E

TG/50/10(proj.4)
ORIGINAL: English
DATE: 2021-05-30

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

Geneva

DRAFT

GRAPEVINE

UPOV Code(s): VITIS

Vitis L.

GUIDELINES

FOR THE CONDUCT OF TESTS

FOR DISTINCTNESS, UNIFORMITY AND STABILITY

prepared by experts from Italy
to be considered by the
Technical Working Party for Fruit Crops
at its fifty-second session, to be held in Zhengzhou, China,
from 2021-07-12 to 2021-07-16

Disclaimer: this document does not represent UPOV policies or guidance

Alternative names:*

Botanical name	*English*	*French*	*German*	*Spanish*
Vitis L.	Grapevine	Vigne	Rebe	Vid

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.]

TABLE OF CONTENTS PAGE

1. Subject of these Test Guidelines

These Test Guidelines apply to all varieties of *Vitis* L. , covering table grapes, wine grapes, and roostocks.

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 (a) plants on their own roots, only in the case of a variety not being sensitive to *Daktulosphaira vitifoliae*;
(b) rooted grafts with scions grafted on a rootstock to be specified by the competent Authority.

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

5 plants.

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 two independent growing cycles.

3.1.2 The two independent growing cycles may be observed from a single planting, examined in two separate growing cycles.

3.1.3 In particular, it is essential that the plants, excluding unproductive rootstock varieties, produce a satisfactory crop of fruit in each of the two growing cycles.

3.1.4 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 5 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 3 plants or parts of plants taken from each of 3 plants and any other observations made on all plants in the test, disregarding any off-type plants.

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 5 plants, no off-types are 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) Young shoot: openness of tip (characteristic 2)
(b) Young leaf: color of upper side of blade (characteristic 6)
(c) Young leaf: density of prostrate hairs between main veins on lower side of blade (characteristic 7)
(d) Flower: sexual organs (characteristic 16)
(e) Mature leaf: number of lobes (characteristic 20)
(f) Time of beginning of berry ripening (characteristic 30)
(g) Bunch: density (characteristic 33)
(h) Berry: shape (characteristic 36)
(i) Berry: color of skin (characteristic 38)
(j) Berry: anthocyanin coloration of flesh (characteristic 39)
(k) Berry: particular flavor (characteristic 41)
(l) Berry: presence of seeds (characteristic 42)

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 All relevant states of expression are presented in the characteristic.

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.

For the example varieties – other than rootstocks – the color of the berry of the example varieties is indicated in the table in Chapter 8.4, following the standardized code used within the European Union for the classification of vine varieties:
B = white,
G = grey,
N = black,
Rg = red,
Rs = rose.

That table also provides synonyms of certain example varieties.

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)-(b) See Explanations on the Table of Characteristics in Chapter 8.1

7 Growth stage key See Explanations on the Table of Characteristics in Chapter 8.3

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 MG/VG		**(+)**	**07-09 / O-301 / B-7.1.1**			
	Time of bud burst					
	very early				Nero	1
	very early to early				Sugraone	2
	early				Chardonnay, Kyoho	3
	early to medium					4
	medium				Garnacha tinta, Sultanina	5
	medium to late					6
	late				Mourvèdre	7
	late to very late					8
	very late				Garganega	9
2. (*) QN VG		**(+)**	**53-69 / O-001 / B-6.1.1**			
	Young shoot: openness of tip					
	closed				Gloire de Montpellier	1
	slightly open				3309 Couderc	2
	half open				Kober 5 BB	3
	wide open				Cina	4
	fully open				Flame seedless, Pinot noir	5
3. (*) QN VG		**(+)**	**53-69 / O-004 / B-6.1.3**			
	Young shoot: density of <u>prostrate</u> hairs on tip					
	absent or very sparse				3309 Couderc , Afus ali, Sultanina	1
	very soparse to sparse					2
	sparse				Chasselas blanc	3
	sparse to medium				Chardonnay	4
	medium				Italia, Pinot noir	5
	medium to dense				Korinthiaki	6
	dense				Furmint, Kyoho	7
	dense to very dense					8
	very dense				Meunier	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
4.		**QN VG**	**(+)**	**53-69 / O-005 / B-6.1.4**			
		Young shoot: density of <u>erect</u> hairs on tip					
		absent or very sparse				Du Lot, Flame seedless	1
		sparse				3309 Couderc	2
		medium				3306 Couderc	3
		dense				Gloire de Montpellier	4
		very dense				1616 Couderc	5
5.	**(*)**	**QN VG**	**(+)**	**53-69 / O-003 / B-6.1.2**			
		Young shoot: anthocyanin coloration of prostrate hairs on tip					
		absent or very weak				Autumn royal seedless, Furmint	1
		weak				Kyoho, Riesling	2
		medium				Barbera	3
		strong				Cabernet-Sauvignon	4
		very strong				Dabouki	5
6.	**(*)**	**PQ VG**	**(+)**	**53-69 / O-051* / B-6.1.16***			
		Young leaf: color of upper side of blade					
		yellow green				Furmint, Sultanina	1
		green				Silvaner gruen	2
		green with reddish brown speckles				Riesling, Sugraone	3
		light brownish red				Kober 5 BB	4
		medium brownish red				Chasselas blanc, Crimson seedless	5
		dark brownish red				Deckrot	6

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
7.	**(*)**	**QN VG**	**(+)**	**53-69 / O-053 / B-6.1.17**			
		Young leaf: density of prostrate hairs between main veins on lower side of blade					
		absent or very sparse				Du Lot, Garnacha tinta	1
		very sparse to sparse					2
		sparse				Muscat à petits grains blancs, Sugraone	3
		sparse to medium				Chardonnay, Muscat of Alexandria	4
		medium				Kyoho, Merlot, Riesling	5
		medium to dense				Cabernet franc	6
		dense				Furmint	7
		dense to very dense				Clairette	8
		very dense				Meunier	9
8.		**QN VG**	**(+)**	**53-69 / O-056 / B-6.1.20**			
		Young leaf: density of erect hairs main veins on lower side of blade					
		absent or very sparse				Du Lot, Flame seedless	1
		sparse				3309 Couderc	2
		medium				Kober 125 AA	3
		dense				Teleki 8 B	4
		very dense				Gloire de Montpellier	5
9.		**QN VG**	**(+)**	**57-69 / O-006 / B-6.1.5**			
		Shoot: attitude					
		erect				Garnacha tinta	1
		semi-erect				Muscat Ottonel	2
		horizontal				Barbera	3
		semi-drooping				Aramon noir	4
		drooping				Dabouki	5
10		**PQ VG**	**(+)** **(a)**	**60-69 / O-007 / B-6.1.6**			
		Shoot: color of <u>dorsal</u> side of <u>internodes</u>					
		green				Sauvignon, Sultanina	1
		green and red				Carignan, Sugraone	2
		red				Kober 5 BB, Riesling	3

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
11	**(*)**	**PQ VG**	**(+) (a)**	**60-69 / O-008 / B-6.1.7**			
		Shoot: color of <u>ventral</u> side of <u>internodes</u>					
		green				Flame seedless, Sauvignon	1
		green and red				Carignan	2
		red				Mourvèdre	3
12		**PQ VG**	**(+) (a)**	**60-69 / O-009 / B-6.1.8**			
		Shoot: color of <u>dorsal</u> side of <u>nodes</u>					
		green				Sauvignon, Sultanina	1
		green and red				Barbera, Sugraone	2
		red				Kober 5 BB	3
13		**PQ VG**	**(+) (a)**	**60-69 / O-010 / B-6.1.9**			
		Shoot: color of <u>ventral</u> side of <u>nodes</u>					
		green				Sauvignon, Sultanina	1
		green and red				Palomino fino	2
		red				Dabouki	3
14		**QN VG**	**(a)**	**60-69 / O-012 / B-6.1.11***			
		Shoot: density of <u>erect</u> hairs on internodes					
		absent or very sparse				3309 Couderc, Flame seedless	1
		sparse				161-49 Couderc	2
		medium				Teleki 8 B	3
		dense				Fercal, Kober 125 AA	4
		very dense				Cina	5
15		**QN VG**	**(a)**	**60-69 / O-014 / B-6.1.13**			
		Shoot: density of <u>prostrate</u> hairs on internodes					
		none or very sparse				Flame seedless, Garnacha tinta	1
		sparse				Alphonse Lavallée	2
		medium				Clairette	3
		dense				Viura	4
		very dense				Meunier	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
16	**(*)**	**QL VG**	**(+)**	**61-68 / O-151 / B-6.2.1***			
		Flower: sexual organs					
		fully developed stamens and no gynoecium				Du Lot	1
		fully developed stamens and reduced gynoecium				3309 Couderc	2
		fully developed stamens and fully developed gynoecium				Chasselas blanc, Flame seedless	3
		reflexed stamens and fully developed gynoecium				Kober 5 BB, Moscatel rosado	4
17	**(*)**	**QN VG**	**(b)**	**75-81 / O-065 / B-6.1.21**			
		Mature leaf: size of blade					
		very small				1103 Paulsen	1
		very small to small					2
		small				Gamay	3
		small to medium				Muscat à petits grains blancs	4
		medium				Cabernet-Sauvignon, Flame seedless	5
		medium to large				Sugraone	6
		large				Carignan, Crimson seedless	7
		large to very large				Sultanina	8
		very large				Alphonse Lavallée, Viura	9
		very large to extra large					10
		extra large					11
18	**(*)**	**PQ VG**	**(+)**	**(b)**	**75-81 / O-067 / B-6.1.22**		
		Mature leaf: shape of blade					
		cordate				Petit Verdot	1
		wedge-shaped				Autumn royal seedless, Gloire de Montpellier	2
		pentagonal				Chasselas blanc, Sultanina	3
		circular				Clairette, Flame seedless	4
		kidney-shaped				Du Lot	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
19		**QN VG**	**(b)**	**75-81 / O-075 / B-6.1.26**			
		Mature leaf: blistering of upper side of blade					
		absent or very weak				Du Lot, Kyoho	1
		weak				Chasselas blanc, Crimson seedless	2
		medium				Argentina, Müller Thurgau	3
		strong				Merlot	4
		very strong				Alvarelhao, Gewürztraminer	5
20	**(*)**	**QN VG**	**(+) (b)**	**75-81 / O-068 / B-6.1.23**			
		Mature leaf: number of lobes					
		one				Du Lot	1
		three				Chenin blanc, Isabella	2
		five				Chasselas blanc, Sugraone	3
		seven				Autumn royal seedless, Cabernet-Sauvignon	4
		more than seven				Centennial seedless, Vilana, Xynisteri	5
21		**QN VG**	**(+) (b)**	**75-81 / O-094 / B-6.1.34**			
		Mature leaf: depth of upper lateral sinuses					
		absent or very shallow				Gloire de Montpellier	1
		shallow				Gamay, Sugraone	2
		medium				Flame seedless, Merlot, Red globe	3
		deep				Centennial seedless, Malvasia Dubrovacka	4
		very deep				Chasselas cioutat	5
22		**QN VG**	**(+) (b)**	**75-81 / O-082 / B-6.1.33**			
		Only varieties with number of lobes more than one: mature leaf: arrangement of lobes of upper lateral sinuses					
		open				Cot, Sultanina	1
		closed				Chasselas blanc	2
		slightly overlapped				Autumn royal seedless, Cabernet-Sauvignon	3
		strongly overlapped				Clairette, Flame seedless	4

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
23	**(*)**	**QN VG**	**(+) (b)**	**75-81 / O-79 / B-6.1.30**			
		Mature leaf: arrangement of lobes of petiole sinus					
		very open				Du Lot	1
		very open to half open				Autumn royal seedless, Gloire de Montpellier	2
		half open				Aramon noir, Red globe	3
		half open to closed				Flame seedless, Sauvignon	4
		closed				Chasselas blanc, Crimson seedless	5
		closed to half overlapped				Cabernet franc	6
		half overlapped				Riesling, Ruby seedless	7
		half overlapped to very overlapped				Agiorgitiko, Marsanne	8
		very overlapped				Clairette	9
24	**(*)**	**QN VG**	**(+) (b)**	**75-81 / O- -- / B-6.1.28**			
		Mature leaf: length of teeth					
		very short				Dogridge, Kober 5 BB	1
		short				Pinot noir	2
		medium				Crimson seedless, Merlot	3
		long				Autumn royal seedless, Carignan	4
		very long				Ahmeur bou Ahmeur, Centennial seedless, Dabouki	5
25	**(*)**	**QN VG**	**(+) (b)**	**75-81 / O-078 / B-6.1.29**			
		Mature leaf: ratio length/width of teeth					
		very low				Marsanne	1
		low				Silvaner gruen	2
		medium				Chasselas blanc, Crimson seedless	3
		high				Autumn royal seedless, Muscat of Alexandria	4
		very high				Centennial seedless, Sangiovese	5

		English		français		deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
26	**(*)**	**PQ**	**VG**	**(+)**	**(b)**	**75-81 / O-076* / B-6.1.27***			
		Mature leaf: shape of teeth							
		both sides concave						Autumn royal seedless, Petit Verdot, Trevisana nera	1
		both sides straight						Kyoho, Muscat à petits grains blancs	2
		both sides convex						Chenin blanc	3
		one side concave, one side convex						Aramon noir	4
		mixture of both sides straight and both sides convex						Cabernet franc, Sugraone	5
		mixture of both sides straight and one side concave, one side convex						Alphonse Lavallée, Centennial seedless, Cinsaut	6
27	**(*)**	**QN**	**VG**	**(+)**	**(b)**	**75-81 / O- -- / B-6.1.24**			
		Mature leaf: proportion of main veins on upper side of blade with anthocyanin coloration							
		absent or very low						Garnacha tinta, Sultanina	1
		low						Muscat of Alexandria, Semillon	2
		medium						Chenin blanc, Flame seedless	3
		high						Dolcetto	4
		very high						Cabernet Mitos	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
28	**(*)**	**QN VG**	**(b)**	**75-81 / O-084 / B-6.1.35**			
		Mature leaf: density of prostrate hairs between main veins on lower side of blade					
		absent or very sparse				Chasselas blanc, Kyoho	1
		very sparse to sparse				Chardonnay, Pinot noir, Riesling	2
		sparse				Italia	3
		sparse to medium				Syrah, Trebbiano toscano	4
		medium				Cabernet-Sauvignon	5
		medium to dense				Barbera	6
		dense				Clairette	7
		dense to very dense					8
		very dense				Isabella	9
29	**(*)**	**QN VG**	**(b)**	**75-81 / O-087 / B-6.1.38**			
		Mature leaf: density of erect hairs on main veins on lower side of blade					
		absent or very sparse				Du Lot	1
		sparse				Perle de Csaba	2
		medium				Riesling	3
		dense				Kober 125 AA, Tempranillo	4
		very dense				Börner	5
30	**(*)**	**QN MG/VG**	**(+)**	**81 / O-303 / B-7.1.4**			
		Time of beginning of berry ripening					
		very early				Perle de Csaba	1
		very early to early				Flame seedless, Sugraone	2
		early				Centennial seedless, Kyoho, Pinot noir	3
		early to medium				Moscatuel	4
		medium				Riesling, Sultanina	5
		medium to late				Autumn royal seedless	6
		late				Alphonse Lavallée, Carignan, Ruby seedless	7
		late to very late				Ahmeur bou Ahmeur, Italia	8
		very late				Aledo, Isabella	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
31	**(*)**	**QN MG/VG**	**(+)**	**89 / O-202 / B-7.1.5**			
		Bunch: length					
		very short				Kober 5 BB	1
		very short to short				Gewürztraminer	2
		short				Riesling	3
		short to medium				Muscat à petits grains blancs	4
		medium				Müller Thurgau	5
		medium to long				Sugraone	6
		long				Autumn royal seedless, Trebbiano toscano	7
		long to very long				Moscato d'Amburgo, Sultanina	8
		very long				Nehelescol, Red globe	9
32		**QN MG/VG**	**(+)**	**89 / O-203 / B- --**			
		Bunch: width					
		very narrow				161-49 Couderc	1
		narrow				Riesling	2
		medium				Garnacha tinta	3
		wide				Cardinal, Red globe	4
		very wide				Sultanina	5
33	**(*)**	**QN VG**	**(+)**	**89 / O-204 / B-6.2.3**			
		Bunch: density					
		very lax				Nehelescol	1
		very lax to lax					2
		lax				Cardinal, Red globe	3
		lax to medium				Moscatuel	4
		medium				Chasselas blanc, Flame seedless, Sugraone	5
		medium to dense				Perlette, Silvaner gruen	6
		dense				Sauvignon, Sultanina	7
		dense to very dense					8
		very dense				Chenin blanc, Meunier	9

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
34	**(*)**	**QN MG/VG**	**(+)**	**89 / O-206 / B-6.2.4**			
		Bunch: length of peduncle of primary bunch					
		very short				Silvaner gruen	1
		short				Crimson seedless, Sauvignon	2
		medium				Cabernet franc, Sugraone	3
		long				Alphonse Lavallée, Barbera, Kyoho, Red globe	4
		very long				Freisa	5
35	**(*)**	**QN VG**		**89 / O-220 / B-6.2.5**			
		Berry: size					
		very small				Korinthiaki	1
		small				Flame seedless, Riesling, Sultanina	2
		medium				Portugieser, Sugraone	3
		large				Muscat of Alexandria, Red globe	4
		very large				Alphonse Lavallée, Kyoho	5
36	**(*)**	**PQ VG**	**(+)**	**89 / O- 223* / B-6.2.6***			
		Berry: shape					
		obloid				Flame seedless, Tompa Mihaly	1
		globose				Chasselas blanc	2
		broad ellipsoid				Müller Thurgau, Red globe	3
		narrow ellipsoid				Italia, Sultanina	4
		cylindrical				Afus ali	5
		obtuse ovoid				Ahmeur bou Ahmeur	6
		ovoid				Dabouki	7
		obovoid				Kyoho, Muscat of Alexandria	8
		horn-shaped				Santa Paula	9
		finger-shaped				Black finger	10
37		**QL VG**	**(+)**	**89**			
		Berry: presence of a dimple					
		absent				Afus ali, Crimson seedless	1
		present				Ahmeur bou Ahmeur	2

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
38	**(*)**	**PQ VG**	**(+)**	**89 / O- 225* / B-6.2.8***			
		Berry: color of skin					
		green				Afus ali	1
		yellow green				Chasselas blanc, Sugraone	2
		yellow				Moscato giallo	3
		pink				Chasselas rose	4
		red				Flame seedless	5
		grey red				Pinot gris	6
		dark red violet				Cardinal, Crimson seedless	7
		blue black				Autumn royal seedless, Kyoho, Pinot noir	8
39	**(*)**	**QN VG**		**89 / O-231 / B-6.2.9**			
		Berry: anthocyanin coloration of flesh					
		absent or very weak				Pinot noir, Red globe	1
		weak				Autumn royal seedless, Gamay de Bouze	2
		strong				Alicante Bouschet	3
40		**QN MG/VG**		**89 / O-235 / B-6.2.11**			
		Berry: firmness of flesh					
		soft				Pinot noir	1
		moderately firm				Italia	2
		firm				Crimson seedless, Sugraone	3
41	**(*)**	**PQ VG**		**89 / O-236 / B-6.2.12***			
		Berry: particular flavor					
		none				Garnacha tinta, Merlot, Sugraone, Sultanina	1
		muscat				Early muscat, Muscat of Alexandria	2
		foxy				Isabella, Kyoho	3
		herbaceous				Cabernet-Sauvignon	4
		other than muscat, foxy or herbaceous				Red globe, Riesling, Sauvignon	5

		English	français	deutsch	español	Example Varieties Exemples Beispielssorten Variedades ejemplo	Note/ Nota
42	**(*)**	**QL VG**	**(+)**	**89 / O-241 / B-6.2.7**			
		Berry: presence of seeds					
		none				Korinthiaki	1
		rudimentary				Sultanina	2
		complete				Cardinal, Kyoho, Riesling	3
43		**PQ VG**		**91-99**			
		Woody shoot: color					
		yellowish brown				Garnacha tinta	1
		orange brown				Portugieser	2
		dark brown				Chasselas blanc, Sultanina	3
		reddish brown				3309 Couderc	4
		reddish violet				Cinsaut, Semillon	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 shoot which should be made in the middle third of shoot.

(b) Observations on the mature leaf which should be made on leaves in the middle third of the shoot just above the raceme.

8.2 Explanations for individual characteristics

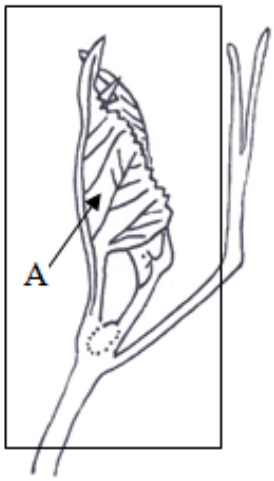
Ad. 1: Time of bud burst

The time of bud burst is when 50% of the plants are at the bud burst stage. A plant is at bud burst stage when 50% of the buds are at least at growth stage 07.

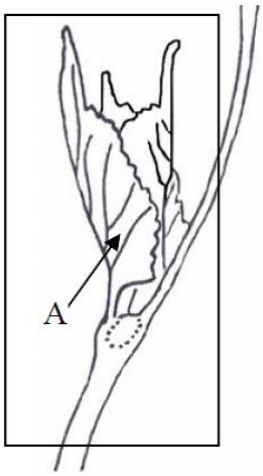
Pruning can influence the time of bud burst, therefore, all material should undergo the same pruning management.

Ad. 2: Young shoot: openness of tip

The openness of tip results from the attitude of the young leaves. The leaves indicated with 'A' have about the same physiological age. Openness of tip is correlated with elongation of the shoot tip.



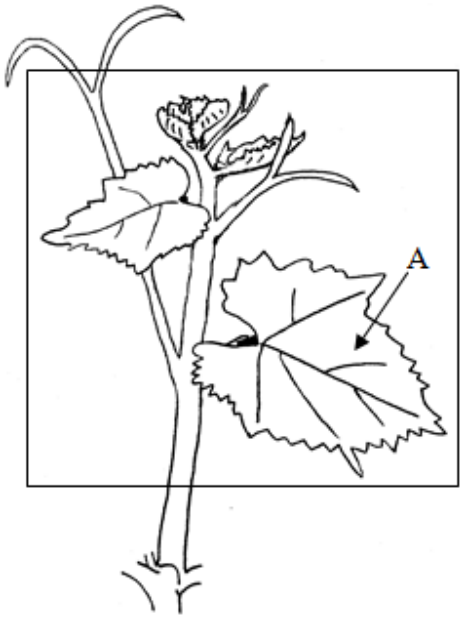
1
closed



2
slightly open

3
half open

4
wide open



5
fully open

Ad. 3: Young shoot: density of prostrate hairs on tip

See Ad. 2

Wide open or fully open tips (characteristic 2) to be observed with inclusion of first 2 distal unfolded leaves. Leaves of closed, slightly open or half open tips to be unfolded to enable observations on corresponding part of tip.

Ad. 4: Young shoot: density of erect hairs on tip

See explanation characteristic 2 and 3

Ad. 5: Young shoot: anthocyanin coloration of prostrate hairs on tip

See explanation characteristic 2 and 3

Ad. 6: Young leaf: color of upper side of blade

Observation on first 2 distal unfolded leaves in case of closed, slightly open or half open tips (characteristic 2). Observation on fourth distal unfolded leaf in case of wide open or fully open tips. The states green with reddish brown speckles (3); light brownish red (4); medium brownish red (5); and dark brownish red (6) correspond to an increasing amount of anthocyanin coloration.

Ad. 7: Young leaf: density of prostrate hairs between main veins on lower side of blade

Observation on second distal unfolded leaf in case of closed, slightly open or half open tips (characteristic 2). Observation on fourth distal unfolded leaf in case of wide open or fully open tips.

Ad. 8: Young leaf: density of erect hairs main veins on lower side of blade

See Ad. 7

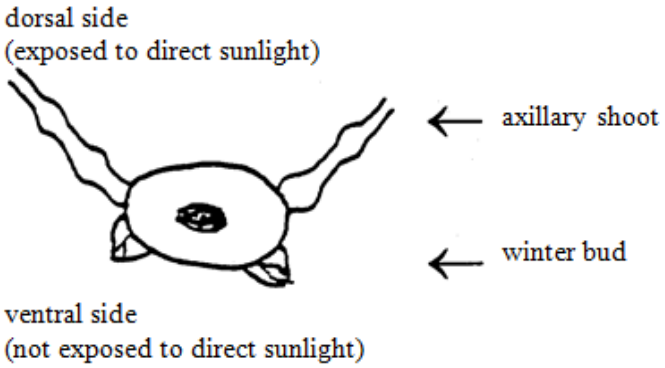
Ad. 9: Shoot: attitude

Observation of this characteristic should be made on plants before tying. Observation is difficult in windy locations where the shoots have to be tied early.

1	2	3	4	5
erect	semi-erect	horizontal	semi drooping	drooping

Ad. 10: Shoot: color of dorsal side of internodes

Cross section of shoot



The states: green (1); green and red (2); and red (3) correspond to the proportion of anthocyanin coloration: absent or low (1); medium (2); and high (3).

Ad. 11: Shoot: color of ventral side of internodes

See Ad. 10

Ad. 12: Shoot: color of dorsal side of nodes

See Ad. 10

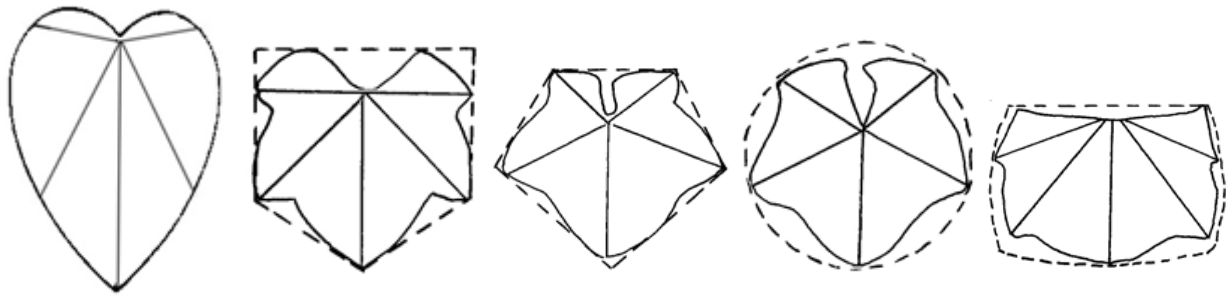
Ad. 13: Shoot: color of ventral side of nodes

See Ad. 10

Ad. 16: Flower: sexual organs

1	2	3	4
fully developed stamens and no gynoecium	fully developed stamens and reduced gynoecium	fully developed stamens and fully developed gynoecium	reflexed stamens and fully developed gynoecium

Ad. 18: Mature leaf: shape of blade



(rounded lateral outline)	(forms a pentagon with parallel sides)	(forms a pentagon with broadest part towards the base)	(forms a pentagon with broadest part towards the apex)	(broader than long)
1	2	3	4	5
cordate	wedge-shaped	pentagonal	circular	kidney-shaped

Ad. 20: Mature leaf: number of lobes

A lobe is that part of the leaf which lies between two leaf sinuses. A leaf sinus results from a clear interruption of teeth on the leaf margin. A leaf showing no lateral sinus is considered to consist of one lobe.

Within the same plant leaves with different number of lobes can appear. The predominant number of lobes has to be observed.

Ad. 21: Mature leaf: depth of upper lateral sinuses

A sinus results from a clear interruption of teeth on the leaf margin. The upper lateral sinuses are situated between the middle vein and the next lateral main vein.

Ad. 22: Only varieties with number of lobes more than one: mature leaf: arrangement of lobes of upper lateral sinuses

See explanation Ad. 20 and Ad. 21.

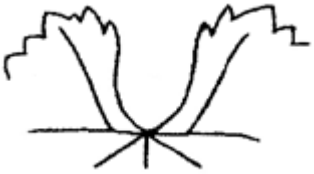
1	2	3	4
open	closed	slightly overlapped	strongly overlapped

Ad. 23: Mature leaf: arrangement of lobes of petiole sinus

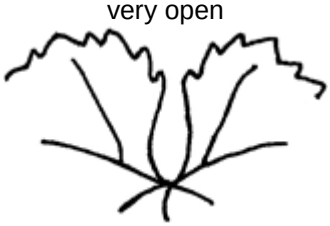
Leaves must be flattened for notation. Within the same plant leaves with different arrangements of lobes of petiole sinus can appear. The predominant arrangement of lobes has to be observed.

1
very open

2
very open to half open



3
half open



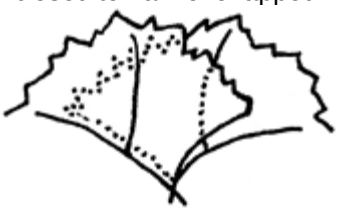
4
half open

5
closed

6
closed to half overlapped

7
half overlapped

8
half overlapped to very overlapped



9
very overlapped

Ad. 24: Mature leaf: length of teeth

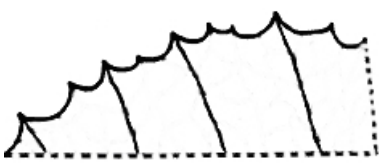
All observations should be made between lateral main veins on the teeth of secondary veins.

Ad. 25: Mature leaf: ratio length/width of teeth

See Ad. 24

Ad. 26: Mature leaf: shape of teeth

See Ad. 24



1
both sides concave

2
both sides straight

3
both sides convex

4
one side concave, one side convex

5
mixture of both sides straight and both sides convex

6
mixture of both sides straight and one side concave, one side convex

Ad. 27: Mature leaf: proportion of main veins on upper side of blade with anthocyanin coloration

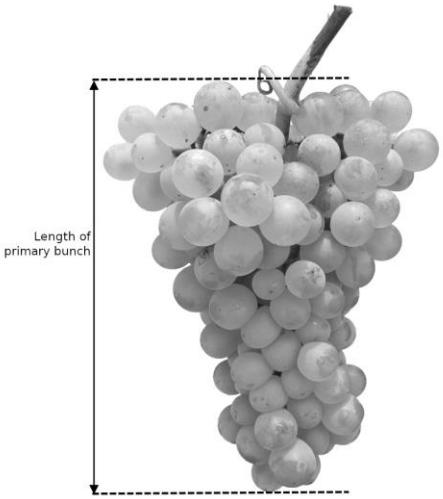
The characteristic should be observed as the proportion of the total length of main veins with anthocyanin coloration. Interruptions in the anthocyanin coloration should not be included in that proportion.

Ad. 30: Time of beginning of berry ripening

To be observed when about 50% of the berries on 50% of the plants start to become soft. Berries will be deformed when lightly pressed between fingers.

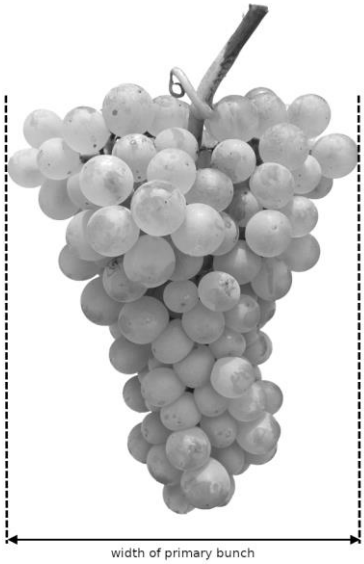
Ad. 31: Bunch: length

Observations should be made excluding the peduncle. To be observed the distance from the uppermost to the lowest berry of the primary bunch.



Ad. 32: Bunch: width

To be observed at the maximum distance between the lateral berries of the primary bunch.

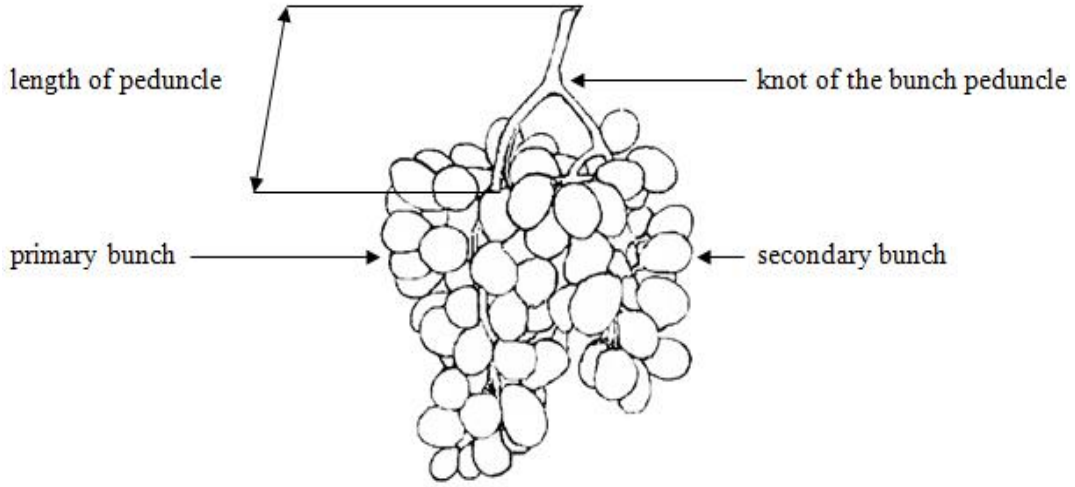


Ad. 33: Bunch: density

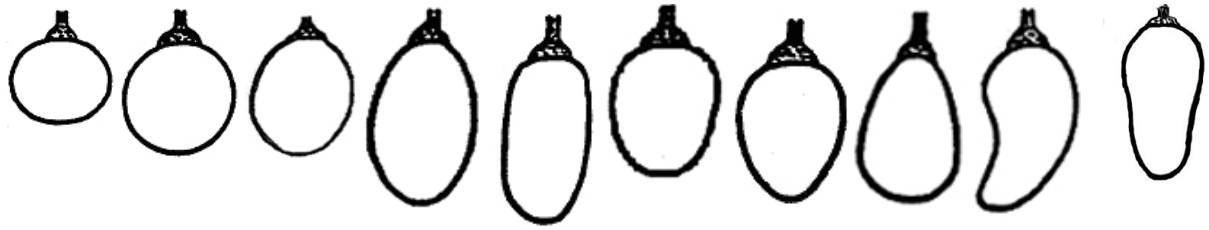
1 = berries in grouped formation, many visible pedicels
2 = berries in grouped formation and seldom visible pedicels
3 = single berries, some pedicels visible
4 = berries with few visible pedicels
5 = densely distributed berries, pedicels not visible, berries movable
6 = densely distributed berries, pedicels not visible, some berries movable
7 = berries not readily movable
8 = many berries pressed out of shape
9 = berries pressed out of shape

Ad. 34: Bunch: length of peduncle of primary bunch

The distance from insertion point of peduncle on shoot to 1st ramification of primary bunch should be measured. Above the 1st ramification there is a knot like thickening on the peduncle from which a secondary bunch or a tendril may arise which should not be confused with the 1st ramification.

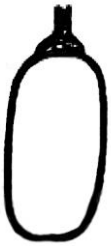


Ad. 36: Berry: shape



1	2	3	4	5	6	7	8	9	10
obloid	globose	broad ellipsoid	narrow ellipsoid	cylindrical	obtuse ovoid	ovoid	obovoid	horn-shaped	finger-shaped

Ad. 37: Berry: presence of a dimple



1
absent

2
present

Ad. 38: Berry: color of skin

Observation of this characteristic should be made on berries of different bunches after removing the bloom.
This characteristic might be light dependent. Observation should be made only on those berries exposed directly to the sun.

Ad. 42: Berry: presence of seeds

1 = no formation of seeds (parthenocarpic, type Corinthe)
2 = seeds with soft seed coat, embryo or endosperm not completely developed (stenospermocarpic)
3 = seeds fully developed

8.3 *Encoding and Description of the Phenological Stages of Grapevine According to the Extended BBCH Scale 1*

BBCH-Code	**Description**
Principal growth stage 0	Sprouting/Bud development
00	Dormancy: winter buds pointed to rounded, light or dark brown according to cultivar; bud scales more or less closed according to cultivar
01	Beginning of bud swelling: buds begin to expand inside the bud scales
03	End of bud swelling: buds swollen, but not green
05	"Wool stage": brown wool clearly visible
07	Beginning of bud burst: green shoot tips just visible
09	Bud burst: green shoot tips clearly visible
Principal growth stage 1	Leaf development
11	First leaf unfolded and spread away from shoot
12	2nd leaves unfolded
13	3rd leaves unfolded
1-	Stages continuous till …
19	9 or more leaves unfolded
Principal growth stage 5	Inflorescence emerge
53	Inflorescences clearly visible
55	Inflorescences swelling, flowers closely pressed together
57	Inflorescences fully developed, flowers separating
Principal growth stage 6	Flowering
60	First flowerhoods detached from the receptacle
61	Beginning of flowering: 10% of flowerhoods fallen
62	20% of flowerhoods fallen
63	Early flowering: 30% of flowerhoods fallen
64	40% of flowerhoods fallen
65	Full flowering: 50% of flowerhoods fallen
66	60% of flowerhoods fallen
67	70% of flowerhoods fallen
68	80% of flowerhood fallen
69	End of flowering
Principal growth stage 7	Development of fruits
71	Fruit set: young fruits begin to swell, remains of flowers lost
73	Berries groat-sized, bunches begin to hang
75	Berries pea-sized, bunches hang
77	Berries beginning to touch
79	Majority of berries touching
Principal growth stage 8	Ripening of berries
81	Beginning of ripening: berries begin to develop variety-specific color
83	Berries developing color
85	Softening of berries
89	Berries ripe for harvest
Principal growth stage 9	Senescence
91	After harvest; end of wood maturation
92	Beginning of leaf discolouration
93	Beginning of leaf-fall
95	50% of leaves fallen
97	End of leaf-fall
99	Harvested product

[1] The code has been jointly developed by *Biologische Bundesanstalt für Land und Forstwirtschaft (BB), Bundessor-tenamt (BSA) and Industrieverband Agrar (IVA*) in cooperation with *Staatliche Lehr und Forschungsanstalt für Landwirtschaft, Wein und Gartenbau (SLFA)*, Section Plant Pathology, Neustadt/Weinstraße. Published in Lorenz et al., 1994, and in Meier, 1997 (see Literature).

8.4 Synonyms and skin color of berry for example varieties

Example Varieties	Skin color of berry *	Synonyms
1103 Paulsen		
161-49 Couderc	N	
1616 Couderc	N	
3306 Couderc		
3309 Couderc		
Afus ali	B	
Agiorgitiko	N	
Ahmeur bou Ahmeur	Rs	Flame tokai
Alicante Bouschet	N	Garnacha Tintorera
Aledo	B	
Alphonse Lavallée	N	Ribier
Alvarelhao	N	
Aramon noir	N	
Argentina	Rs	
Autumn royal seedless	N	
Barbera	N	
Black finger	N	
Börner		
Cabernet franc	N	
Cabernet Mitos	N	
Cabernet-Sauvignon	N	Cabernet Sauvignon
Cardinal	Rg	
Carignan	N	Carignano, Cariñena, Mazuela
Centennial seedless	B	
Chardonnay	B	
Chasselas blanc	B	Weisser Gutedel
Chasselas cioutat	B	
Chasselas rose	Rs	Roter Gutedel
Chenin blanc	B	
Cina		
Cinsaut	N	
Clairette	B	
Cot	N	Malbec
Korinthiaki	N	Black Corinth, Corinto nero, Corinthe noir, Corinto negro
Crimson seedless	Rg	
Dabouki	B	
Deckrot	N	
Dog ridge	N	
Dolcetto	N	
Early muscat	B	
Fercal	N	
Flame seedless	Rg	
Freisa	N	
Furmint	B	
Garganega	B	
Gamay	N	
Gamay de Bouze	N	
Garnacha tinta	N	Grenache noir
Gewurztraminer	Rs	
Isabella	N	
Italia	B	
Kober 125 AA	N	
Kober 5 BB	N	
Kyoho	N	
Malvasia dubrovacka	B	Malvasia di Sardegna
Marsanne	B	
Merlot	N	
Meunier	N	Müllerrebe, Pinot meunier
Moscatel rosado	Rs	
Moscato giallo	B	

Mourvèdre	N	
Müller Thurgau	B	Rivaner
Muscat à petits grains blancs	B	Gelber Muskateller, Moscatel de grano menudo, Moschato aspro, Muscat blanc
Muscat Hamburg	N	
Muscat of Alexandria	B	Hanepoot, Zibibbo, Moscatel de Alejandría, Moscatel de Málaga, Moscatel romano
Muscat Ottonel	B	
Moscatuel	Rs	
Nehelescol	B	
Nero	N	
Palomino fino	B	
Perle de Csaba	B	Csaba gyöngye
Perlette	B	
Petit verdot	N	
Pinot gris	G	Grauburgunder, Pinot grigio, Ruländer
Pinot noir	N	Blauer Spätburgunder, Pinot nero, Rulandské sedé
Portugieser	N	Blauer Portugieser, Portugais bleu, Modry Portugal
Red globe	Rg	
Riesling	B	Riesling renano, Rheinriesling, Weisser Riesling, Ryzlink rýnský
Gloire de Montpellier		Riparia Gloire de Montpellier
Ruby seedless	Rg	
Du Lot		Rupestris du Lot
Sangiovese	N	
Santa Paula	B	
Sauvignon	B	
Semillon	B	
Silvaner gruen	B	
Syrah	N	
Sugraone	B	
Sultanina	B	Sultanine, Thompson seedless
Teleki 8 B		
Tompa Mihaly	B	Chasselas Michel Tompa, Tompa
Trebbiano toscano	B	Ugni blanc
Trevisana nera	N	
Vilana	B	
Viura	B	Macabeo, Macabeu
Xynisteri	B	

* The color of the berry is indicated according to the standardized code used within the European Union for the classification of vine varieties:

B = white
G = grey
N = black
Rg = red
Rs = rose

9. Literature

Ambrosi, H. et al., 1994: Farbatlas Rebsorten. Verlag Eugen Ulmer, Stuttgart, DE.
Borrego Polanco, J. et al., 1990: Descripciones ampelográficas nacionales. Servicio de Investigación Agraria de la Comunidad de Madrid, Madrid, ES.
Bundessortenamt (editor), 2015: Beschreibende Sortenliste Reben.
Cabello, F. et al., 2003: La colección de variedades de vid de El Encín. Instituto Madrileño de Investigación Agraria y Alimentaria, Madrid, ES.
Chomé, P. et al., 2003: Variedades de vid. Registro de variedades comerciales. Centro de publicaciones del Ministerio de Agricultura, Pesca y Alimentación, Madrid, ES.
CTPS – Ministère de l'Agriculture de la Pêche et de l'Alimentation, 1995: Catalogue des variétés et clones de vigne cultivés en France. ENTAV (editor), Le Grau du Roi, FR.
Galet, P., 1988: Cépages et vignobles de France, tome 1: Les vignes américaines. 2e édition, imprimerie Charles Dehan, Montpellier, FR.
Galet, P., 1990: Cépages et vignobles de France, tome 2: L'ampélographie française. 2e édition, imprimerie Charles Dehan, Montpellier, FR.
Garcia de Luján, A. et al., 2004: Catálogo de variedades y clones de vid de Andalucía. Junta de Andalucía, Consejería de Agricultura y Pesca, Sevilla, ES.
Goethe, H., 1887: Handbuch der Ampelographie. 2. Auflage, Verlag Paul Parey, Berlin, DE.
IPGRI, 1997: Descriptors for Grapevine (*Vitis* spp.). International Plant Genetic Resources Institute, Via delle Sette Chiese 142, 00145 Rome, IT, p. 62.
IRZ Geilweilerhof, 2007: Vitis. International Variety Catalogue (VIVC), http://www.vivc.bafz.de/index.php
Lawrence, E., 1994: Henderson's Dictionary of Biological Terms. 10th edition, Longman Scientific and Technical.
Lorenz, D.H. et al., 1994: Phänologische Entwicklungsstadien der Weinrebe (Vitis vinifera L. ssp. vinifera). Codierung und Beschreibung nach der erweiterten BBCH-Skala. Vitic. Enol. Sci. 49 (2), pp. 66-70.
Meier, U., 1997: Growth stages of mono- and dicotyledonous plants. BBCH-Monograph, Blackwell Science, Berlin, Vienna, AT.
Ministero delle politiche agricole, alimentari e forestali, 2013: Registro nazionale delle varietà di vite, http://catalogoviti.politicheagricole.it/catalogo.php,IT
Moog, H., 1957: Einführung in die Rebsortenkunde. Verlag Eugen Ulmer, Stuttgart, DE.
Muñoz Organero, G., Gaforio, L., Garcia Muñoz, S., Cabello, F., 2011: Manual for standardisation of OIV Vitis descriptors. INIA, ES.
OIV, 2009: Descriptor List for Grapevine Varieties and *Vitis* Species. Office International de la Vigne et du Vin, 18, rue d'Aguesseau, 75008 Paris, FR.
Ortiz Marcide, J.M., et al., 1999: Identificación molecular de Germoplasma de Vid. Instituto Madrileño de Investigación Agraria y Alimentaria, Jornadas de Agronomía, Madrid, ES.
Pl@ntGrape, 2009-2020: Catalogue des vignes cultivées en France. IFV – INRAE – l'Institut Agro, Montpellier SupAgro, https://plantgrape.plantnet-project.org/fr/.
Stern, W. T., 1995: Botanical Latin. 4th edition, David and Charles Publishers, UK.
Viala, P., Vermorel, V., 1901-1910: Ampélographie. Tome 1-7, Editeurs Masson et Cie, Paris, FR.

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	*Vitis* L.
1.2	Common name	Grapevine

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 [ ]

(d) [ ]

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)	**Young shoot: openness of tip**		
	closed	Gloire de Montpellier	1 [ ]
	slightly open	3309 Couderc	2 [ ]
	half open	Kober 5 BB	3 [ ]
	wide open	Cina	4 [ ]
	fully open	Flame seedless, Pinot noir	5 [ ]
5.2 (6)	**Young leaf: color of upper side of blade**		
	yellow green	Furmint, Sultanina	1 [ ]
	green	Silvaner gruen	2 [ ]
	green with reddish brown speckles	Riesling, Sugraone	3 [ ]
	light brownish red	Kober 5 BB	4 [ ]
	medium brownish red	Chasselas blanc, Crimson seedless	5 [ ]
	dark brownish red	Deckrot	6 [ ]
5.3 (7)	**Young leaf: density of prostrate hairs between main veins on lower side of blade**		
	absent or very sparse	Du Lot, Garnacha tinta	1 [ ]
	very sparse to sparse		2 [ ]
	sparse	Muscat à petits grains blancs, Sugraone	3 [ ]
	sparse to medium	Chardonnay, Muscat of Alexandria	4 [ ]
	medium	Kyoho, Merlot, Riesling	5 [ ]
	medium to dense	Cabernet franc	6 [ ]
	dense	Furmint	7 [ ]
	dense to very dense	Clairette	8 [ ]
	very dense	Meunier	9 [ ]
5.4 (16)	**Flower: sexual organs**		
	fully developed stamens and no gynoecium	Du Lot	1 [ ]
	fully developed stamens and reduced gynoecium	3309 Couderc	2 [ ]
	fully developed stamens and fully developed gynoecium	Chasselas blanc, Flame seedless	3 [ ]
	reflexed stamens and fully developed gynoecium	Kober 5 BB, Moscatel rosado	4 [ ]

	Characteristics	Example Varieties	Note
5.5 (20)	**Mature leaf: number of lobes**		
	one	Du Lot	1 [ ]
	three	Chenin blanc, Isabella	2 [ ]
	five	Chasselas blanc, Sugraone	3 [ ]
	seven	Autumn royal seedless, Cabernet-Sauvignon	4 [ ]
	more than seven	Centennial seedless, Vilana, Xynisteri	5 [ ]
5.6 (30)	**Time of beginning of berry ripening**		
	very early	Perle de Csaba	1 [ ]
	very early to early	Flame seedless, Sugraone	2 [ ]
	early	Centennial seedless, Kyoho, Pinot noir	3 [ ]
	early to medium	Moscatuel	4 [ ]
	medium	Riesling, Sultanina	5 [ ]
	medium to late	Autumn royal seedless	6 [ ]
	late	Alphonse Lavallée, Carignan, Ruby seedless	7 [ ]
	late to very late	Ahmeur bou Ahmeur, Italia	8 [ ]
	very late	Aledo, Isabella	9 [ ]
5.7 (36)	**Berry: shape**		
	obloid	Flame seedless, Tompa Mihaly	1 [ ]
	globose	Chasselas blanc	2 [ ]
	broad ellipsoid	Müller Thurgau, Red globe	3 [ ]
	narrow ellipsoid	Italia, Sultanina	4 [ ]
	cylindrical	Afus ali	5 [ ]
	obtuse ovoid	Ahmeur bou Ahmeur	6 [ ]
	ovoid	Dabouki	7 [ ]
	obovoid	Kyoho, Muscat of Alexandria	8 [ ]
	horn-shaped	Santa Paula	9 [ ]
	finger-shaped	Black finger	10 [ ]
5.8 (38)	**Berry: color of skin**		
	green	Afus ali	1 [ ]
	yellow green	Chasselas blanc, Sugraone	2 [ ]
	yellow	Moscato giallo	3 [ ]
	pink	Chasselas rose	4 [ ]
	red	Flame seedless	5 [ ]
	grey red	Pinot gris	6 [ ]
	dark red violet	Cardinal, Crimson seedless	7 [ ]
	blue black	Autumn royal seedless, Kyoho, Pinot noir	8 [ ]

	Characteristics	Example Varieties	Note
5.9 (39)	**Berry: anthocyanin coloration of flesh**		
	absent or very weak	Pinot noir, Red globe	1 [ ]
	weak	Autumn royal seedless, Gamay de Bouze	2 [ ]
	strong	Alicante Bouschet	3 [ ]
5.10 (41)	**Berry: particular flavor**		
	none	Garnacha tinta, Merlot, Sugraone, Sultanina	1 [ ]
	muscat	Early muscat, Muscat of Alexandria	2 [ ]
	foxy	Isabella, Kyoho	3 [ ]
	herbaceous	Cabernet-Sauvignon	4 [ ]
	other than muscat, foxy or herbaceous	Red globe, Riesling, Sauvignon	5 [ ]
5.11 (42)	**Berry: presence of seeds**		
	none	Korinthiaki	1 [ ]
	rudimentary	Sultanina	2 [ ]
	complete	Cardinal, Kyoho, Riesling	3 [ ]

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	*Berry: shape*	*globose*	*broad ellipsoid*

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

A representative color photograph of the variety displaying its main distinguishing feature(s), should accompany the Technical Questionnaire. The photograph will provide a visual illustration of the candidate variety which supplements the information provided in the Technical Questionnaire.

The key points to consider when taking a photograph of the candidate variety are:

- Indication of the date and geographic location
- Correct labeling (breeder's reference)
- Good quality printed photograph (minimum 10 cm x 15 cm) and/or sufficient resolution electronic format version (minimum 960 x 1280 pixels)"

Further guidance on providing photographs with the Technical Questionnaire is available in document TGP/7 "Development of Test Guidelines", Guidance Note 35 (http://www.upov.int/tgp/en/).

[The link provided may be deleted by members of the Union when developing authorities' own test guidelines.]

Only if the variety is not sensitive to *Daktulosphaira vitifoliae* the material to be supplied should be in form of plants on their own roots. Additional information on the sensitivity of the variety to this phytophagus should be provided to the Authority.

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”.

.....

9.3 Has the plant material to be examined been tested for the presence of virus or other pathogens?

Yes [ ]

(please provide details as specified by the Authority)

No [ ]

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]