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INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

TEA

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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 Committee at its fifty-sixth session
to be held in Geneva on October 26 and 27, 2020

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Camellia sinensis (L.) Kuntze	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

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 The testing of a variety may be concluded when the competent authority can determine with certainty the outcome of the test.

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.

3.4 Test Design

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

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.

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 9 plants or parts of plants taken from each of 9 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 1.

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 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.

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: color (characteristic 14)
(e) Leaf blade: shape (characteristic 16)

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)**				
		Plant: vigor	**Plante : vigueur**	**Pflanze: Wuchsstärke**	**Planta: vigor**		
		weak	faible	gering	débil	GWEJULUL, TRFK 301/1	3
		medium	moyenne	mittel	medio	TRFK 306	5
		strong	forte	stark	fuerte	TRFK 301/4, TRFK 371/8	7
2.	**(*)**	**PQ VG**	**(+) (a)**				
		Plant: type	**Plante : type**	**Pflanze: Typ**	**Planta: tipo**		
		shrub	arbrisseau	Strauch	arbusto	TRFK 536, TRFK 543	1
		semi-arbor	demi-arbre	Halbbaum	semiarborescente	AHP S15/10	2
		arbor	arbre	Baum	arborescente	TRFK 56/89	3
3.	**(*)**	**QN VG**	**(+) (a)**				
		Plant: growth habit	**Plante : port**	**Pflanze: Wuchsform**	**Planta: hábito de crecimiento**		
		upright	dressé	aufrecht	erecto	TRFK 301/3	1
		semi-upright	demi-dressé	halbaufrecht	semierecto	AHP S15/10	3
		spreading	étalé	breitwüchsig	extendido	TRFK 371/8	5
4.		**QN VG**	**(a)**				
		Plant: density of branches	**Plante : densité des ramifications**	**Pflanze: Dichte der Zweige**	**Planta: densidad de ramas**		
		sparse	lâche	locker	laxa	TRFK 306	3
		medium	moyenne	mittel	media	EPKD99/10, TRFK 301/4	5
		dense	dense	dicht	densa	AHP S15/10, EPK TN14-3	7
5.	**(*)**	**QL VG**	**(+) (a)**				
		Branch: zigzag	**Ramification : zigzag**	**Zweig: Zickzackform**	**Rama: zigzagueo**		
		absent	absent	fehlend	ausente	TRFK 31/8	1
		present	présent	vorhanden	presente		9
6.	**(*)**	**QN MG/MS**	**(+)**				
		Young shoot: time of beginning of 'one and a bud' stage	**Jeune rameau : époque de début de la phase 'un et un bourgeon'**	**Jungtrieb: Zeitpunkt des Beginns des Stadiums 'ein Blatt und eine Knospe'**	**Rama joven: época de inicio de la fase de "una hoja y una yema"**		
		early	précoce	früh	temprana		3
		medium	moyenne	mittel	intermedia		5
		late	tardive	spät	tardía		7

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7.	**(*)**	**PQ VG**	**(a)**				
		Young shoot: color of second leaf	**Jeune rameau : couleur de la deuxième feuille**	**Jungtrieb: Farbe des zweiten Blattes**	**Rama joven: color de la segunda hoja**		
		whitish	blanchâtre	weißlich	blanquecino		1
		light green	vert clair	hellgrün	verde claro	TRFK 301/3	2
		medium green	vert moyen	mittelgrün	verde medio	EPK TN14-3	3
		dark green	vert foncé	dunkelgrün	verde oscuro	NDT TAI, TRFK 306/3	4
		yellow green	vert-jaune	gelbgrün	verde amarillento	TRFK 6/8	5
		purple green	vert-pourpre	purpurgrün	verde púrpura	TRFK K-PURPLE	6
		purple	pourpre	purpurn	púrpura	TRFK 306	7
8.	**(*)**	**QN VG**	**(a)**				
		Young shoot: density pubescence of bud	**Jeune rameau : densité de la pilosité du bourgeon**	**Jungtrieb: Dichte der Behaarung der Knospe**	**Rama joven: densidad de la pubescencia de la yema**		
		absent or sparse	absente ou faible	fehlend oder locker	ausente o laxa	TRFK 31/8	1
		medium	moyenne	mittel	media	TRFK 704/2	3
		dense	forte	dicht	densa	AHP S15/10	5
9.		**QN VG**	**(a)**				
		Young shoot: anthocyanin coloration at base of petiole	**Jeune rameau : pigmentation anthocyanique à la base du pétiole**	**Jungtrieb: Anthocyanfärbung an der Basis des Blattstiels**	**Rama joven: pigmentación antociánica en la base del pecíolo**		
		absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	TRFK 31/8	1
		weak	faible	gering	débil	TRFK 73/1	2
		medium	moyenne	mittel	media		3
		strong	forte	stark	fuerte	TRFK 306	4
		very strong	très forte	sehr stark	muy fuerte	TRFK K-PURPLE	5
10.	**(*)**	**QN MS/VG**	**(+) (a)**				
		Young shoot: length	**Jeune rameau : longueur**	**Jungtrieb: Länge**	**Rama joven: longitud**		
		short	courte	kurz	corta	K-PURPLE	3
		medium	moyenne	mittel	media	TRFK 704/2	5
		long	longue	lang	larga	BBK 35, TRFK 301/4	7
11.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: attitude	**Limbe : port**	**Blattspreite: Haltung**	**Limbo: porte**		
		upwards	dressé	aufwärts gerichtet	erecto	BBK 35, TRFK 56/89	1
		horizontal	horizontal	waagerecht	horizontal	TRFK 6/8	3
		downwards	retombant	abwärts gerichtet	hacia abajo	TRFK 371/8	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
12.	**(*)**	**QN MS/VG**	**(b)**				
		Leaf blade: length	**Limbe : longueur**	**Blattspreite: Länge**	**Limbo: longitud**		
		short	courte	kurz	corta	K-PURPLE	3
		medium	moyenne	mittel	media	AHP SC31/37	5
		long	longue	lang	larga	BBK 35, TRFK 301/4	7
13.	**(*)**	**QN MS/VG**	**(b)**				
		Leaf blade: width	**Limbe : largeur**	**Blattspreite: Breite**	**Limbo: anchura**		
		narrow	étroite	schmal	estrecha	K-PURPLE	3
		medium	moyenne	mittel	media	AHP SC31/37	5
		broad	large	breit	ancha	TRFK 371/8	7
14.	**(*)**	**QL VG**	**(b)**				
		Leaf blade: color	**Limbe : couleur**	**Blattspreite: Farbe**	**Limbo: color**		
		green	vert	grün	verde	TRFK 31/8	1
		purple	pourpre	purpurn	púrpura	TRFK 306	2
15.	**(*)**	**QN VG**	**(b)**				
		Leaf blade: intensity of color	**Limbe : intensité de la couleur**	**Blattspreite: Intensität der Farbe**	**Limbo: intensidad del color**		
		light	claire	hell	clara	AHP SC12/28, TRFK 73/1	3
		medium	moyenne	mittel	media	TRFK 306, TRFK 31/8, TRFK56/89	5
		dark	foncée	dunkel	oscura	NDT TAI, TRFK K-PURPLE, TRFK301/6	7
16.	**(*)**	**QN VG**	**(+) (b)**				
		Leaf blade: shape	**Limbe : forme**	**Blattspreite: Form**	**Limbo: forma**		
		very narrow elliptic	très elliptique étroite	sehr schmal elliptisch	elíptica muy estrecha	EPK C12, TRFK301/6	1
		narrow elliptic	elliptique étroite	schmal elliptisch	elíptica estrecha	TRFK 31/8, TRFK 704/2	2
		medium elliptic	elliptique moyenne	mittel elliptisch	elíptica media	AHP S15/10	3
		broad elliptic	elliptique large	breit elliptisch	elíptica ancha		4
17.	**(*)**	**PQ VG**	**(+) (b)**				
		Leaf blade: shape of apex	**Limbe : forme du sommet**	**Blattspreite: Form der Spitze**	**Limbo: forma del ápice**		
		obtuse	obtuse	stumpf	obtusa		1
		acute	aigue	spitz	aguda	TRFK 108/82	2
		acuminate	acuminée	zugespitzt	acuminada	AHP S15/10, TRFCA SF S150, TRFK597/1	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
18.	**(*)**	**PQ VG**	**(+) (b)**				
		Leaf blade: shape of base	**Limbe : forme de la base**	**Blattspreite: Form der Basis**	**Limbo: forma de la base**		
		acute	pointue	spitz	aguda	AHP SC31/37	1
		obtuse	obtuse	stumpf	obtusa	TRFK 704/2	2
		truncate	tronquée	abgeflacht	truncada		3
19.		**PQ VG**	**(+)**				
		Leaf blade: shape in cross section	**Limbe : forme en section transversale**	**Blattspreite: Form im Querschnitt**	**Limbo: forma en sección transversal**		
		folded upwards	incurvée	aufgebogen	plegada hacia arriba	TRFK 6/8	1
		flat	plate	gerade	plana	TRFK 12/12	2
		recurved	retombante	zurückgebogen	recurvada		3
20.		**QN VG**	**(+) (b)**				
		Leaf blade: undulation of margin	**Limbe : ondulation du bord**	**Blattspreite: Randwellung**	**Limbo: ondulación del margen**		
		absent or weak	absente ou faible	fehlend oder gering	ausente o débil	EPK TN14-3, TRFK31/8	1
		medium	moyenne	mittel	media	TRFK 301/3	3
		strong	forte	stark	fuerte	TRFK 303/577	5
21.		**QN VG**	**(+) (b)**				
		Leaf blade: serration of margin	**Limbe : dentelure du bord**	**Blattspreite: Randeinschnitte**	**Limbo: serrado del margen**		
		absent or very weak	absente ou très faible	fehlend oder sehr gering	ausente o muy débil	TRFK 306	1
		weak	faible	gering	débil	TRFK 31/8	3
		medium	moyenne	mittel	medio	AHP S15/10	5
		strong	forte	stark	fuerte	TRFK 301/5, TRFK 597/1	7
		very strong	très forte	sehr stark	muy fuerte		9
22.		**QN VG**		**(b)**			
		Leaf blade: texture of upper surface	**Limbe : texture de la surface supérieure**	**Blattspreite: Textur der Oberfläche**	**Limbo: textura del haz**		
		smooth or weakly rugose	lisse ou faiblement rugueuse	glatt oder schwach blasig	lisa o ligeramente rugosa	TRFK 6/8	1
		moderately rugose	modérément rugueuse	mittel blasig	moderadamente rugosa	EPK TN14-3	2
		strongly rugose	fortement rugueuse	stark blasig	muy rugosa	AHP SC31/37	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23.		**QN MG**	**(+)**				
		Time of full flowering	**Époque de pleine floraison**	**Zeitpunkt der Vollblüte**	**Época de plena floración**		
		early	précoce	früh	temprana		3
		medium	moyenne	mittel	intermedia		5
		late	tardive	spät	tardía		7
24.		**QN MS/VG**		**(c)**			
		Flower: length of pedicel	**Fleur : longueur du pédoncule**	**Blüte: Länge des Blütenstiels**	**Flor: longitud del pedicelo**		
		short	courte	kurz	corta	EPK TN14-3	1
		medium	moyenne	mittel	media	TRFK 6/8, AHP S15/10	3
		long	longue	lang	larga	TRFK 301/5	5
25.	**(*)**	**QN VG**		**(c)**			
		Flower: anthocyanin coloration on outer side of sepal	**Fleur: pigmentation anthocyanique sur la face externe du sépale**	**Blüte: Anthocyanfärbung an der Außenseite des Kelchblatts**	**Flor: pigmentación antociánica de la cara externa del sépalo**		
		absent or weak	absente ou faible	fehlend oder gering	ausente o débil	TRFK 6/8	1
		medium	moyenne	mittel	media		2
		strong	forte	stark	fuerte	TRFK 306	3
26.		**QL VG**		**(c)**			
		Flower: pubescence of outer side of sepal	**Fleur : pilosité de la face externe du sépale**	**Blüte: Behaarung an der Außenseite des Kelchblatts**	**Flor: pubescencia de la cara externa del sépalo**		
		absent	absente	fehlend	ausente	TRFK 306	1
		present	présente	vorhanden	presente		9
27.		**QN MS**		**(c)**			
		Flower: diameter	**Fleur : diamètre**	**Blüte: Durchmesser**	**Flor: diámetro**		
		small	petit	klein	pequeño	TRFK 303/577	3
		medium	moyen	mittel	medio	TRFK 6/8, AHP S15/10	5
		large	grand	groß	grande	TRFK 301/5, TRFK 306	7
28.		**QL VG**		**(c)**			
		Flower: pubescence of ovary	**Fleur : pilosité de l'ovaire**	**Blüte: Behaarung des Fruchtknotens**	**Flor: pubescencia del ovario**		
		absent	absente	fehlend	ausente		1
		present	présente	vorhanden	presente	AHP S15/10, TRFK 31/8	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
29.		**QN VG**	**(c)**				
		Flower: density of pubescence of ovary	**Fleur : densité de la pilosité de l'ovaire**	**Blüte: Dichte der Behaarung des Fruchtknotens**	**Flor: densidad de la pubescencia del ovario**		
		sparse	lâche	gering	laxa	TRFK 31/8	1
		medium	moyenne	mittel	media	AHP S15/10	3
		dense	dense	stark	densa	TRFK 6/8	5
30.	**(*)**	**PQ VG**	**(+) (c)**				
		Flower: color of inner petals	**Fleur : couleur des pétales internes**	**Blüte: Farbe der inneren Blütenblätter**	**Flor: color de los pétalos internos**		
		white	blanc	weiß	blanco	TRFK 306	1
		greenish	verdâtre	grünlich	verdoso	AHP S15/10	2
		pink	rose	rosa	rosa		3
31.	**(*)**	**QN VG**	**(c)**				
		Flower: length of style	**Fleur : longueur du style**	**Blüte: Länge des Griffels**	**Flor: longitud del estilo**		
		short	courte	kurz	corta	TRFCA SFS150	1
		medium	moyenne	mittel	media	AHP S15/10	3
		long	longue	lang	larga	TRFK 306	5
32.		**QN VG**	**(+) (c)**				
		Flower: position of style splitting	**Fleur : position de la scission du style**	**Blüte: Position der Griffelspaltung**	**Flor: posición de la división del estilo**		
		low	basse	niedrig	baja	EPK TN14-3	1
		medium	moyenne	mittel	media	TRFK 306	3
		high	haute	hoch	alta	TRFK 6/8	5
33.	**(*)**	**QN VG**	**(+) (c)**				
		Flower: position of stigma relative to stamens	**Fleur : position du stigmate par rapport aux étamines**	**Blüte: Stellung der Narbe im Verhältnis zu den Staubblättern**	**Flor: posición del estigma en relación con los estambres**		
		far below	loin au-dessous	weit unterhalb	muy por debajo	TRFK 430/90	1
		moderately below	modérément au-dessous	mittel unterhalb	medianamente por debajo	EPK TN14-3	2
		same level	au même niveau	auf gleicher Höhe	al mismo nivel	AHP S15/10	3
		moderately above	modérément au-dessus	mittel oberhalb	medianamente por encima	EPKD99/10	4
		far above	loin au-dessus	weit oberhalb	muy por encima	EPK C12	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 should be made at least 15 months after transplanting or at the first flush of the year, as appropriate.

(b) Observations should be made on the fifth fully developed leaf from the top of the branch.

(c) Observations on the flower should be made on fully developed flowers at the time of full flowering.

8.2 Explanations for individual characteristics

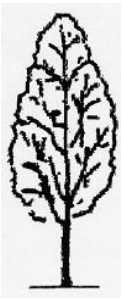
Ad. 1: Plant: vigor

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

Ad. 2: Plant: type

1
shrub

2
semi-arbor

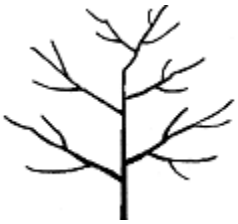


3
arbor

Ad. 3: Plant: growth habit

1
upright

3
semi-upright



5
spreading

Ad. 5: Branch: zigzag

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 reached when 30% of plants have buds at the "one leaf and a bud" stage.

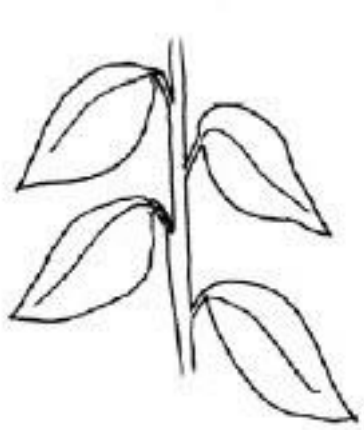
Ad. 10: Young shoot: length

Observations should be made at "three and a bud stage".

Ad. 11: Leaf blade: attitude

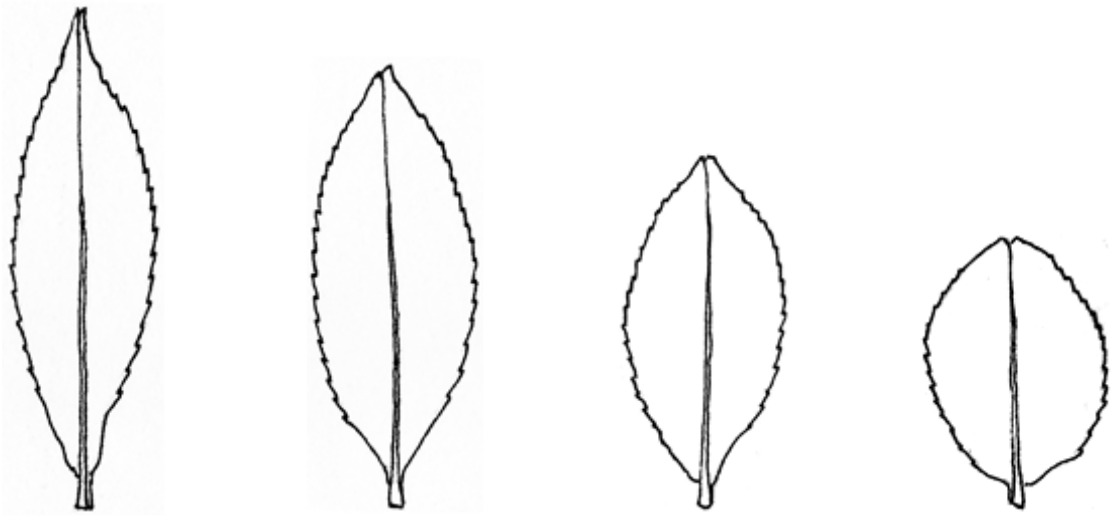
1
upwards

3
horizontal



5
downwards

Ad. 16: Leaf blade: shape



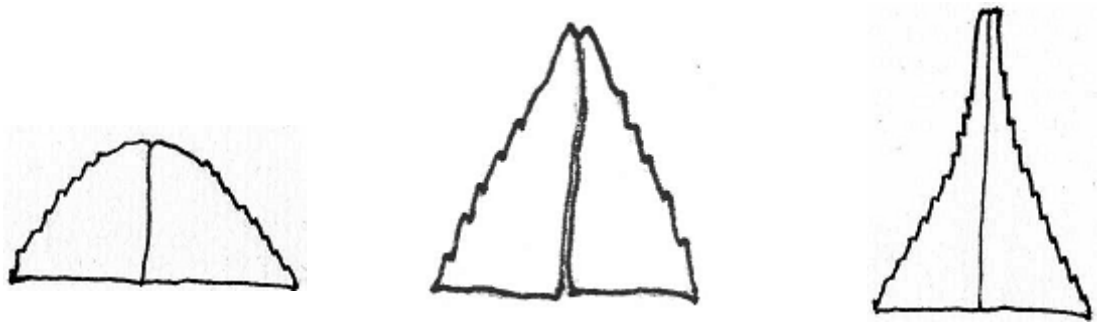
1
very narrow elliptic

2
narrow elliptic

3
medium elliptic

4
broad elliptic

Ad. 17: Leaf blade: shape of apex

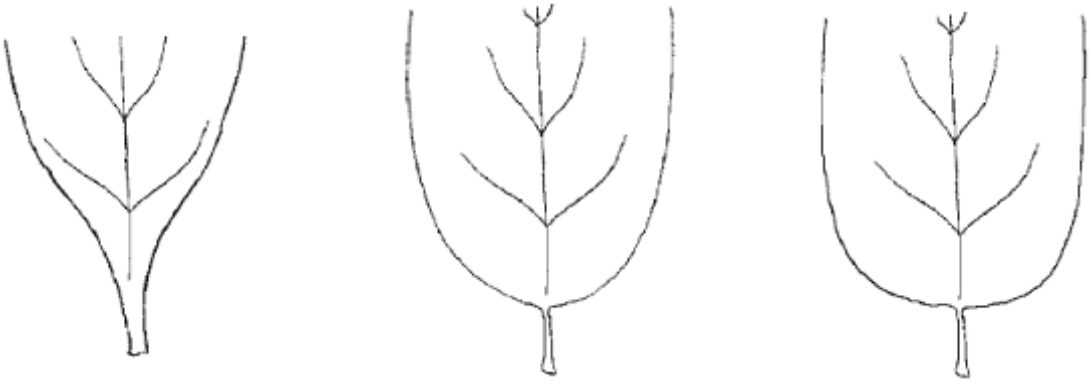


1
obtuse

2
acute

3
acuminate

Ad. 18: Leaf blade: shape of base



1
acute

2
obtuse

3
truncate

Ad. 19: Leaf blade: shape in cross section

1
folded upwards

2
flat

3
recurved

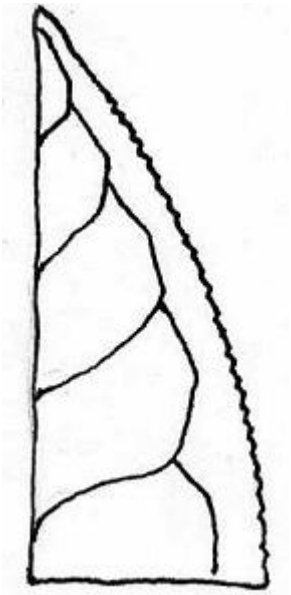
Ad. 20: Leaf blade: undulation of margin

1
absent or weak

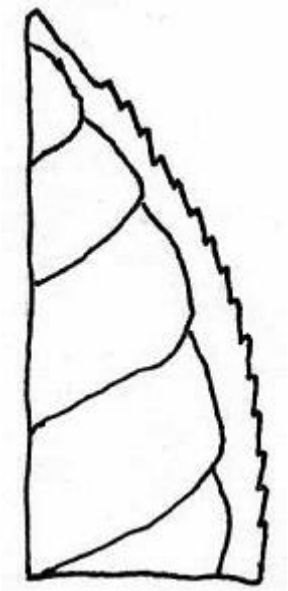
3
medium

5
strong

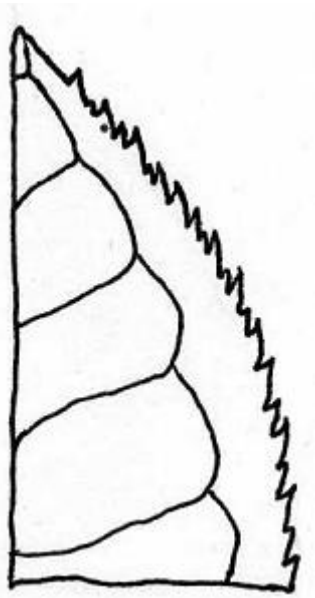
Ad. 21: Leaf blade: serration of margin



3
weak



5
medium



7
strong

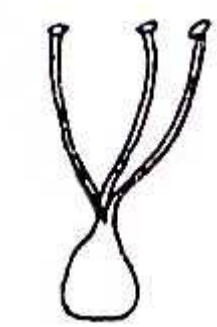
Ad. 23: Time of full flowering

Time of full flowering is reached when 50% of the plants have 50% of flowers open.

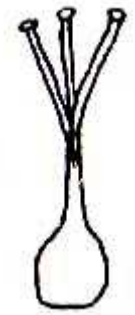
Ad. 30: Flower: color of inner petals

a = Inner petal
b = Outer petal

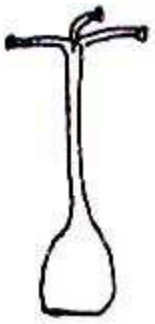
Ad. 32: Flower: position of style splitting



1
low

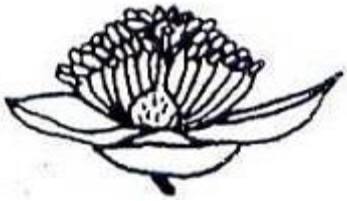


3
medium



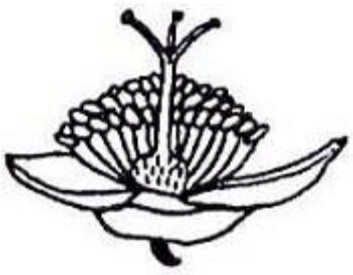
5
high

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



1
far below

3
same level



5
far above

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

Wachira, F.N., Kamunya, S.M., Chalo, R., Maritim, T., Kinyangi, T., 2012:T RFK Clonal Catalogue, (1st Edition), Tea Research Foundation of Kenya (TRFK), KE

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:

4.1.1 Crossing

(a) controlled cross [ ]

(please state parent variety)

(……..……..…) x (……..……..…)

female parent male parent

(b) partially known cross [ ]

(please state known parent variety(ies))

(……..……..…) x (……..……..…)

female parent male parent

(c) unknown cross [ ]

4.1.2 Mutation [ ]
(please state parent variety)

4.1.3 Discovery and development [ ]
(please state where and when discovered and how developed)

4.1.4 Other [ ]
(Please provide details)

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 Vegetative propagation

(a) Cuttings [ ]
(b) *In vitro* propagation [ ]
(c) Other (state method) [ ]

4.2.2 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 (2)	**Plant: type**		
	shrub	TRFK 536, TRFK 543	1 [ ]
	semi-arbor	AHP S15/10	2 [ ]
	arbor	TRFK 56/89	3 [ ]
5.2 (3)	**Plant: growth habit**		
	upright	TRFK 301/3	1 [ ]
	upright to semi-upright		2 [ ]
	semi-upright	AHP S15/10	3 [ ]
	semi-upright to spreading		4 [ ]
	spreading	TRFK 371/8	5 [ ]
5.3 (8)	**Young shoot: density pubescence of bud**		
	absent or sparse	TRFK 31/8	1 [ ]
	sparse to medium		2 [ ]
	medium	TRFK 704/2	3 [ ]
	medium to dense		4 [ ]
	dense	AHP S15/10	5 [ ]
5.4 (14)	**Leaf blade: color**		
	green	TRFK 31/8	1 [ ]
	purple	TRFK 306	2 [ ]
5.5 (16)	**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 [ ]

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	*Plant: growth habit*	*upright*	*spreading*

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.

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]