-9.9 cm, very large:>=10.0 cm |
| 5     | Beginning of flowering  | 1 plant        | Measurement | date  |                             |  |
| 6     | Ending of flowering     | 1 plant        | Measurement | date  |                             |  |
| 7     | Habit of flower setting | 1 plant        | Observation | 3:Terminal 5:Terminal and axillary 7:Axillary   |                             |  |
| 8     | Base color of flower    | 5 flowers      | Observation |   |                             | Indicate reference number of RHS color chart   |
| 9     | Petal number            | 5 flowers      | Measurement | (integer)   |                             | Number of complete petals  |
| 10    | Diameter of flower head | 5 flowers      | Measurement | cm (round to the 1st decimal place)   |                             | Measure in the full flowering stage  |
| 11    | Type of stamen          | 5 flowers      | Observation | 1:Tutsu-shibe 2:Chasen-shibe 3:Toji-shibe<br>4:Nagatsutsu-shibe 5:Wabi-shibe 6:San-shibe<br>7:Ume-shibe 8:Rinjin 9:Sasanqua-shibe |                             |  |
| 12    | Filament color          | 5 flowers      | Observation | 1:White 2:Light yellow 3:Yellow 4:Deep yellow<br>5:Tinted red   |                             |  |
| 13    | Ovary hair              | 5 flowers      | Observation | 0:Absent 3:Little 5:Intermediate 7:Much   |                             | Absent:like`Tsubaki', little:like `Wabisuke', intermediate:covered with hair all over, much:a lot of hair.                                     |



| Plant |                                     | Camellia       |             | 94(09007)  | Primary optional character |   |
|-------|-------------------------------------|----------------|-------------|--|----------------------------|---|
| No    | Characters                          | No. of samples | Methods     | Rank or measurement unit   |                            | Remarks   |
| 1     | Tree form                           | 1 plant        | Observation | 1: Bushy 3: Spreading 4: Normal 5: Upright<br>7: Drooping 8: Zigzag 9: Other                 |                            | Evaluated by canopy and branch angles   |
| 2     | Tree height                         | 1 plant        | Measurement | 2: Highly dwarf 3: Dwarf 4: Semi-dwarf 5: Normal<br>7: Tall                                  |                            | Measure adult trees at least 5 years old.<br>Highly dwarf: $\leq 0.3$ m, dwarf: 0.4-0.5 m, semi-dwarf: 0.6-1.9 m, normal: 2.0-3.9 m, tall: $\geq 4$ m |
| 3     | Branch circumference                | 1 plant        | Observation | 3: Small 5: Intermediate 7: Large  |                            | 'Otome' and 'Fujinomine' are standard cultivars of the 'intermediate' rank  |
| 4     | Sprouting frequency                 | 1 plant        | Measurement | 1: Once 2: Twice 3: Three times 4: Four times<br>5: Five times 6: Six times                  |                            | Measured by sprouting frequency of terminal bud for one year  |
| 5     | Sprouting time                      | 1 plant        | Measurement | date   |                            | Sprouting period of terminal bud  |
| 6     | Hairiness of current shoot          | 1 plant        | Observation | 0: Absent 3: Weak 5: Intermediate 7: Strong  |                            |   |
| 7     | Durability of hair of current shoot | 1 plant        | Observation | 1: Remain in summer 9: Fall out in summer  |                            |   |
| 8     | Branching ability                   | 1 plant        | Observation | 3: Weak 5: Intermediate 7: Strong  |                            | Examine growing number of current shoots  |
| 9     | Internode length                    | 1 plant        | Observation | 3: Short 5: Intermediate 7: Long   |                            | Short: average: $\leq 1.5$ cm, intermediate: about 2 cm, long: $\geq 2.5$ cm  |
| 10    | Change of leaf type                 | 1 plant        | Observation | 2: No change 4: Light-dependent 6: Seasonal change<br>8: Remarkable change                   |                            | Examined changes of leaf form and size  |
| 11    | Leaf type                           | 5 leaves       | Observation | 2: Flat 3: Recurved 4: Folding 5: Outcurved margin<br>6: Incurved margin 7: Sinuous 9: Other |                            |   |
| 12    | Shape of leaf tip                   | 5 leaves       | Observation | 1: Very acute 2: Acute 3: Obtuse 4: Convex<br>5: Slightly convex 6: Trilobate 9: Other       |                            |   |
| 13    | Shape of leaf base                  | 5 leaves       | Observation | 2: Acute 5: Obtuse 8: Rounded  |                            |   |



| Plant |                             | Camellia       |             | 94(09007)   | Primary optional character |   |
|-------|-----------------------------|----------------|-------------|---|----------------------------|---|
| No    | Characters                  | No. of samples | Methods     | Rank or measurement unit  |                            | Remarks   |
| 14    | Leaf color                  | 5 leaves       | Observation | 2:Light green 3:Yellow green 4:Green 5:Deep green 6:Silver green 7:White speckled 8:Yellow speckled 9:Yellow  |                            | If it is mottled leaf, enter mottle color   |
| 15    | Variegation type            | 5 leaves       | Observation | 2:Hoshi-fu 3:Naka-fu 4:Sugano-fu 5:Tsume-fu 6:Fukurin 7:Fukurin-kuzure 8:Bota-fu 9:Other  |                            |   |
| 16    | Leaf luster                 | 5 leaves       | Observation | 0:Absent 5:Weak 9:Present   |                            | Weak: `Sazanka', present: `Otome'   |
| 17    | Leaf thickness              | 5 leaves       | Observation | 3:Thin 5:Intermediate 7:Thick   |                            | Compared according to the feel of leaves  |
| 18    | Leaf margin shape           | 5 leaves       | Observation | 1:Entire 2:Smooth sinuate 3:Pointed serrated 4:Fine serrated 5:Blunt serrated 6:Dentated 7:Coarse-serrate 8:Lobated 9:Other                             |                            | Observe whether serration is fine and sharp or not  |
| 19    | Veins on leaf surface       | 5 leaves       | Observation | 3:Transparent 5:Semi-transparent 7:Opaque   |                            | Transparent:leaf vein is visible, semi-transparent:lateral vein is visible, opaque:only midrib is visible |
| 20    | Vein of leaf back           | 5 leaves       | Observation | 3:Transparent 5:Semi-transparent 7:Opaque   |                            | Transparent:leaf vein is visible, semi-transparent:lateral vein is visible, opaque:only midrib is visible |
| 21    | Protrusion of leaf vein     | 5 leaves       | Observation | 3:Concave 5:Flat 7:Convex   |                            |   |
| 22    | Pattern of leaf vein        | 5 leaves       | Observation | 1:Simple 9:Complex  |                            | Complex:fine vein, simple:rough vein  |
| 23    | Petiole length              | 5 leaves       | Measurement | 3:Short 5:Intermediate 7:Long   |                            | Short:<= 0.4 cm, intermediate:0.5-0.9 cm, long:>= 1.0 cm  |
| 24    | Hair of petiole and leaf    | 5 leaves       | Observation | 0:Absent 3:Some in petiole 4:Much in petiole 5:Absent in leaf 6:Present in leaf surface 7:Present in leaf back 8:Like cork in leaf back 9:Much all over |                            | Observe young leaves  |
| 25    | Changability of flower form | 5 flowers      | Observation | 3:Low 5:High 7:Very high  |                            | Observe from petal stage to flowering stage   |



| Plant |                                       | Camellia       |             | 94(09007)  | Primary optional character |  |
|-------|---------------------------------------|----------------|-------------|--|----------------------------|--|
| No    | Characters                            | No. of samples | Methods     | Rank or measurement unit   |                            | Remarks  |
| 26    | Flower form                           | 5 flowers      | Observation | 3:Single 7:Double 9:Formal-double  |                            |  |
| 27    | Form of single blooming flower        | 5 flowers      | Observation | 1:Tsutsu-zaki 2:Rappa-zaki 3:Choko-zaki<br>4:Haigyō-zaki 5:Kakae-zaki 6:Heikai-zaki<br>7:Hoshi-zaki 8:Wan-zaki 9:Other |                            | Observe flower form at the best flowering time                     |
| 28    | Form of double blooming flower        | 5 flowers      | Observation | 1:Double 2:Renga-zaki 3:Nidan-zaki 4:Botan-zaki<br>5:Shishi-zaki 6:Anemone-zaki 7:Henka-zaki<br>8:Kakae-zaki 9:Other   |                            | Observe flower form at the best flowering time                     |
| 29    | Form of formal double blooming flower | 5 flowers      | Observation | 1:Sene-zaki 2:Hōjyū-zaki 3:Retsuben-zaki<br>4:Bara-zaki 5:Rasenzaki 6:Karako-zaki<br>9:Others                          |                            | Observe flower form at the best flowering time                     |
| 30    | Flower direction                      | 1 plant        | Observation | 3:Downwards 5:Horizontal 7:Upwards   |                            | The direction is determined by at least 70% of all flowers.        |
| 31    | Classification of flower color        | 5 flowers      | Observation | 1:Single colored 9:Multi colored   |                            | Distinguish between single-and multi color flowers                 |
| 32    | Color of inside petal                 | 5 flowers      | Measurement | 1:White 2:Pale pink 3:Pink 4:Deep pink<br>5:Red 6:Purplish red 7:Deep red 8:Dark red<br>9:Other                        |                            |  |
| 33    | Classification of variegate color     | 5 flowers      | Measurement | 1:Flaked 2:Other   |                            |  |
| 34    | Flake classification                  | 5 flowers      | Observation | 1:Fukikake-shibori 2:Ko-shibori 3:Tate-shibori<br>4:Sujiiri  |                            | Observe red flakes appearing on white flowers                      |
| 35    | Flake color                           | 5 flowers      | Measurement | 1:White 2:Pale pink 3:Pink 4:Deep pink<br>5:Red 6:Purplish red 7:Deep red 8:Dark red<br>9:Other                        |                            |  |
| 36    | Classification of other variegations  | 5 flowers      | Observation | 1:Unjyōhan 2:Yokomoku 3:Tenpan 4:Dark eye<br>5:Fukurin 6:Bokashi 7:Sokojiro 8:Sokobeni<br>9:Other                      |                            | Observe shape and size of white variegation appeared on red flower |
| 37    | Variegation color                     | 5 flowers      | Measurement | 1:White 2:Light pink 3:Pink 4:Deep pink<br>5:Red 6:Purplish red 7:Deep red 8:Dark red<br>9:Other                       |                            |  |



| Plant |  | Camellia       |             | 94(09007)   | Primary optional character |   |
|-------|--|----------------|-------------|---|----------------------------|---|
| No    | Characters                             | No. of samples | Methods     | Rank or measurement unit  |                            | Remarks   |
| 38    | Outer petal shape                      | 5 flowers      | Observation | 1:Rounded 2:Obovate 3:Ovate 4:Elliptic<br>5:Oblong 6:Spatulate  |                            | Record the form of outer petal                        |
| 39    | Petal vein                             | 5 flowers      | Observation | 0:Absent 2:Weak 3:Strong  |                            | Vein appearing on petal                               |
| 40    | Petal margin shape                     | 5 flowers      | Observation | 1:Rounded 2:Sagittate 3:Emarginate 4:Sinate<br>5:Crinkled 6:Serrate 7:Folding 8:Deep<br>notched 9:Other         |                            | Observe normal outer petal                            |
| 41    | Inner petal shape                      | 5 flowers      | Observation | 1:Same as outer petal 2:Smaller 3:Narrow<br>4:Karakoben 5:Large Karakoben 6:Stammen<br>complex 7:Larger 8:Erect |                            | Observe differences between outer and inner<br>petals |
| 42    | Bend of outer petal                    | 5 flowers      | Observation | 1:Flat 3:Sinuous 5:Incurved 7:Recurved  |                            | Observe the form of outer petal                       |
| 43    | Petal thickness                        | 5 flowers      | Observation | 3:Thin 5:Intermediate 7:Thick   |                            |   |
| 44    | Form of flower bud                     | 5 flowers      | Observation | 2:Circular 4:Pointed circular 6:Pointed<br>oblong 8:Oblong  |                            |   |
| 45    | Number of filaments                    | 5 flowers      | Measurement | 0:Absent 1:Atrophic 3:Few 5:Intermediate<br>7:Many  |                            | Few:<=49 filaments, intermediate:50-99,<br>many:>=100 |
| 46    | Anther color                           | 5 flowers      | Observation | 1:White 2:Light yellow 3:Yellow 4:Deep<br>yellow 5:Brownish yellow  |                            |   |
| 47    | Adhesion of stamen to<br>petal         | 5 flowers      | Observation | 0:No adhesion 9:Adhesion  |                            | No adhesion:`Sazanka`, adhesion:`Tsubaki`             |
| 48    | Number of ovary<br>divisions           | 5 flowers      | Observation | 1:1 2:2 3:3 4:4 5:5 6:6 7:7 8:8 9:>=9   |                            | Observe section of ovary                              |
| 49    | Length of pistil<br>compared to stamen | 5 flowers      | Observation | 3:Shorter 5:Same 7:Longer   |                            | Pistil length relative to stamen                      |
| 50    | Atrophy of pistil                      | 5 flowers      | Observation | 1:Absent 9:Present  |                            |   |
| 51    | Exposure of stamens in<br>bud          | 5 flowers      | Observation | 1:No exposure 9:Exposure  |                            |   |



| Plant |                           | Camellia       |             | 94(09007)  | Primary optional character |  |
|-------|---------------------------|----------------|-------------|--|----------------------------|--|
| No    | Characters                | No. of samples | Methods     | Rank or measurement unit   |                            | Remarks  |
| 52    | Number of style divisions | 5 flowers      | Observation | 0:None 2:2 3:3 4:4 5:5 6:6 7:7-8 8:>=9                                       |                            | Enter number of complete style division (i.e. excluding incomplete ones)                                 |
| 53    | Degree of style division  | 5 flowers      | Observation | 0:No division 2:few 3:1/4 4:1/3 5:1/2<br>6:Almost divided                    |                            | Division length relative to stamen   |
| 54    | Style hair                | 5 flowers      | Observation | 0:Absent 2:Very sparse 3:Sparse 7:Dense                                      |                            |  |
| 55    | Shape of cupsule          | 5 cupsules     | Observation | 2:Circular 4:Oblong 6:Pear shaped 7:Gourd shaped<br>8:Broad elliptic 9:Other |                            |  |
| 56    | Size of cupsule           | 5 cupsules     | Measurement | 1:Very small 3:Small 5:Intermediate 7:Large<br>9:Very large                  |                            | Very small:<=0.5 cm diameter, small:about 1 cm, intermediate:about 2 cm, large:3-4 cm, very large:>=5 cm |
| 57    | Thickness of cupsule      | 5 cupsules     | Observation | 3:Thin 7:Thick 9:Very thick  |                            |  |
| 58    | Flower stalk              | 5 flowers      | Observation | 0:Absent 3:Short 7:Long  |                            |  |



|       |                                    |                |             |   |                               |  |
|-------|------------------------------------|----------------|-------------|---|-------------------------------|--|
| Plant |                                    | Camellia       |             | 94(09007)   | Secondary essential character |  |
| No    | Characters                         | No. of samples | Methods     | Rank or measurement unit                              |                               | Remarks  |
| 1     | Freezing tolerance                 | 3 plants       | Observation | 1:Very low 3:Low 5:Intermediate 7:High<br>9:Very high |                               | After treatment at -9 centi degrees for 2 hours, keep at room temperature for 2 days. Then observe degree of injury. |
| 2     | Resistance to Pestalotia longiseta | 1 plant        | Observation | 1:Very low 3:Low 5:Intermediate 7:High<br>9:Very high |                               | Size of local lesion after artificial inoculation  |
| 3     | Pollen fertility                   | 100 grains     | Measurement | % (round to the 1st decimal place)                    |                               | Examine pollen with a microscope by means of staining such as by acetocarmine.                                       |



| Plant |                           | Camellia       |             | 94(09007)                               | Secondary optional character |   |
|-------|---------------------------|----------------|-------------|---|------------------------------|---|
| No    | Characters                | No. of samples | Methods     | Rank or measurement unit                |                              | Remarks   |
| 1     | Disease resistance        | 1 plant        | Observation | 3:Low 5:Intermediate 7:High             |                              |   |
| 2     | Pest resistance           | 1 plant        | Observation | 3:Low 5:Intermediate 7:High             |                              | Observe the extent of damage in field   |
| 3     | Heat tolerance            | 1 plant        | Observation | 3:Low 5:Intermediate 7:High             |                              | Observe the extent of injury due to high temperature                                |
| 4     | Drought tolerance         | 1 plant        | Observation | 3:Low 5:Intermediate 7:High             |                              | Observe the extent of injury due to drought   |
| 5     | Self-incompatibility (I)  | 50 flowers     | Measurement | % (round to the 1st decimal place)      |                              | Examine fruit-bearing ability by artificial crossing                                |
| 6     | Self-incompatibility (II) | 5 flowers      | Measurement | 0:Absent 9:Present                      |                              | Test for self-incompatibility at 10 days after crossing                             |
| 7     | Number of chromosomes     | 1 plant        | Measurement |   |                              | Examine number of root tip cells (2n) and pollen mother cells (n) with a microscope |
| 8     | Fruiting ability          | 1 plant        | Observation | 0:None 3:Very low 5:Intermediate 7:High |                              | Estimate number of set fruits in a tree   |



|       |                            |                |             |                             |                              |   |
|-------|----------------------------|----------------|-------------|-----------------------------|------------------------------|---|
| Plant |                            | Camellia       |             | 94(09007)                   | Tertiary essential character |   |
| No    | Characters                 | No. of samples | Methods     | Rank or measurement unit    |                              | Remarks                                       |
| 1     | Fragrance of flower        | 5 flowers      | Sensory     | 0:Absent 2:Weak 7:Strong    |                              | Fragrance under windless condition            |
| 2     | Rooting ability of cutting | 10 plants      | Measurement | 3:Low 5:Intermediate 7:High |                              | Cutting is done when current shoot grows hard |



| Plant |  | Camellia       |             | 94(09007)                   | Tertiary optional character |   |
|-------|--|----------------|-------------|-----------------------------|-----------------------------|---|
| No    | Characters   | No. of samples | Methods     | Rank or measurement unit    |                             | Remarks   |
| 1     | Transplantability  | 5 plants       | Observation | 3:Low 5:Intermediate 7:High |                             | Judged by the ability to take root after transplanting  |
| 2     | Adaptability for hedges  | 5 plants       | Observation | 3:Low 5:Intermediate 7:High |                             | Examine adaptability of hedging   |
| 3     | Forcing ability of flowering                                   | 5 plants       | Observation | 3:Low 5:Intermediate 7:High |                             | Examine forcing ability by flowering regulation   |
| 4     | Acceleration of flower-bud differentiation by growth retardant | 5 branches     | Observation | 3:Low 5:Intermediate 7:High |                             | Examine acceleration ability of flower bud differentiation by means of plant growth regulator treatment |
| 5     | Isozyme pattern (6-pdgh etc.)                                  | 1 plant        | Measurement |                             |                             | Analyzed by electrophoresis, and recorded genotype for each isozyme                                     |