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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

TEA*

UPOV Code(s):

CMLIA_SIN

Camellia sinensis (L.) Kuntze

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Kenya
to be considered by the
Technical Working Party for Agricultural Crops
at its forty-eighth session, to be held in Montevideo, Uruguay,
from 2019-09-16 to 2019-09-20

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Camellia sinensis (L.) Kuntze, *Thea sinensis* L.	Tea	Théier	Tee, Teestrauch	Te, Té

The purpose of these guidelines ("Test Guidelines") is to elaborate the principles contained in the General Introduction (document TG/1/3), and its associated TGP documents, into detailed practical guidance for the harmonized examination of distinctness, uniformity and stability (DUS) and, in particular, to identify appropriate characteristics for the examination of DUS and production of harmonized variety descriptions.

ASSOCIATED DOCUMENTS

These Test Guidelines should be read in conjunction with the General Introduction and its associated TGP documents.

* These names were correct at the time of the introduction of these Test Guidelines but may be revised or updated. [Readers are advised to consult the UPOV Code, which can be found on the UPOV Website (www.upov.int), for the latest information.]

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1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Camellia sinensis* (L.) Kuntze.

2. Material Required

2.1 The competent authorities decide on the quantity and quality of the plant material required for testing the variety and when and where it is to be delivered. Applicants submitting material from a State other than that in which the testing takes place must ensure that all customs formalities and phytosanitary requirements are complied with.

2.2 The material is to be supplied in the form of one-year-old rooted cuttings.

2.3 The minimum quantity of plant material, to be supplied by the applicant, should be:

20 rooted cuttings

In the case of seed, the seed should meet the minimum requirements for germination, species and analytical purity, health and moisture content, specified by the competent authority.

2.4 The plant material supplied should be visibly healthy, not lacking in vigor, nor affected by any important pest or disease.

2.5 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If it has been treated, full details of the treatment must be given.

3. Method of Examination

3.1 Number of Growing Cycles

3.1.1 The minimum duration of tests should normally be a single growing cycle.

3.1.2 or at least two years after planting.

3.2 Testing Place

Tests are normally conducted at one place. In the case of tests conducted at more than one place, guidance is provided in TGP/9 “Examining Distinctness”.

3.3 Conditions for Conducting the Examination

3.3.1 The tests should be carried out under conditions ensuring satisfactory growth for the expression of the relevant characteristics of the variety and for the conduct of the examination.

3.3.2 The optimum stage of development for the assessment of each characteristic is indicated by a number in the Table of Characteristics. The stages of development denoted by each number are described in Chapter 8.

3.3.3 Because daylight varies, color determinations made against a color chart should be made either in a suitable cabinet providing artificial daylight or in the middle of the day in a room without direct sunlight. The spectral distribution of the illuminant for artificial daylight should conform with the CIE Standard of Preferred Daylight D 6500 and should fall within the tolerances set out in the British Standard 950, Part I. These determinations should be made with the plant part placed against a white background. The color chart and version used should be specified in the variety description.

3.4 Test Design

3.4.1 Each test should be designed to result in a total of at least 10 trees.

3.4.2 The design of the tests should be such that plants or parts of plants may be removed for measurement or counting without prejudice to the observations which must be made up to the end of the growing cycle.

3.5 Additional Tests

Additional tests, for examining relevant characteristics, may be established.

4. Assessment of Distinctness, Uniformity and Stability

4.1 Distinctness

4.1.1 General Recommendations

It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding distinctness. However, the following points are provided for elaboration or emphasis in these Test Guidelines.

To assess distinctness of hybrids, the parent lines and the formula may be used according to the following recommendations:

(i) description of parent lines according to the Test Guidelines;

(ii) check of the originality of the parent lines in comparison with the variety collection, based on the characteristics in Chapter 7, in order to identify similar parent lines;

(iii) check of the originality of the hybrid formula in relation to the hybrids in the variety collection, taking into account the most similar lines; and

(iv) assessment of the distinctness at the hybrid level for varieties with a similar formula.

Further guidance is provided in documents TGP/9 "Examining Distinctness" and TGP/8 "Trial Design and Techniques Used in the Examination of Distinctness, Uniformity and Stability".

4.1.2 Consistent Differences

The differences observed between varieties may be so clear that more than one growing cycle is not necessary. In addition, in some circumstances, the influence of the environment is not such that more than a single growing cycle is required to provide assurance that the differences observed between varieties are sufficiently consistent. One means of ensuring that a difference in a characteristic, observed in a growing trial, is sufficiently consistent is to examine the characteristic in at least two independent growing cycles.

4.1.3 Clear Differences

Determining whether a difference between two varieties is clear depends on many factors, and should consider, in particular, the type of expression of the characteristic being examined, i.e. whether it is expressed in a qualitative, quantitative, or pseudo-qualitative manner. Therefore, it is important that users of these Test Guidelines are familiar with the recommendations contained in the General Introduction prior to making decisions regarding distinctness.

4.1.4 Number of Plants or Parts of Plants to be Examined

Unless otherwise indicated, for the purposes of distinctness, all observations on single plants should be made on 10 plants or parts of plants taken from each of 10 plants and any other observations made on all plants in the test, disregarding any off-type plants.

In the case of observations of parts taken from single plants, the number of parts to be taken from each of the plants should be 10.

4.1.5 Method of Observation

The recommended method of observing the characteristic for the purposes of distinctness is indicated by the following key in the Table of Characteristics (see document TGP/9 “Examining Distinctness”, Section 4 “Observation of characteristics”):

MG: single measurement 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 observation of individual plants or parts of plants

Type of observation: visual (V) or measurement (M)

"Visual" observation (V) is an observation made on the basis of the expert's judgment. For the purposes of this document, "visual" observation refers to the sensory observations of the experts and, therefore, also includes smell, taste and touch. Visual observation includes observations where the expert uses reference points (e.g. diagrams, example varieties, side-by-side comparison) or non-linear charts (e.g. color charts). Measurement (M) is an objective observation against a calibrated, linear scale e.g. using a ruler, weighing scales, colorimeter, dates, counts, etc.

Type of record: for a group of plants (G) or for single, individual plants (S)

For the purposes of distinctness, observations may be recorded as a single record for a group of plants or parts of plants (G), or may be recorded as records for a number of single, individual plants or parts of plants (S). In most cases, "G" provides a single record per variety and it is not possible or necessary to apply statistical methods in a plant-by-plant analysis for the assessment of distinctness.

In cases where more than one method of observing the characteristic is indicated in the Table of Characteristics (e.g. VG/MG), guidance on selecting an appropriate method is provided in document TGP/9, Section 4.2.

4.2 Uniformity

4.2.1 It is of particular importance for users of these Test Guidelines to consult the General Introduction prior to making decisions regarding uniformity. However, the following points are provided for elaboration or emphasis in these Test Guidelines:

4.2.2 These Test Guidelines have been developed for the examination of vegetatively propagated varieties. For varieties with other types of propagation, the recommendations in the General Introduction and document TGP/13 "Guidance for new types and species" Section 4.5 "Testing Uniformity" should be followed.

4.2.3 The assessment of uniformity for hybrid varieties depends on the type of hybrid and should be according to the recommendations for hybrid varieties in the General Introduction.

4.2.4 Where the assessment of a hybrid variety involves the parent lines, the uniformity of the hybrid variety should, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity of its parent lines.

4.2.5 For the assessment of uniformity of vegetatively propagated varieties, a population standard of 1% and an acceptance probability of at least 95% should be applied. In the case of a sample size of 10 plants, 1 off-type is allowed.

4.3 Stability

4.3.1 In practice, it is not usual to perform tests of stability that produce results as certain as those of the testing of distinctness and uniformity. However, experience has demonstrated that, for many types of variety, when a variety has been shown to be uniform, it can also be considered to be stable.

4.3.2 Where appropriate, or in cases of doubt, stability may be further examined by testing a new plant stock to ensure that it exhibits the same characteristics as those shown by the initial material supplied.

4.3.3 Where appropriate, or in cases of doubt, the stability of a hybrid variety may, in addition to an examination of the hybrid variety itself, also be assessed by examination of the uniformity and stability of its parent lines.

5. Grouping of Varieties and Organization of the Growing Trial

5.1 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 are aided by the use of grouping characteristics.

5.2 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.

5.3 The following have been agreed as useful grouping characteristics:

(a) Plant: type (characteristic 2)
(b) Plant: growth habit (characteristic 3)
(c) Young shoot: density pubescence of bud (characteristic 8)
(d) Leaf blade: shape (characteristic 13)
(e) Leaf blade: color (characteristic 34)

5.4 Guidance for the use of grouping characteristics, in the process of examining distinctness, is provided through the General Introduction and document TGP/9 “Examining Distinctness”.

6. Introduction to the Table of Characteristics

6.1 Categories of Characteristics

6.1.1 Standard Test Guidelines Characteristics

Standard Test Guidelines characteristics are those which are approved by UPOV for examination of DUS and from which members of the Union can select those suitable for their particular circumstances.

6.1.2 Asterisked Characteristics

Asterisked characteristics (denoted by *) are those included in the Test Guidelines which are important for the international harmonization of variety descriptions and should always be examined for DUS and included in the variety description by all members of the Union, except when the state of expression of a preceding characteristic or regional environmental conditions render this inappropriate.

6.2 States of Expression and Corresponding Notes

6.2.1 States of expression are given for each characteristic to define the characteristic and to harmonize descriptions. Each state of expression is allocated a corresponding numerical note for ease of recording of data and for the production and exchange of the description.

6.2.2 In the case of qualitative and pseudo-qualitative characteristics (see Chapter 6.3), all relevant states of expression are presented in the characteristic. However, in the case of quantitative characteristics with 5 or more states, an abbreviated scale may be used to minimize the size of the Table of Characteristics. For example, in the case of a quantitative characteristic with 9 states, the presentation of states of expression in the Test Guidelines may be abbreviated as follows:

State	*Note*
small	3
medium	5
large	7

However, it should be noted that all of the following 9 states of expression exist to describe varieties and should be used as appropriate:

State	*Note*
very small	1
very small to small	2
small	3
small to medium	4
medium	5
medium to large	6
large	7
large to very large	8
very large	9

6.2.3 Further explanation of the presentation of states of expression and notes is provided in document TGP/7 “Development of Test Guidelines”.

6.3 Types of Expression

An explanation of the types of expression of characteristics (qualitative, quantitative and pseudo-qualitative) is provided in the General Introduction.

6.4 Example Varieties

Where appropriate, example varieties are provided to clarify the states of expression of each characteristic.

6.5 Legend

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1 2	**3 4**	**5 6**	**7**			
	Name of characteristics in English	**Nom du caractère en français**	**Name des Merkmals auf Deutsch**	**Nombre del carácter en español**		
	states of expression	types d’expression	Ausprägungsstufen	tipos de expresión		

1 Characteristic number

2 (*) Asterisked characteristic – see Chapter 6.1.2

3 Type of expression
QL Qualitative characteristic – see Chapter 6.3
QN Quantitative characteristic – see Chapter 6.3
PQ Pseudo-qualitative characteristic – see Chapter 6.3

4 Method of observation (and type of plot, if applicable)
MG, MS, VG, VS – see Chapter 4.1.5

5 (+) See Explanations on the Table of Characteristics in Chapter 8.2

6 (a)-(c) See Explanations on the Table of Characteristics in Chapter 8.1

7 Not applicable

7. Table of Characteristics/Tableau des caractères/Merkmalstabelle/Tabla de caracteres

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
1.	**(*)**	**QN**	**VG**	**(+)**	**(a)**	**a**			
		Plant: vigor							
		weak						GWEJULUL, TRFK 301/1	3
		medium						TRFFK 306	5
		strong						TRFK 301/4, TRFK 371/8	7
2.	**(*)**	**QN**	**VG**	**(+)**	**(a)**	**a**			
		Plant: type							
		shrub						TRFK 536, TRFK 543	1
		semi-arbor						AHP S15/10	3
		arbor						TRFK 56/89	5
3.	**(*)**	**QN**	**VG**	**(+)**	**(a)**	**a**			
		Plant: growth habit							
		upright						TRFK 301/3	1
		semi-upright						AHP S15/10	3
		spreading						TRFK 371/8	5
4.		**QN**	**VG**		**(a)**	**a**			
		Plant: density of branches							
		sparse						TRFFK 306	3
		medium						EPKD99/10, TRFK 301/4	5
		dense						AHP S15/10, EPK TN14-3	7
5.	**(*)**	**QL**	**VG**	**(+)**	**(a)**	**a**			
		Plant: Branch zigzagging							
		absent						TRFK 31/8	1
		present							9
6.		**QN**	**MS**	**(+)**	**(a)**				
		Young shoot: time of beginning of 'one and a bud' stage							
		early							3
		medium							5
		late							7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7.	**(*)**	**PQ VG**	**(+) (a)**				
		Young shoot: color of second leaf at 'two and a bud stage'					
		brown					
		purple				TRFK 306	
		whitish					1
		yellow green				TRFK 6/8	2
		light green				TRFK 301/3	3
		medium green				EPK TN14-3	4
		dark green				NDT TAI, TRFK301/6	5
		purple green				TRFK K-PURPLE	6
8.	**(*)**	**QN VG**	**(a)**				
		Young shoot: density pubescence of bud					
		sparse				TRFK 31/8	3
		medium				TRFK 704/2	5
		dense				AHP S15/10	7
9.		**QL VG**	**(a)**				
		Young shoot: anthocyanin coloration at base of petiole					
		absent or very weak				TRFK 31/8	1
		weak				TRFK 73/1	3
		medium					5
		strong				TRFK 306	7
		very strong				TRFK K-PURPLE	9
10.	**(*)**	**QN MS/VG**	**(a)**				
		Young shoot: length of 'three and a bud'					
		short				K-PURPLE	3
		medium				TRFK 704/2	5
		long				BBK 35, TRFK 301/4	7
11.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: attitude					
		upwards				BBK 35, TRFK 56/89	1
		outwards				TRFK 6/8	3
		downwards				TRFK 371/8	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12.	**(*)**	**QN MS/VG**	**(b)**				
		Leaf blade: length					
		short				K-PURPLE	3
		medium				AHP SC31/37	5
		long				BBK 35, TRFK 301/4	7
13.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: shape					
		very narrow elliptic				EPK C12, TRFK301/6	1
		narrow elliptic				TRFK 31/8 , TRFK 704/2	2
		medium elliptic				AHP S15/10	3
		broad elliptic					4
14.	**(*)**	**QN MS/VG**	**(b)**				
		Leaf blade: width					
		narrow				K-PURPLE	3
		medium				AHP SC31/37	5
		broad				TRFK 371/8	7
15.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: intensity of green color					
		light				AHP SC12/28	3
		medium				TRFK 31/8 , TRFK56/89	5
		dark				NDT TAI, TRFK301/6	7
16.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: intensity of purple color					
		light				TRFK 73/1	3
		medium				TRFK 306	5
		dark				TRFK K-PURPLE	7
17.		**QN VG**	**(+) (b)**				
		Leaf blade: shape in cross section					
		folded upwards				TRFK 6/8	1
		flat				TRFK 12/12	2
		recurved					3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.		**QN VG**	**(b)**				
		Leaf blade: texture of upper surface					
		smooth or weakly rugose				TRFK 6/8	1
		moderately rugose				EPK TN14-3	2
		strongly rugose				AHP SC31/37	3
19.	**(*)**	**PQ VG**	**(+) (b)**				
		Leaf blade: shape of apex					
		obtuse					1
		acute				TRFK 108/82	2
		acuminate				AHP S15/10, TRFCA SF S150, TRFK597/1	3
20.		**QN VG**	**(+) (b)**				
		Leaf blade: undulation of margin					
		absent or weak				EPK TN14-3, TRFK31/8	1
		medium				TRFK 301/3	3
		strong				TRFK 303/577	5
21.		**QN VG**	**(+) (b)**				
		Leaf blade: serration of margin					
		absent or very weak				TRFFK 306	1
		weak				TRFK 31/8	3
		medium				AHP S15/10	5
		strong				TRFK 301/5, TRFK 597/1	7
		very strong					9
22.	**(*)**	**PQ VG**	**(+) (b)**				
		Leaf blade: shape of base					
		acute				AHP SC31/37	1
		obtuse				TRFK 704/2	2
		truncate					3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		**QN MG**	**(+) (c)**				
		Flower: time of full flowering					
		early					3
		medium					5
		late					7
24.		**QN MS/VG**	**(c)**				
		Flower: length of pedicel					
		short				EPK TN14-3	3
		medium				TRFK 6/8, AHP S15/10	5
		long				TRFK 301/5	7
25.	**(*)**	**QL VG**	**(c)**				
		Flower: pubescence on outer side of sepal					
		absent				TRFK 306	1
		present					9
26.	**(*)**	**QL VG**	**(c)**				
		Flower: anthocyanin coloration on outer side of sepal					
		absent				TRFK 6/8	1
		present				TRFK 306	9
27.		**QN MS**	**(c)**				
		Flower: diameter					
		small				TRFK 303/577	3
		medium				TRFK 6/8, AHP S15/10	5
		large				TRFK 301/5, TRFK 306	7
28.		**QN VG**	**(c)**				
		Flower: density of pubescence of ovary					
		sparse				TRFK 31/8	3
		medium				AHP S15/10	5
		dense				TRFK 6/8	7

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29.	**(*)**	**PQ**	**VG**	**(+)**	**(c)**				
		Flower: color of inner petals							
		greenish						AHP S15/10	1
		white						TRFK 306	2
		pink							3
30.	**(*)**	**QL**	**VG**		**(c)**				
		Flower: pubescence of ovary							
		absent							1
		present						TRFK 6/8	9
31.	**(*)**	**QN**	**VG**		**(c)**				
		Flower: length of style							
		short						TRFCA SFS150	1
		medium						AHP S15/10	2
		long						TRFK 306	3
32.		**QN**	**VG**	**(+)**	**(c)**				
		Flower: position of style splitting							
		low						EPK TN14-3	3
		medium						TRFK 306	5
		high						TRFK 6/8	7
33.	**(*)**	**QN**	**VG**	**(+)**	**(c)**				
		Flower: position of stigma relative to stamens							
		below						TRFK 6/8	1
		same level						K-PURPLE	3
		above						EPK C12	5
34.	**(*)**	**QN**	**VG**	**(+)**	**(b)**	**b**			
		Leaf blade: color							
		green						TRFK 31/8	1
		purple						TRFK 306	2

	English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
35.	**QN MS**	**(b)**	**b**			
	Leaf: size					
	very small				TRFK K-PURPLE	1
	small				TRFK 833/1	2
	medium				TRFK 303/577	3
	large				AHP S15/10, TRFK 301/5	4
	very large					5

8. Explanations on the Table of Characteristics

8.1 Explanations covering several characteristics

Characteristics containing the following key in the Table of Characteristics should be examined as indicated below:

(a) Observations on the young shoot should be made at least 15 months after transplanting.
(b) Observations on the leaf blade should be on the third fully developed leaf from previous plucking.
(c) Observations on the flower should be made on fully developed flowers at the blooming stage.

8.2 Explanations for individual characteristics

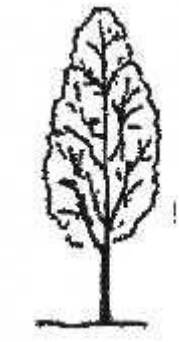
Ad. 1: Plant: vigor

The vigor of the plant should be considered as the overall abundance of vegetative growth.

Ad. 2: Plant: type

1
shrub

3
semi-arbor

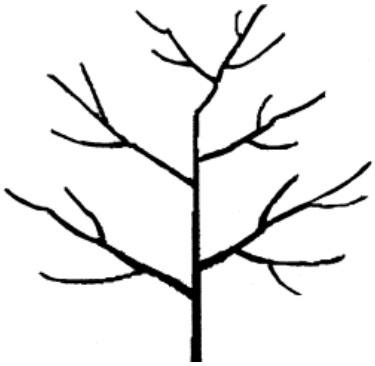


5
arbor

Ad. 3: Plant: growth habit

1
upright

3
semi-upright



5
spreading

Ad. 5: Plant: Branch zigzagging

1
absent

9
present

Ad. 6: Young shoot: time of beginning of 'one and a bud' stage

The time of beginning of ‘one and a bud’ stage is the time at which 30 percent of plants have buds at the ‘one and a bud’ stage.

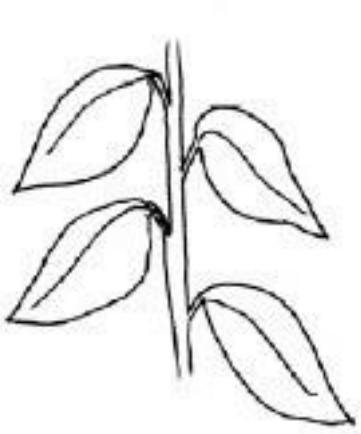
Ad. 7: Young shoot: color of second leaf at 'two and a bud stage'

The color observed to be scored using RHS Color chart.

Ad. 11: Leaf blade: attitude

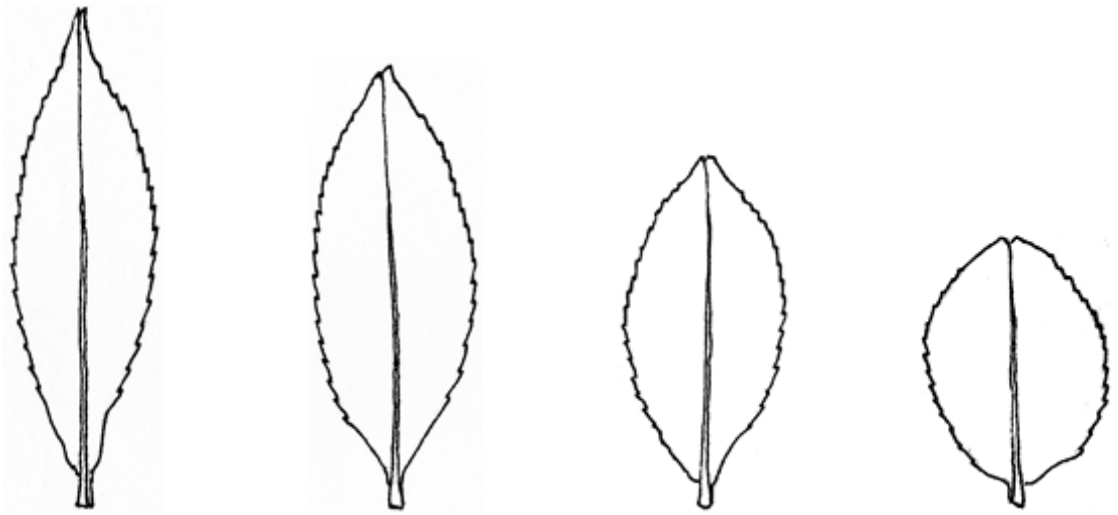
1
upwards

3
outwards



5
downwards

Ad. 13: Leaf blade: shape



1
very narrow elliptic

2
narrow elliptic

3
medium elliptic

4
broad elliptic

Ad. 15: Leaf blade: intensity of green color

The color observed to be scored using RHS Color Chart.

Ad. 16: Leaf blade: intensity of purple color

The color observed to be scored using RHS Color Chart.

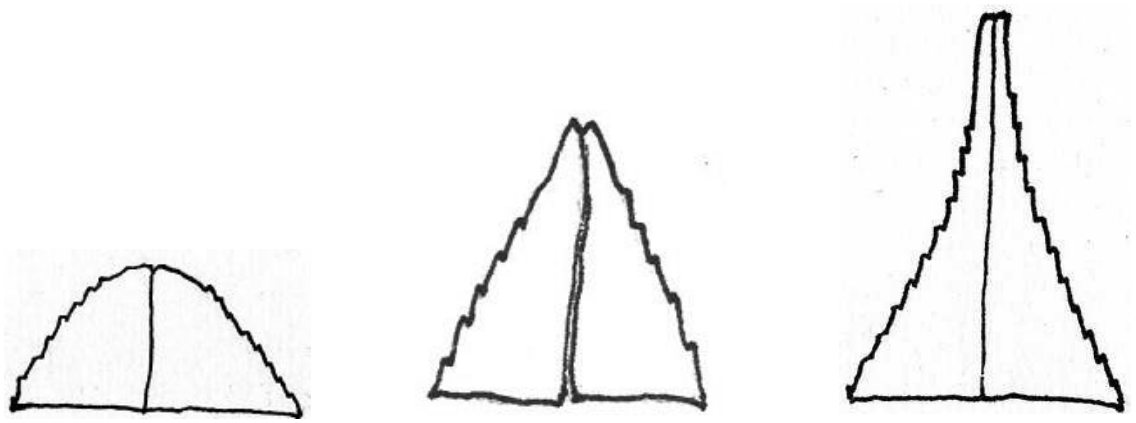
Ad. 17: Leaf blade: shape in cross section

1
folded upwards

2
flat

3
recurved

Ad. 19: Leaf blade: shape of apex



1
obtuse

2
acute

3
acuminate

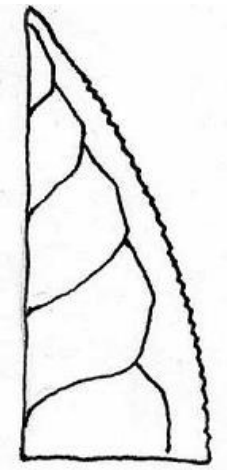
Ad. 20: Leaf blade: undulation of margin

1
absent or weak

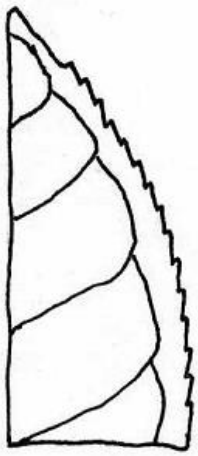
3
medium

5
strong

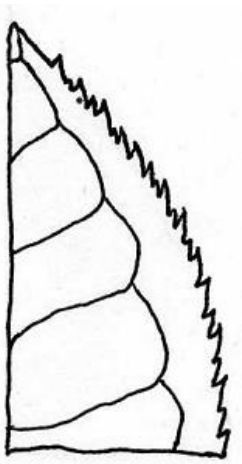
Ad. 21: Leaf blade: serration of margin



3
weak

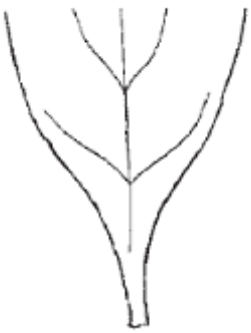


5
medium

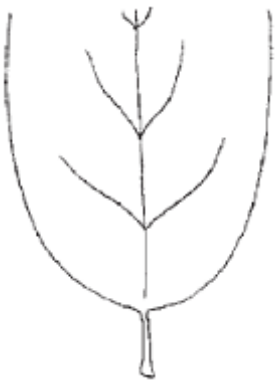


7
strong

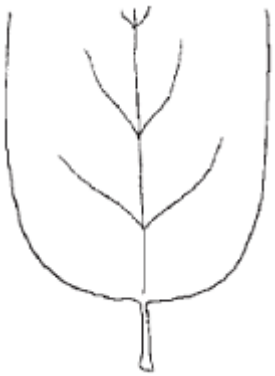
Ad. 22: Leaf blade: shape of base



1
acute



2
obtuse



3
truncate

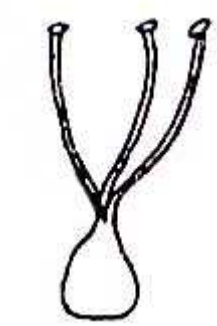
Ad. 23: Flower: time of full flowering

The full flowering time is the time of about 50 percent flowers in blooming.

Ad. 29: Flower: color of inner petals

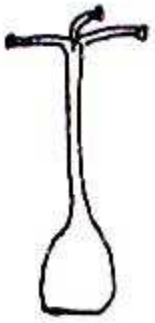
The color observed to be scored using RHS Color Chart.

Ad. 32: Flower: position of style splitting



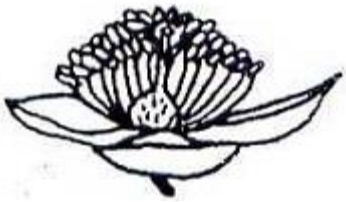
3
low

5
medium



7
high

Ad. 33: Flower: position of stigma relative to stamens



1
below

3
same level

5
above

Ad. 34: Leaf blade: color

The color observed to scored using RHS Color Chart.

9. Literature

Chen, L., Yang, Y.J., Yu, F.L., 2005: Descriptors and data standard for tea (*Camellia* spp.). China Agricultural Press, Beijing, CN

Chen, L., Yu, F.L., Tong, Q.Q., 2000: Discussions on phylogenetic classification and evolution of section *Thea*.Journal of Tea Science, 20(2): 89-94

IPGRI, 1997; Descriptor for tea (Camellia Sinensis). International Plant Genetic Resources Institute,Rome,IT

Ming,T.L.,1992:Arevision of Camellia Sect Thea Acta Botanica Yunanica,,14(2) :115-132

Wachira ,F.N.,Kamunya ,S.M.,ChaloR.,Maritim, T.,and Kinyangi,T.,2012:I,T.,2012:TRFK Clonal Catalogue, (1st Edition) Tea Research Foundation of Kenya (TRFK)

10. Technical Questionnaire

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

	Application date: (not to be filled in by the applicant)

TECHNICAL QUESTIONNAIRE
to be completed in connection with an application for plant breeders' rights

1. Subject of the Technical Questionnaire

1.1 Botanical name	*Camellia sinensis* (L.) Kuntze
1.2 Common name	Tea

2. Applicant

Name	
Address	
Telephone No.	
Fax No.	
E-mail address	
Breeder (if different from applicant)	

3. Proposed denomination and breeder's reference

Proposed denomination (if available)	
Breeder's reference	

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

#4. Information on the breeding scheme and propagation of the variety

4.1 Breeding scheme

Variety resulting from:

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

4.2 Method of propagating the variety

4.2.1 Other [ ]

(Please provide details)

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

5. Characteristics of the variety to be indicated (the number in brackets refers to the corresponding characteristic in Test Guidelines; please mark the note which best corresponds).

	Characteristics	Example Varieties	Note
5.1 (1)	**Plant: vigor**		
	weak	GWEJULUL, TRFK 301/1	3 [ ]
	medium	TRFFK 306	5 [ ]
	strong	TRFK 371/8, TRFK 301/4	7 [ ]
5.2 (2)	**Plant: type**		
	shrub	TRFK 536, TRFK 543	1 [ ]
	semi-arbor	AHP S15/10	3 [ ]
	arbor	TRFK 56/89	5 [ ]
5.3 (3)	**Plant: growth habit**		
	upright	TRFK 301/3	1 [ ]
	semi-upright	AHP S15/10	3 [ ]
	spreading	TRFK 371/8	5 [ ]
5.4 (8)	**Young shoot: density pubescence of bud**		
	sparse	TRFK 31/8	3 [ ]
	medium	TRFK 704/2	5 [ ]
	dense	AHP S15/10	7 [ ]
5.5 (13)	**Leaf blade: shape**		
	very narrow elliptic	EPK C12, TRFK301/6	1 [ ]
	narrow elliptic	TRFK 31/8 , TRFK 704/2	2 [ ]
	medium elliptic	AHP S15/10	3 [ ]
	broad elliptic		4 [ ]
5.6 (15)	**Leaf blade: intensity of green color**		
	light	AHP SC12/28	3 [ ]
	medium	TRFK 31/8 , TRFK56/89	5 [ ]
	dark	NDT TAI, TRFK301/6	7 [ ]
5.7 (34)	**Leaf blade: color**		
	green	TRFK 31/8	1 [ ]
	Purple	TRFK 306	2 [ ]

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

6. Similar varieties and differences from these varieties

Please use the following table and box for comments to provide information on how your candidate variety differs from the variety (or varieties) which, to the best of your knowledge, is (or are) most similar. This information may help the examination authority to conduct its examination of distinctness in a more efficient way.

Denomination(s) of variety(ies) similar to your candidate variety	Characteristic(s) in which your candidate variety differs from the similar variety(ies)	Describe the expression of the characteristic(s) for the **similar** variety(ies)	Describe the expression of the characteristic(s) for **your** candidate variety
Example			

Comments:

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

#7. Additional information which may help in the examination of the variety

7.1 In addition to the information provided in sections 5 and 6, are there any additional characteristics which may help to distinguish the variety?

Yes [ ] No [ ]

(If yes, please provide details)

7.2 Are there any special conditions for growing the variety or conducting the examination?

Yes [ ] No [ ]

(If yes, please provide details)

7.3 Other information

Authorities may allow certain of this information to be provided in a confidential section of the Technical Questionnaire.

TECHNICAL QUESTIONNAIRE	Page {x} of {y}	Reference Number:

8. Authorization for release

(a) Does the variety require prior authorization for release under legislation concerning the protection of the environment, human and animal health?

Yes [ ] No [ ]

(b) Has such authorization been obtained?

Yes [ ] No [ ]

If the answer to (b) is yes, please attach a copy of the authorization.

9. Information on plant material to be examined or submitted for examination

9.1 The expression of a characteristic or several characteristics of a variety may be affected by factors, such as pests and disease, chemical treatment (e.g. growth retardants or pesticides), effects of tissue culture, different rootstocks, scions taken from different growth phases of a tree, etc.

9.2 The plant material should not have undergone any treatment which would affect the expression of the characteristics of the variety, unless the competent authorities allow or request such treatment. If the plant material has undergone such treatment, full details of the treatment must be given. In this respect, please indicate below, to the best of your knowledge, if the plant material to be examined has been subjected to:

(a)	Microorganisms (e.g. virus, bacteria, phytoplasma)	Yes [ ]	No [ ]
(b)	Chemical treatment (e.g. growth retardant, pesticide)	Yes [ ]	No [ ]
(c)	Tissue culture	Yes [ ]	No [ ]
(d)	Other factors	Yes [ ]	No [ ]

Please provide details for where you have indicated “yes”.

.....

10. I hereby declare that, to the best of my knowledge, the information provided in this form is correct:

Applicant’s name

Signature Date

[End of document]