



CHINA

DUS Examination of Phalaenopsis at Naktuinbouw 荷兰园艺检验局对蝴蝶兰的DUS审查

Evelien Spaans
Naktuinbouw, The Netherlands
荷兰园艺检验局
November 29th, 2023
2023年11月29日



Funded by the European Union
受欧盟资助

www.ipkey.eu



Examination of Phalaenopsis at Naktuinbouw 荷兰园艺检验局对蝴蝶兰的DUS审查

Evelien Spaans
Naktuinbouw, The Netherlands
荷兰园艺检验局
November 29th, 2023
2023年11月29日

- Introduction to Phalaenopsis /// 蝴蝶兰简介
- Method of examination /// 审查方法
 - Trial set-up /// 试验设置
 - Method of observation /// 观测方法
 - States of expression /// 表达状态
 - Grouping characteristics /// 分组特征
 - Calibration books /// 校准手册
 - Description of a variety /// 品种描述
- CPVO TP/213/2 Rev. Corr. Characteristics
CPVO TP/213/2修订版对应性状
- Distinctness /// 特异性
- Uniformity /// 一致性



Introduction to Phalaenopsis /// 蝴蝶兰简介

Phalaenopsis is one of our most important ornamental crops at Naktuinbouw /// 蝴蝶兰是荷兰园艺检验局最重要的观赏植物之一

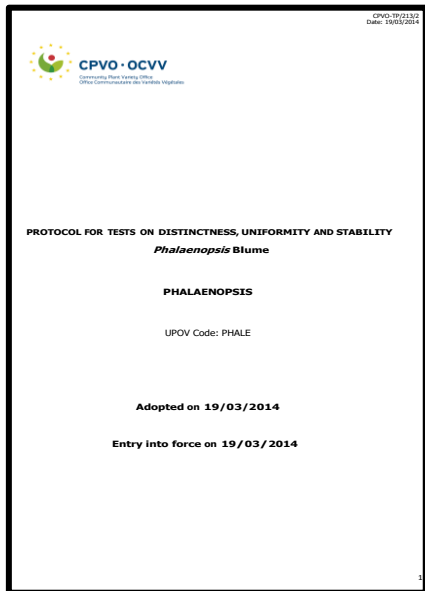
Applications per year Applications received at Naktuinbouw

| year | Total | CPVO | %CPVO |
|--------|-------|------|-------|
| – 2006 | 109 | 62 | 57 % |
| – 2007 | 173 | 109 | 63 % |
| – 2008 | 100 | 77 | 77 % |
| – 2009 | 71 | 50 | 70 % |
| – 2010 | 142 | 89 | 63 % |
| – 2011 | 129 | 84 | 63 % |
| – 2012 | 102 | 47 | 46 % |
| – 2013 | 138 | 110 | 79 % |
| – 2014 | 157 | 113 | 77 % |
| – 2015 | 60 | 36 | 60 % |
| – 2016 | 105 | 52 | 50 % |
| – 2017 | 148 | 133 | 90 % |
| – 2018 | 115 | 108 | 94 % |
| – 2019 | 153 | 152 | 99 % |

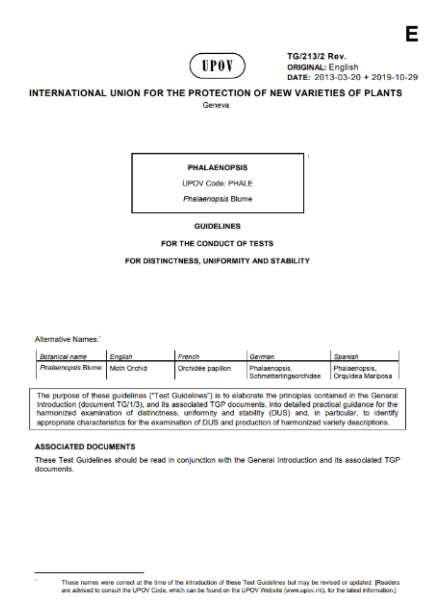
历年申请数量

Introduction to Phalaenopsis /// 蝴蝶兰简介

CPVO Technical Protocol CPVO 技术协议



UPOV Technical Guideline UPOV 技术指南



Method of examination /// 审查方法

Trial set-up: /// 试验条件：

- Plant material requirements (see S2/S3 Gazette CPVO) /// 试验材料要求（见CPVO S2/S3）

- 10 healthy, non-flowering plants /// 10株，健康、未开花

- One growing cycle /// 一个生长周期

- trials starting in January and August /// 1月和8月开始试种

- Grown in greenhouse /// 温室生长

- minimum temperature: 19 °C (night) - 21 °C (day) /// 最低气温：19°C（夜温）-21°C（昼温）
- relative humidity: 70% - 85% /// 相对湿度：70%-85%



Method of examination /// 审查方法

Method of observation: /// 观测方法：

- visual (V) vs measurement (M) /// 目测 (V)、测量 (M)
- group of plants (G) vs individual plant (S) /// 群体 (G)、个体 (S)

MG: 群体测量
MS: 个体测量
VG: 群体目测
VS: 个体目测

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

All characteristics in UPOV TG/213/2 are VG or VG/MS

UPOV TG/213/2中的所有性状均为VG或VG/MS



Method of examination /// 审查方法

States of expression: /// 表达状态：

- Qualitative trait (QL): discontinuous state /// 质量性状 (QL)：不连续状态

- Pseudo-qualitative trait (PQ): /// 假质量性状 (PQ)：partly continuous state, but varies in multiple dimensions /// 部分连续状态，但在多个维度上变化

- Quantitative trait (QN): continuous state in a single dimension /// 数量性状 (QN)：单维连续状态

表达
极小
极小到小
小
小到中
中
中到大
大
大到极大
极大

代码
1
2
3
4
5
6
7
8
9

| 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 |

| | | |
|------------|-----|-------------------|
| 10. (*) | VG | Leaf: variegation |
| QL | (a) | absent |
| | (b) | present |

| | | |
|-----------|-----|---------------------|
| 7. (+) | VG | Leaf: shape of apex |
| PQ | (a) | acute |
| | (b) | obtuse |
| | | emarginate |

| | | |
|------------|-----------|---------------------------|
| 60. (+) | VG/ MS | Petal: area of over color |
| QN | (c) | small |
| | | medium |
| | | large |

Method of examination /// 审查方法

Grouping characteristics: /// 分组性状：

- Plant: length (char. 1) /// 植株：长度（性状1）
- Leaf: variegation (char. 10) /// 叶片：斑纹（性状10）
- Leaf: spots on upper side (char. 11) /// 叶片：上表面有斑点（性状11）
- Flower: width in front view (char. 22) /// 花：宽度，前视图（性状22）
- Petal: ground color of upper side (char. 58) /// 花瓣：上表面主色（性状58）
- Petal: over color (if present) (char. 59) /// 花瓣：次色（如有）（性状59）
- Petal: number of spots (char. 61) /// 花瓣：斑点数量（性状61）
- Petal: number of stripes (char. 64) /// 花瓣：条纹数量（性状64）
- Petal: density of netting (char. 66) /// 花瓣：网纹密度（性状66）



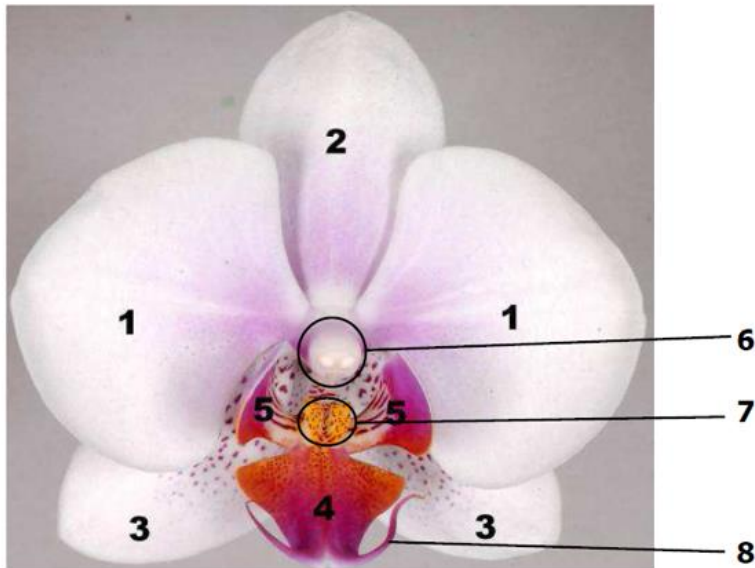
Method of examination /// 审查方法

Calibration books 校准手册

Flower structure 结构

- 1: petal
- 2: dorsal sepal
- 3: lateral sepal
- 4: apical lobe
- 5: lateral lobe
- 6: column
- 7: callus
- 8: whiskers

- 1: 花瓣
- 2: 后萼片
- 3: 侧萼片
- 4: 顶裂片
- 5: 侧裂片
- 6: 合蕊柱
- 7: 肉突
- 8: 根须



Method of examination /// 审查方法

Description of a variety /// 品种描述



CPVO TP/213/2 Rev. Corr. Characteristics (1/3) /// CPVO TP/213/2 修订版对应性状 (1/3)

01. Plant: length /// 植物：长度
02. Plant: number of inflorescences /// 植物：花序数
03. Leaf: length /// 叶片：长度
04. Leaf: width /// 叶片：宽度
05. Leaf: shape /// 叶片：形状
06. Leaf: position of the broadest part /// 叶片：最宽部分的位置
07. Leaf: shape of apex /// 叶片：先端形状
08. Leaf: symmetry of apex /// 叶：先端对称性
09. Leaf: attitude /// 叶片：姿态
10. Leaf: variegation /// 叶片：杂色
11. Leaf: spots on upper side /// 叶片：上表面斑点
12. Leaf: main colour of upper side /// 叶片：上表面主色
13. Leaf: anthocyanin coloration of upper side /// 叶片：上表面花青甙显色
14. Inflorescence: type /// 花序：类型
15. Inflorescence: length of flowering part /// 花序：着花部分的长度
16. Inflorescence: number of flowers /// 花序：花数
17. Peduncle: length /// 花梗：长度
18. Peduncle: thickness /// 花梗：粗细
19. Peduncle: anthocyanin coloration /// 花梗：花青素着色
20. Flower: shape in lateral view /// 花：侧面看的形状
21. Flower: length in front view /// 花：正面长度
22. Flower: width in front view /// 花：前视图中的宽度
23. Flower: arrangement of petals /// 花：花瓣的排列
24. Flower: fragrance /// 花：香气



01. Plant: length /// 植株：长度

QN – VG/MS

代码和表达

- 1: 极小
- 2: 极小到小
- 3: 小
- 4: 小到中
- 5: 中
- 6: 中到大
- 7: 大
- 8: 大到极大
- 9: 极大

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long



Plant: length

植株：长度



02. Plant: number of inflorescences /// 植株：花序数

QN – VG/MS

Notes and states of expression:

- 1: only one
- 2: one or two
- 3: only two
- 4: two or three
- 5: only three
- 6: more than three

代码和表达

- 1: 一
- 2: 一或二
- 3: 二
- 4: 二或三
- 5: 三
- 6: 三以上



one

—



two

二



three

三



four

四



03. Leaf: length /// 叶片：长度

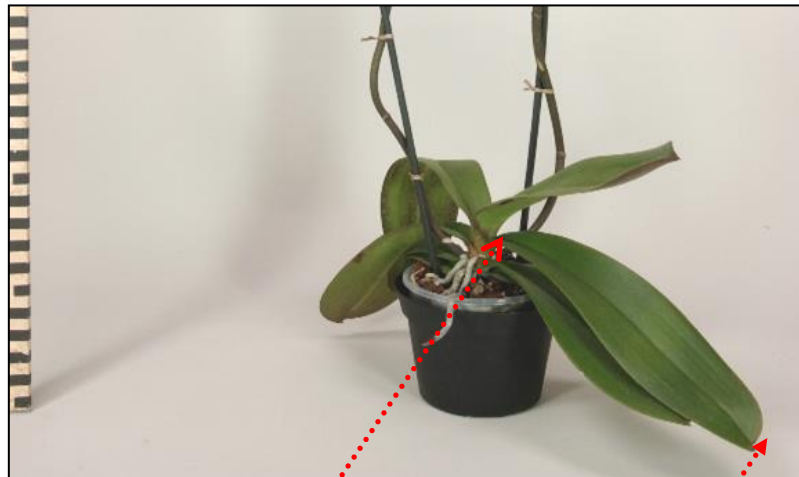
QN – VG/MS

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

代码和表达

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 大到极长
- 9: 极长



Leaf length
叶片长度

04. Leaf: width /// 叶片：宽度

QN – VG/MS

Notes and states of expression:

1: very narrow

2: very narrow to narrow

3: narrow

4: narrow to medium

5: medium

6: medium to broad

7: broad

8: broad to very broad

9: very broad

代码和表达

1: 极窄

2: 极窄到窄

3: 窄

4: 窄到中

5: 中

6: 中到宽

7: 宽

8: 宽到极宽

9: 极宽



Leaf width
/// 叶宽



05. Leaf: shape // 叶片：形状

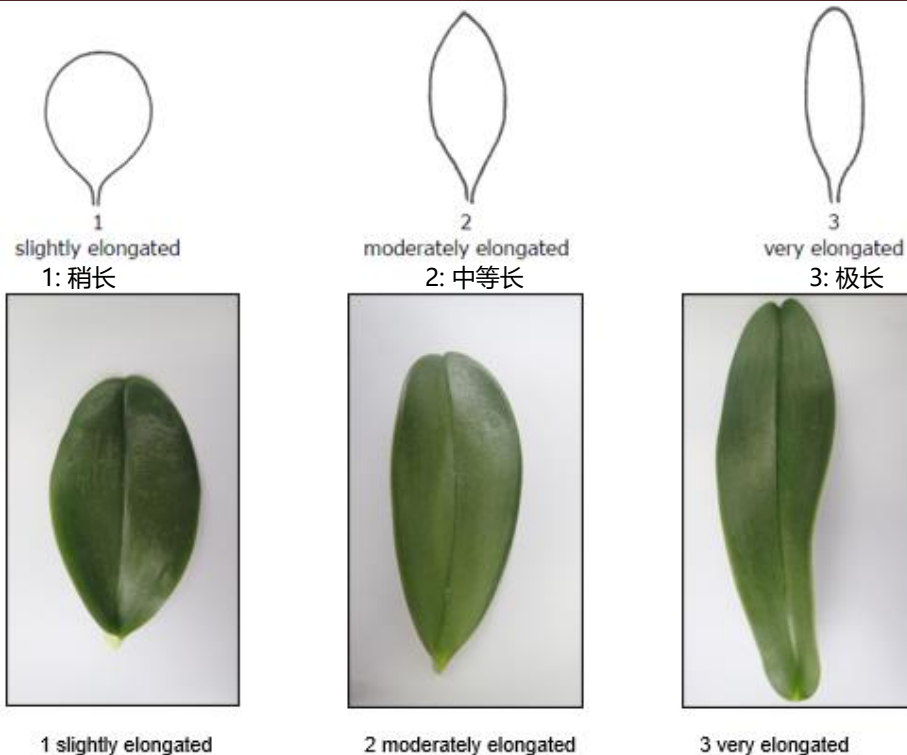
QN – VG

Notes and states of expression:

- 1: slightly elongated
- 2: moderately elongated
- 3: very elongated

代码和表达

- 1: 稍长
- 2: 中等长
- 3: 极长



06. Leaf: position of the broadest part // 叶片：最宽部分的位置

QN – VG/MS

Notes and states of expression:

- 1: towards base
- 2: at middle
- 3: towards apex

代码和表达

- 1: 接近基部
- 2: 中间部位
- 3: 接近顶部



1
towards base

1: 接近基部



1 towards base



2
at middle

2: 中间部位



2 at middle



3
towards apex

3: 接近顶部



3 towards apex

07. Leaf: shape of apex /// 叶片：先端形状

PQ - VG



1
acute

1: 锐形



2
obtuse

2: 钝形



3
emarginate

3: 顶端微凹形



08. Leaf: symmetry of apex /// 叶片：先端对称性

QN – VG/MS

Notes and states of expression:

- 1: symmetric or slightly asymmetric
- 2: moderately asymmetric
- 3: strongly asymmetric

代码和表达

- 1: 对称或稍不对称
- 2: 较为非对称
- 3: 非对称



1 symmetric or slightly asymmetric

1: 对称或稍不对称



2 moderately asymmetric

2: 较为非对称



3 strongly asymmetric

3. 非对称



3 strongly asymmetric

3. 非对称

09. Leaf: attitude /// 叶片：姿态

QN – VG/MS

Notes and states of expression:

- 1: erect
- 2: erect to semi-erect
- 3: semi-erect
- 4: semi-erect to horizontal
- 5: horizontal
- 6: horizontal to semi-drooping
- 7: semi-drooping
- 8: semi-drooping to drooping
- 9: drooping

代码和表达

- 1: 直立
- 2: 直立到半直立
- 3: 半直立
- 4: 半直立到水平
- 5: 水平
- 6: 水平到半下垂
- 7: 半下垂
- 8: 半下垂到下垂
- 9: 下垂



10. Leaf: variegation // 叶片：杂色

QL - VG



1 absent

1: 无



9 present

9: 有

11. Leaf: spots on upper side /// 叶片：上表面斑点

QL - VG



1 absent

1: 无



9 present

9: 有

12. Leaf: main colour of upper side // 叶片：上表面主色

PQ - VG

Notes and states of expression:

- 1: yellowish green
- 2: light green
- 3: medium green
- 4: dark green

代码和表达

- 1: 黄绿色
- 2: 淡绿色
- 3: 绿色
- 4: 浓绿色

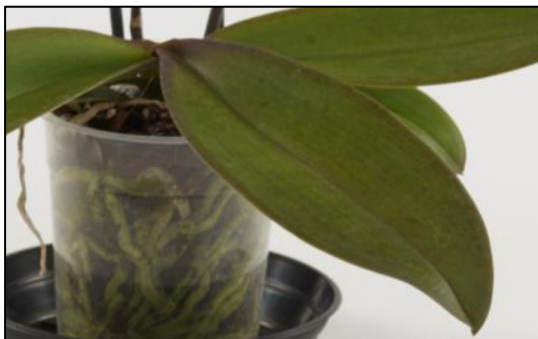


13. Leaf: anthocyanin coloration of upper side // 叶片：上表面花青甙显色

QN – VG/MS

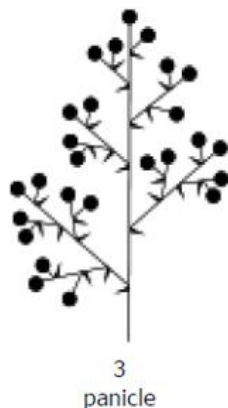
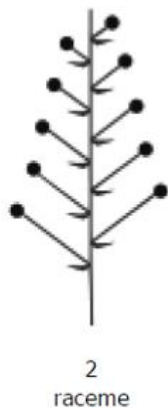
- 1: absent or very weak
- 2: very weak to weak
- 3: weak
- 4: weak to medium
- 5: medium
- 6: medium to strong
- 7: strong
- 8: strong to very strong
- 9: very strong

- 代码和表达**
- 1: 无到极弱
 - 2: 极弱到弱
 - 3: 弱
 - 4: 弱到中
 - 5: 中
 - 6: 中到强
 - 7: 强
 - 8: 强到极强
 - 9: 极强

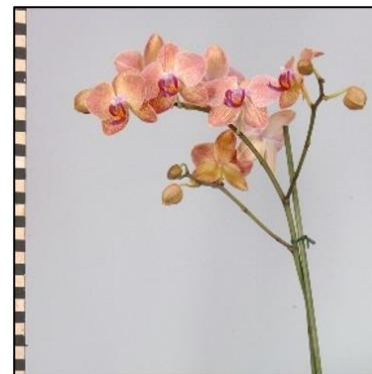


14. Inflorescence: type // 花序：类型

QL - VG



2 raceme



3 panicle

1: 单生花; 2: 总状花序; 3: 圆锥花序

15. Inflorescence: length of flowering part /// 花序：着花位置长度

QN – VG/MS

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

代码和表达

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 长到极长
- 9: 极长



Inflorescence: length of flowering part



16. Inflorescence: number of flowers /// 花序：花数量

QN – VG/MS

Notes and states of expression:

- 1: very few
- 2: very few to few
- 3: few
- 4: few to medium
- 5: medium
- 6: medium to many
- 7: many
- 8: many to very many
- 9: very many

代码和表达

- 1: 极少
- 2: 极少到少
- 3: 少
- 4: 少到中
- 5: 中
- 6: 中到多
- 7: 多
- 8: 多到极多
- 9: 极多



17. Peduncle: length /// 花序梗：长度

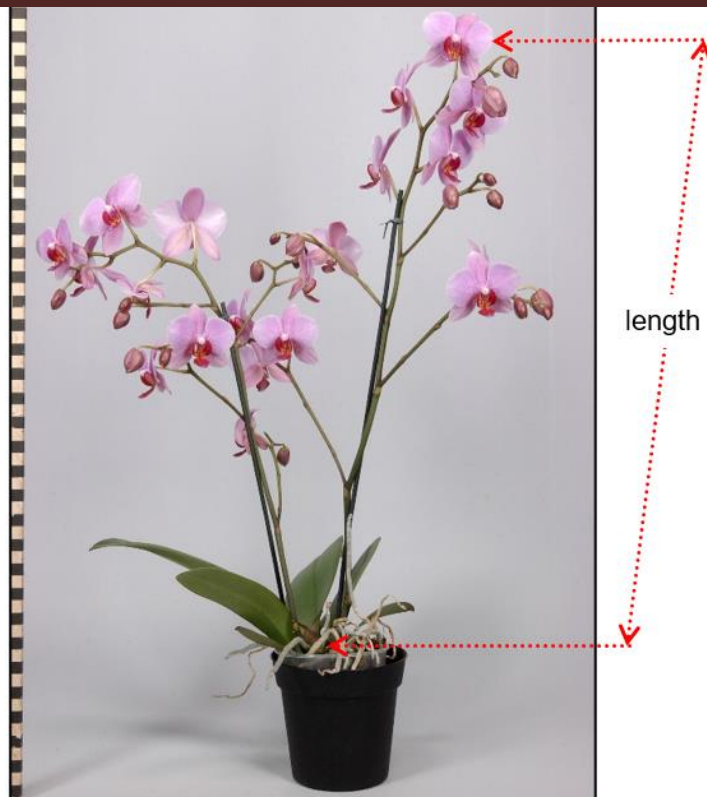
QN – VG/MS

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

代码和表达

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 长到极长
- 9: 极长



18. Peduncle: thickness /// 花序梗：粗度

QN – VG/MS

Notes and states of expression:

- 1: thin
- 2: medium
- 3: thick

代码和表达

- 1: 细
- 2: 中
- 3: 粗



19. Peduncle: anthocyanin coloration /// 花序梗：花青甙显色

QN - VG

Notes and states of expression:

- 1: absent or weak
- 2: weak to medium
- 3: medium
- 4: medium to strong
- 5: strong

代码和表达

- 1: 无或弱
- 2: 弱到中
- 3: 中
- 4: 中到强
- 5: 强



20. Flower: shape in lateral view // 花：侧面形状

QN - VG

Notes and states of expression:

- 1: concave
- 2: flat
- 3: convex

代码和表达

- 1: 内弯
- 2: 平整
- 3: 外弯



1
concave
1: 内弯



2
flat
2: 平整



3
convex
3: 外弯

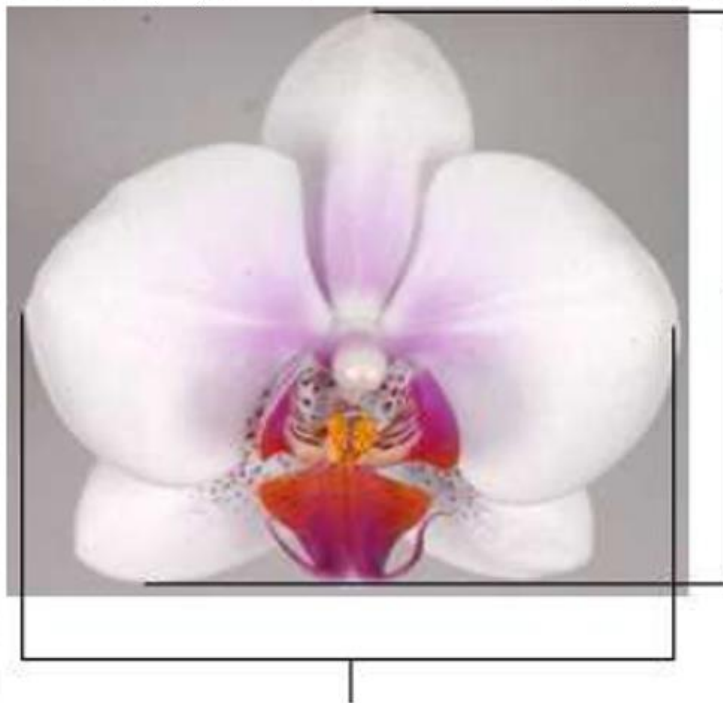
21. Flower: length in front view // 花：正面长度

QN – VG/MS

Notes and states of expression: 代码和表达

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 长到极长
- 9: 极长



花：长
Flower: length

Flower: width 花：宽

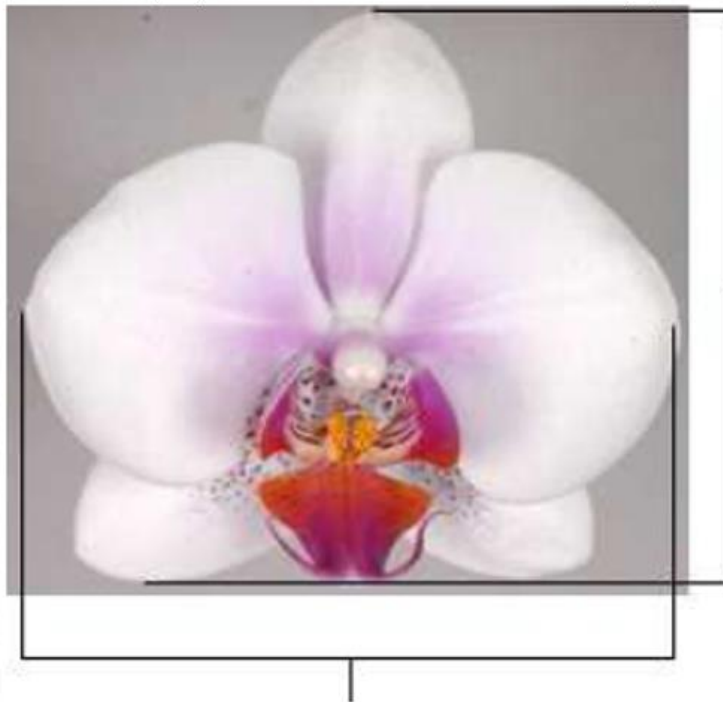


22. Flower: width in front view // 花：正面宽度

QN – VG/MS

Notes and states of expression:

- | | |
|--------------------------|---------|
| 1: very narrow | 代码和表达 |
| 2: very narrow to narrow | 1: 极窄 |
| 3: narrow | 2: 极小到小 |
| 4: narrow to medium | 3: 小 |
| 5: medium | 4: 小到中 |
| 6: medium to broad | 5: 中 |
| 7: broad | 6: 中到大 |
| 8: broad to very broad | 7: 大 |
| 9: very broad | 8: 大到极大 |
| | 9: 极大 |



花：长
Flower: length

Flower: width 花：宽

23. Flower: arrangement of petals // 花：花瓣排列方式

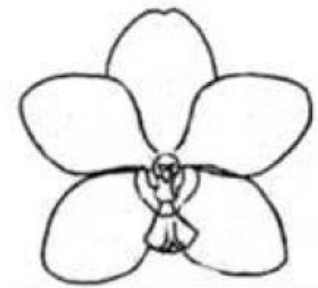
QN – VG/MS

Notes and states of expression:

- 1: free
- 2: touching
- 3: overlapping

代码和表达

- 1: 分开
- 2: 相接
- 3: 重叠



1
free



2
touching



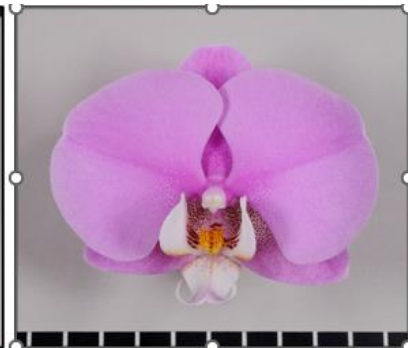
3
overlapping



1: 分开
1 free



2: 相接
2 touching



3: 重叠
3 overlapping

24. Flower: fragrance // 花：香味

QN – VG/MS

Notes and states of expression:

- 1: absent or weak
- 2: moderate
- 3: strong

代码和表达

- 1: 无或弱
- 2: 中
- 3: 强



CPVO TP/213/2 Rev. Corr. Characteristics (2/3) /// CPVO TP/213/2修订版对应性状 (2/3)

25-49 are left out /// 不包括性状25-49

50. Petal: length /// 花瓣：长度

51. Petal: width /// 花瓣：宽度

52. Petal: shape /// 花瓣：形状

53. Petal: position of broadest part /// 花瓣：最宽部分的位置

54. Petal: curvature of longitudinal axis /// 花瓣：纵轴弯曲状态

55. Petal: shape in cross section /// 花瓣：横截面形状

56. Petal: twisting /// 花瓣：扭曲

57. Petal: undulation of margin /// 花瓣：边缘波状

58. Petal: ground colour of upper side /// 花瓣：上表面主色

59. Petal: over colour (if present) /// 花瓣：次色（如有）

60. Petal: area of over colour /// 花瓣：次色范围

61. Petal: number of spots /// 花瓣：斑点数量

62. Petal: size of spots /// 花瓣：斑点大小

63. Petal: colour of spots /// 花瓣：斑点颜色

64. Petal: number of stripes /// 花瓣：条纹数量

65. Petal: colour of stripes /// 花瓣：条纹颜色

66. Petal: density of netting /// 花瓣：网纹密度

67. Petal: colour of netting /// 花瓣：网纹颜色

68. Lip: fusion of lateral lobes with apical lobe /// 唇瓣：侧裂片与中裂片顶端融合

Not in UPOV
guideline /// 不
在UPOV指南中



50. Petal: length // 花瓣：长度

QN – VG/MS

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

代码和表达

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 长到极长
- 9: 极长



Petal length

51. Petal: width /// 花瓣：宽度

QN – VG/MS

Notes and states of expression: 代码和表达

- | | |
|--------------------------|---------|
| 1: very narrow | 1: 极窄 |
| 2: very narrow to narrow | 2: 极窄到窄 |
| 3: narrow | 3: 窄 |
| 4: narrow to medium | 4: 窄到中 |
| 5: medium | 5: 中 |
| 6: medium to broad | 6: 中到宽 |
| 7: broad | 7: 宽 |
| 8: broad to very broad | 8: 宽到极宽 |
| 9: very broad | 9: 极宽 |



52. Petal: shape // 花瓣：形状

QN - VG

Notes and states of expression:

3: moderately compressed

4: moderately compressed to medium

5: medium

6: medium to moderately elongated

7: moderately elongated

代码和表达

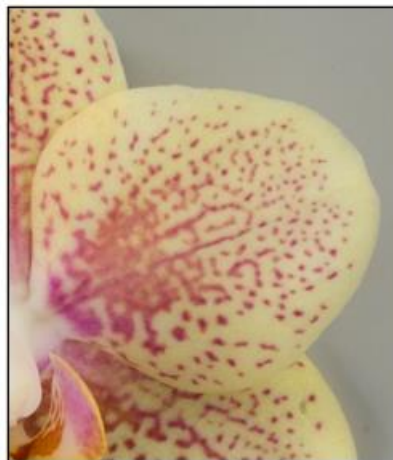
3: 较扁

4: 较扁到中

5: 中

6: 中到较长

7: 较长



53. Petal: position of broadest part // 花瓣：最宽部分的位置

QN – VG/MS

Notes and states of expression:

- 1: towards base
- 2: at middle
- 3: towards apex

代码和表达

- 1: 接近基部
- 2: 中间部位
- 3: 接近顶部



1 towards base

1: 接近基部



2 at middle

2: 中间部位



3 towards apex

3: 接近顶部



54. Petal: curvature of longitudinal axis /// 花瓣：纵轴弯曲状态

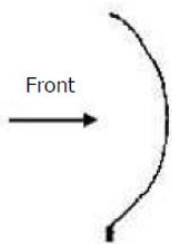
QN – VG/MS

Notes and states of expression:

- 1: incurving
- 2: straight
- 3: recurving

代码和表达

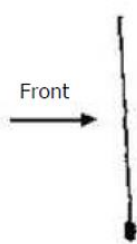
- 1: 内弯
- 2: 平直
- 3: 反弯



1
incurving
1: 内弯



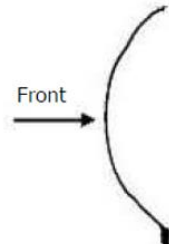
1 incurving



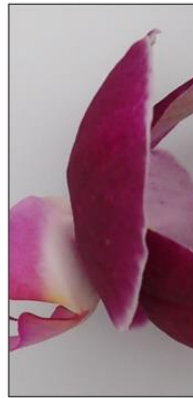
2
straight
2: 平直



2 straight



3
recurving
3: 反弯



3 recurving

55. Petal: shape in cross section // 花瓣：横截面形状

QN – VG/MS



Front

Back

1
concave

1: 凹



1 concave
1: 凹



Front

Back

2
straight

2: 平



2 straight
2: 平



Front

Back

3
convex

3: 凸



3 convex
3: 凸

56. Petal: twisting // 花瓣：扭曲

QL - VG

Notes and states of expression:

1: absent

9: present

代码和表达

1: 无

9: 有



1 absent
1: 无



9 present
9: 有

57. Petal: undulation of margin /// 花瓣：边缘波状

QN – VG/MS

Notes and states of expression:

- 1: absent or weak
- 2: medium
- 3: strong

代码和表达

- 1: 无或弱
- 2: 中
- 3: 强

边缘波状：无



Undulation is absent



Undulation is weak (Phaladadel)

边缘波状：弱
(Phaladadel)



Undulation is medium (Spilled Ink)

边缘波状：中 (墨水洒落状)



Undulation is strong

边缘波状：强

58. Petal: ground colour of upper side /// 花瓣：上表面主色

59. Petal: over colour (if present) /// 花瓣：次色（如有）

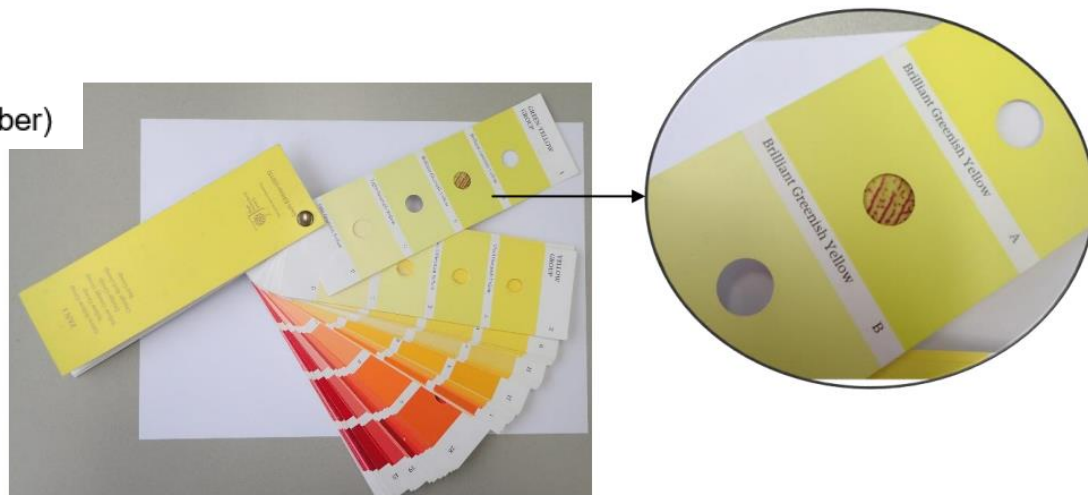
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡（注明标号）



60. Petal: area of over colour /// 花瓣：次色范围

QN – VG/MS

Notes and states of expression:

- 1: very small
- 2: very small to small
- 3: small
- 4: small to medium
- 5: medium
- 6: medium to large
- 7: large
- 8: large to very large
- 9: very large

代码和表达

- 1: 极小
- 2: 极小到小
- 3: 小
- 4: 小到中
- 5: 中
- 6: 中到大
- 7: 大
- 8: 大到极大
- 9: 极大



3
small
3: 小



5
medium
5: 中



7
large
7: 大

61. Petal: number of spots /// 花瓣：斑点数量

QN – VG/MS

Notes and states of expression: 代码和表达

- 1: none
- 2: very few to few
- 3: few
- 4: few to medium
- 5: medium
- 6: medium to many
- 7: many
- 8: many to very many
- 9: very many

- 1: 无
- 2: 极少到少
- 3: 少
- 4: 少到中
- 5: 中
- 6: 中到多
- 7: 多
- 8: 多到极多
- 9: 极多



(Road Trip)



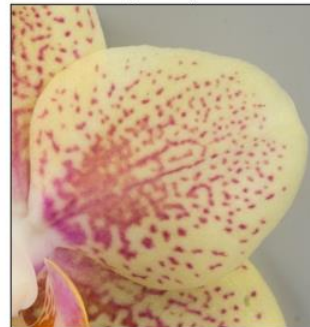
(P 132)



(MI00208)



(Sandcastle)



62. Petal: size of spots // 花瓣：斑点大小

QN – VG/MS

Notes and states of expression:

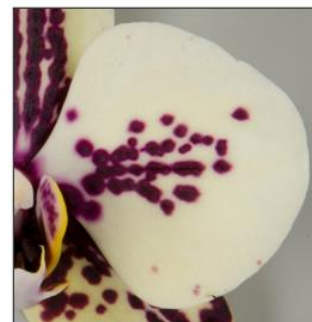
- 1: very small
- 2: very small to small
- 3: small
- 4: small to medium
- 5: medium
- 6: medium to large
- 7: large
- 8: large to very large
- 9: very large

代码和表达

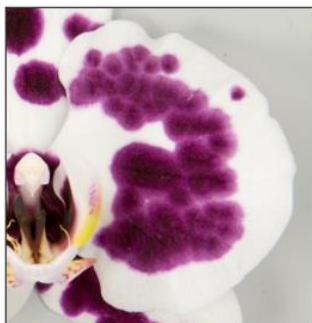
- 1: 极小
- 2: 极小到小
- 3: 小
- 4: 小到中
- 5: 中
- 6: 中到大
- 7: 大
- 8: 大到极大
- 9: 极大



(M00208)



(MI1508)



(Troubadour)



63. Petal: colour of spots /// 花瓣：斑点颜色

PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



64. Petal: number of stripes /// 花瓣：条纹数量

QN – VG/MS

Notes and states of expression:

- 1: none
- 2: very few to few
- 3: few
- 4: few to medium
- 5: medium
- 6: medium to many
- 7: many
- 8: many to very many
- 9: very many

代码和表达

- 1: 无
- 2: 极少到少
- 3: 少
- 4: 少到中
- 5: 中
- 6: 中到中
- 7: 多
- 8: 多到极多
- 9: 极多



65. Petal: colour of stripes // 花瓣：条纹颜色

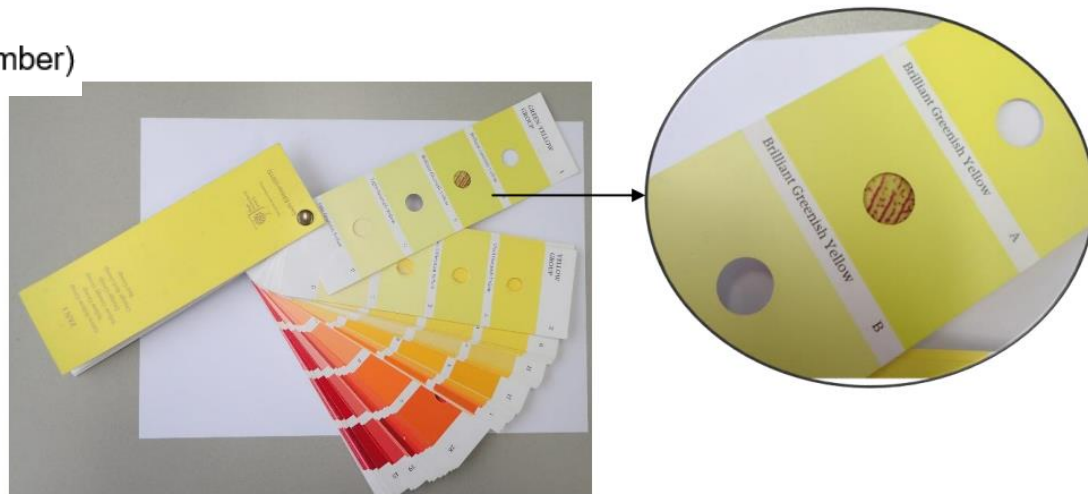
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



66. Petal: density of netting // 花瓣：网纹密度

QN – VG/MS

Notes and states of expression:

- 1: none
- 2: very low to low
- 3: low
- 4: low to medium
- 5: medium
- 6: medium to high
- 7: high
- 8: high to very high
- 9: very high

代码和表达

- 1: 无
- 2: 极疏到疏
- 3: 疏
- 4: 疏到中
- 5: 中
- 6: 中到密
- 7: 密
- 8: 密到极密
- 9: 极密



67. Petal: colour of netting // 花瓣：网纹颜色

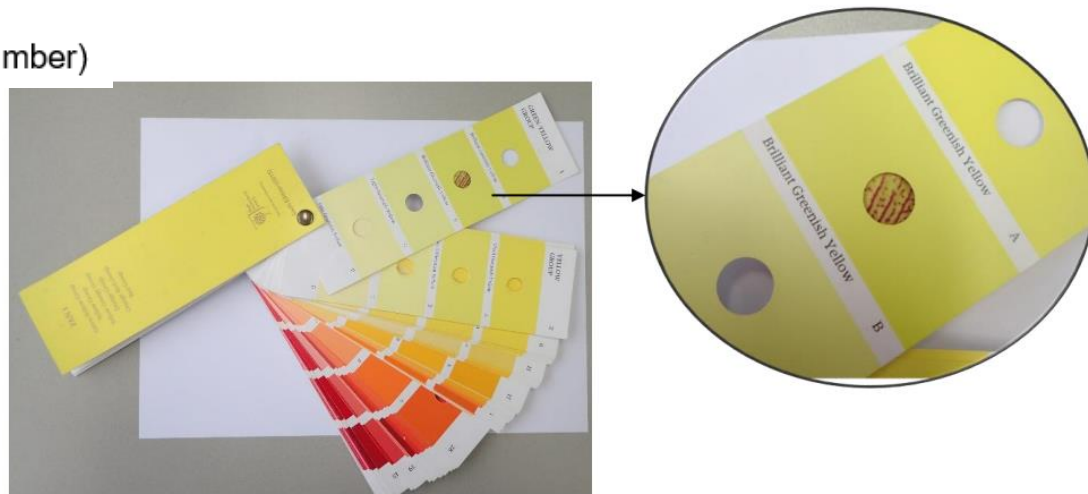
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



68. Lip: fusion of lateral lobes with apical lobe (1) // 唇瓣：侧裂片与中裂片合生（1）

QN – VG

Any flower which is slightly fused (2) or more is regarded as “big lip” // 任何轻度合生（代码2）或以上的花都归为“大唇瓣”

Notes and states of expression:

- 1: none
- 2: slightly fused = fused up to a quarter to length
- 3: moderated fused = fused to half the length
- 4: strongly fused = fused to three quarters of length
- 5: completely fused

代码和表达

- 1: 无
- 2: 轻度合生（至多1/4长度）
- 3: 中度合生（至多1/2长度）
- 4: 重度合生（至多3/4长度）
- 5: 完全合生



1
none



3
moderately fused



5
completely fused



68. Lip: fusion of lateral lobes with apical lobe (2) // 唇瓣：侧裂片与中裂片合生（2）

QN – VG

Any flower which is slightly fused (2) or more is regarded as “big lip”// 任何轻度合生（代码2）及以上的花都归为“大唇瓣”



The flowers above have a so-called *big lip*, meaning that the apical lobe and the lateral lobes are fused. In this case, make a remark about the big lip in the remarks section and the shape of the lateral lobes become ‘not applicable’.

Also characteristics 75, 76, 77, 87, 88, 89, 90, 91, 92, 93 and 94 become ‘not applicable’.

CPVO TP/213/2 Rev. Corr. Characteristics (3/3) /// CPVO TP/213/2 修订版对应性状 (3/3)

69. Lip: length of apical lobe /// 唇瓣：中裂片长度
70. Lip: width of apical lobe /// 唇瓣：中裂片宽度
71. Lip: shape of apical lobe /// 唇瓣：中裂片形状
72. Lip: whiskers /// 唇瓣：须
73. Lip: length of whiskers /// 唇瓣：须的长度
74. Lip: bump and ridge on apical lobe /// 唇瓣：中裂片上表面的隆起和脊
75. Lip: shape of lateral lobe /// 唇瓣：侧裂片的形状
76. Lip: curvature of lateral lobe /// 唇瓣：侧裂片弯曲类型
77. Lip: size of lateral lobe relative to apical lobe /// 唇瓣：侧裂片相对于中裂片的大小
78. Apical lobe: ground colour /// 中裂片：主色
79. Apical lobe: over colour (if present) /// 中裂片：次色（如有）
80. Apical lobe: number of spots /// 中裂片：斑点数量
81. Apical lobe: size of spots /// 中裂片：斑点大小
83. Apical lobe: number of stripes /// 中裂片：条纹数量
85. Apical lobe: density of netting /// 中裂片：网纹密度
87. Lateral lobe: ground colour /// 侧裂片：主色
88. Lateral lobe: over colour (if present) /// 侧裂片：次色（如有）
89. Lateral lobe: number of spots /// 侧裂片：斑点数量
91. Lateral lobe: number of stripes /// 侧裂片：条纹数量
93. Lateral lobe: density of netting /// 侧裂片：网纹密度
95. Lip: callus /// 唇瓣：肉突
96. Callus: colour /// 肉突：颜色
97. Callus: pubescence /// 肉突：软毛
98. Column: colour /// 柱状物：颜色

Note: numbers comply with CPVO protocol, not UPOV guideline

注：数字标号遵循CPVO规程（非UPOV指南）

69. Lip: length of apical lobe // 唇瓣：中裂片长度

QN – VG/MS

Notes and states of expression:

1: very short

2: very short to short

3: short

4: short to medium

5: medium

6: medium to long

7: long

8: long to very long

9: very long

代码和表达

1: 极短

2: 极短到短

3: 短

4: 短到中

5: 中

6: 中到长

7: 长

8: 长到极长

9: 极长



70. Lip: width of apical lobe /// 唇瓣：中裂片宽度

QN – VG/MS

Notes and states of expression:

- 1: very narrow
- 2: very narrow to narrow
- 3: narrow
- 4: narrow to medium
- 5: medium
- 6: medium to broad
- 7: broad
- 8: broad to very broad
- 9: very broad

代码和表达

- 1: 极窄
- 2: 极窄到窄
- 3: 窄
- 4: 窄到中
- 5: 中
- 6: 中到宽
- 7: 宽
- 8: 宽到极宽
- 9: 极宽



width 宽度



width 宽度










71. Lip: shape of apical lobe // 唇瓣：中裂片形状

PQ - VG

Notes and states of expression: 代码和表达

- 1: triangular
- 2: ovate
- 3: trullate
- 4: elliptic
- 5: rhombic
- 6: circular
- 7: obtrullate
- 8: obtriangular

- 1: 三角形
- 2: 卵圆形
- 3: 卵菱形
- 4: 椭圆形
- 5: 菱形
- 6: 圆形
- 7: 倒卵菱形
- 8: 倒三角形

| | | ← broadest part → | | | | |
|--|---|--|---|---|--|---|
| | | (below middle) | at middle | | (above middle) | |
| narrow (high) ↑ width (ratio length/width) ↓ broad (low) | | | | | | |
| |  <p>1 triangular</p> |  <p>2 ovate</p> |  <p>3 trullate</p> |  <p>4 elliptic</p> |  <p>5 rhombic</p> |  <p>7 obtrullate</p> |
| | | |  <p>6 circular</p> | | | |



72. Lip: whiskers // 唇瓣：须

QL - VG



1 absent
1: 无



9 present
9: 有

73. Lip: length of whiskers /// 唇瓣：须的长度

QN - VG/MS

Notes and states of expression:

- 1: very short
- 2: very short to short
- 3: short
- 4: short to medium
- 5: medium
- 6: medium to long
- 7: long
- 8: long to very long
- 9: very long

代码和表达

- 1: 极短
- 2: 极短到短
- 3: 短
- 4: 短到中
- 5: 中
- 6: 中到长
- 7: 长
- 8: 长到极长
- 9: 极长



base

tip



tip

base



74. Lip: bump and ridge on apical lobe /// 唇瓣：中裂片上表面的隆起和脊

QN – VG/MS

Notes and states of expression:

- 1: absent or small
- 2: medium
- 3: large

代码和表达

- 1: 无或小
- 2: 中
- 3: 大



1
absent or small
1: 无或小



2
medium
2: 中



3
large
3: 大



Location of bump and ridge /// 隆起和脊的位置



75. Lip: shape of lateral lobe /// 唇瓣：侧裂片的形状

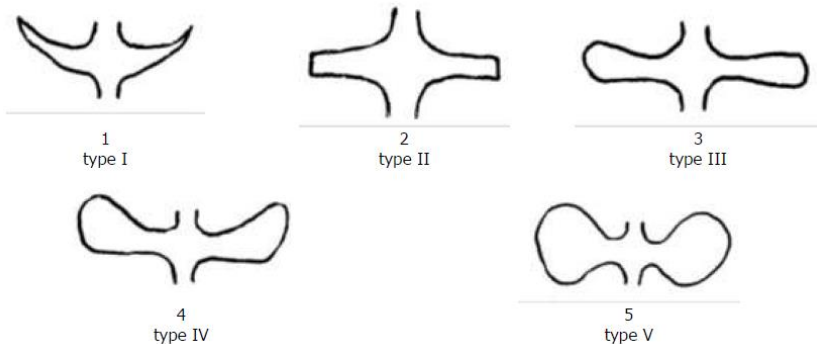
PQ - VG

Notes and states of expression:

- 1: type I
- 2: type II
- 3: type III
- 4: type IV
- 5: type V

代码和表达

- 1: 类型 I
- 2: 类型 II
- 3: 类型 III
- 4: 类型 IV
- 5: 类型 V



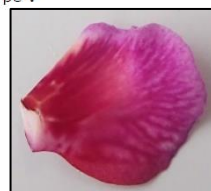
type I /// 类型 I



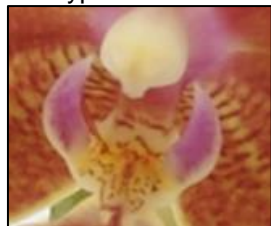
type III /// 类型 III



type IV /// 类型 IV



type V /// 类型 V



76. Lip: curvature of lateral lobe /// 唇瓣：侧裂片弯曲类型

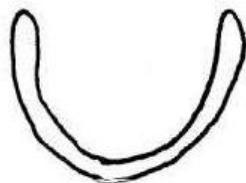
QN – VG/MS

Notes and states of expression:

- 1: weak
- 2: medium
- 3: strong

代码和表达

- 1: 弱
- 2: 中
- 3: 强

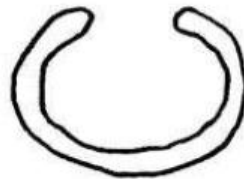


1
weak

1: 弱



1 weak



2
medium

2: 中



2 medium



3
strong

3: 强



3 strong



77. Lip: size of lateral lobe relative to apical lobe // 唇瓣：侧裂片相对于中裂片的大小

QN – VG/MS

Notes and states of expression:

- 1: much smaller
- 2: much smaller to smaller
- 3: smaller
- 4: smaller to equal
- 5: equal
- 6: equal to larger
- 7: larger
- 8: larger to much larger
- 9: much larger

代码和表达

- 1: 极小于
- 2: 极小于到小于
- 3: 小于
- 4: 小于到相同
- 5: 相同
- 6: 相同到大于
- 7: 大于
- 8: 大于到极大于
- 9: 极大于



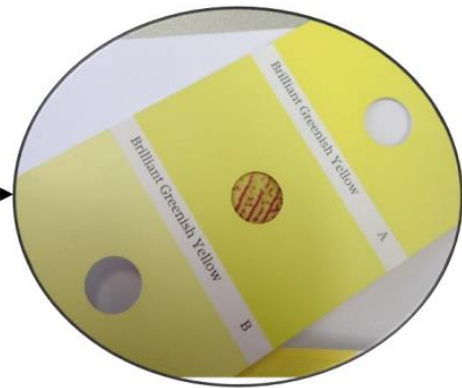
78. Apical lobe: ground colour /// 中裂片：主色

79. Apical lobe: over colour (if present) /// 中裂片：次色（如有）

PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)



代码和表达
参照RHS比色卡（注明标号）

80. Apical lobe: number of spots /// 中裂片：斑点数量

QN – VG/MS

Notes and states of expression:

- 1: none
- 2: few
- 3: medium
- 4: many

代码和表达

- 1: 无
- 2: 少
- 3: 中
- 4: 多



81. Apical lobe: size of spots /// 中裂片：斑点大小

QN – VG/MS

Notes and states of expression:

- 1: very small
- 2: very small to small
- 3: small
- 4: small to medium
- 5: medium
- 6: medium to large
- 7: large
- 8: large to very large
- 9: very large

代码和表达

- 1: 极小
- 2: 极小到小
- 3: 小
- 4: 小到中
- 5: 中
- 6: 中到大
- 7: 大
- 8: 大到极大
- 9: 极大



82. Apical lobe: colour of spots // 中裂片：斑点颜色

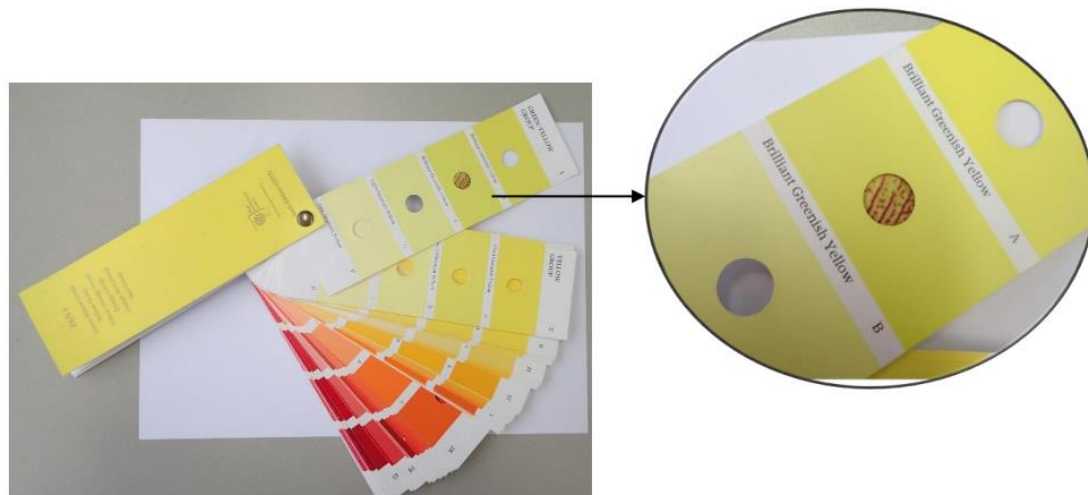
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡（注明标号）



83. Apical lobe: number of stripes /// 中裂片：条纹数量

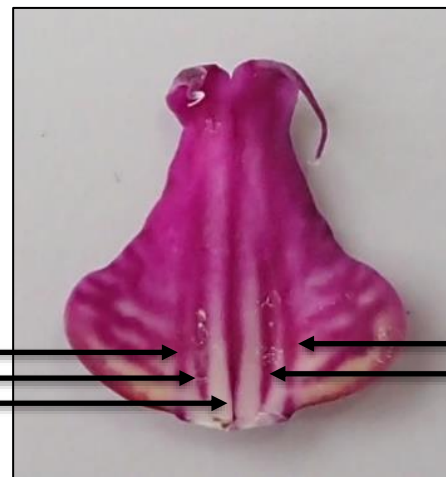
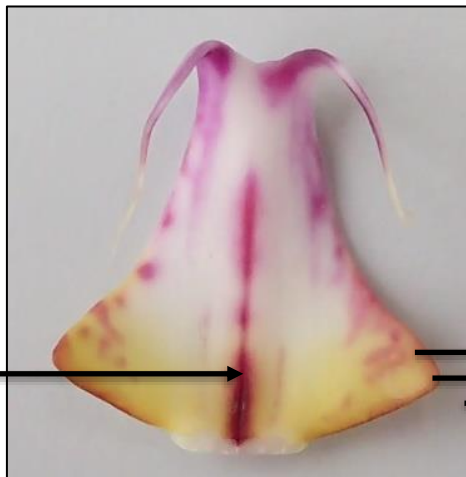
QN – VG/MS

Notes and states of expression:

- 1: none
- 2: few
- 3: medium
- 4: many

代码和表达

- 1: 无
- 2: 少
- 3: 中
- 4: 多



84. Apical lobe: colour of stripes /// 中裂片：条纹颜色

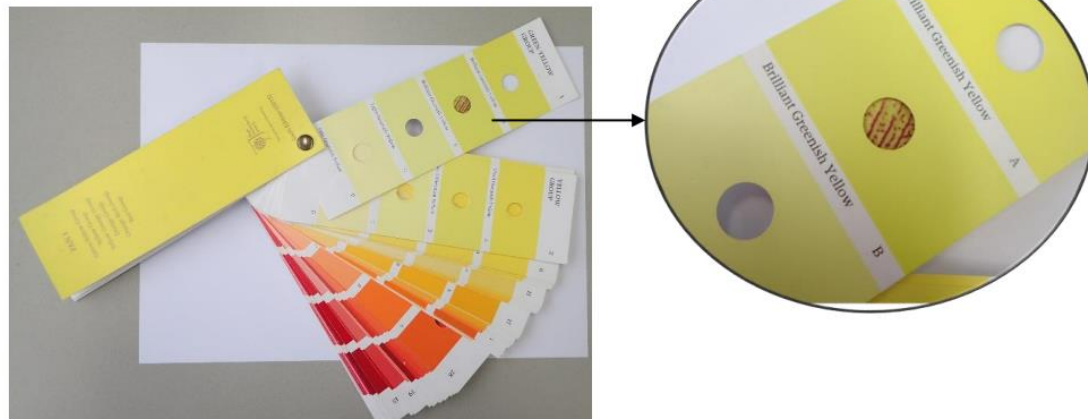
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡（注明标号）



85. Apical lobe: density of netting /// 中裂片：网纹密度

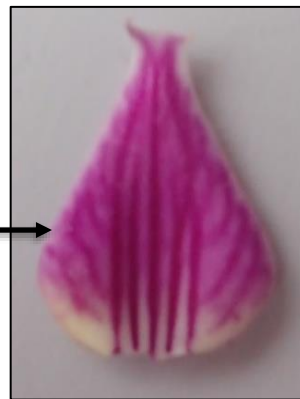
QN – VG/MS

Notes and states of expression:

- 1: none
- 2: low
- 3: medium
- 4: high

代码和表达

- 1: 无
- 2: 疏
- 3: 中
- 4: 密



86. Apical lobe: colour of netting /// 中裂片：网纹颜色

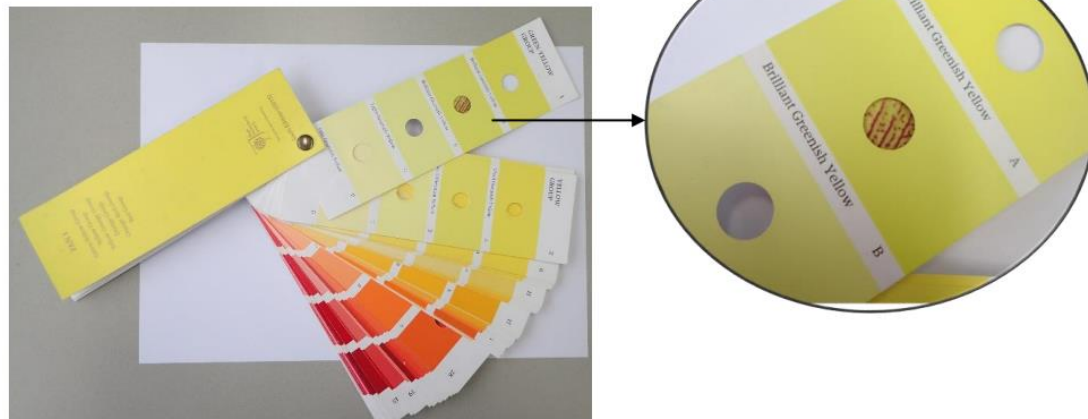
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡（注明标号）



87. Lateral lobe: ground colour /// 侧裂片：主色

88. Lateral lobe: over colour (if present) /// 侧裂片：次色（如有）

PQ - VG 代码和表达
参照RHS比色卡（注明标号）

Notes and states of expression:
RHS Colour Chart (indicate reference number)



89. Lateral lobe: number of spots /// 侧裂片：斑点数量

QN - VG/MS

Notes and states of expression: 代码和表达

- 1: none
- 2: few
- 3: medium
- 4: many

- 1: 无
- 2: 少
- 3: 中
- 4: 多



90. Lateral lobe: colour of spots /// 侧裂片：斑点颜色

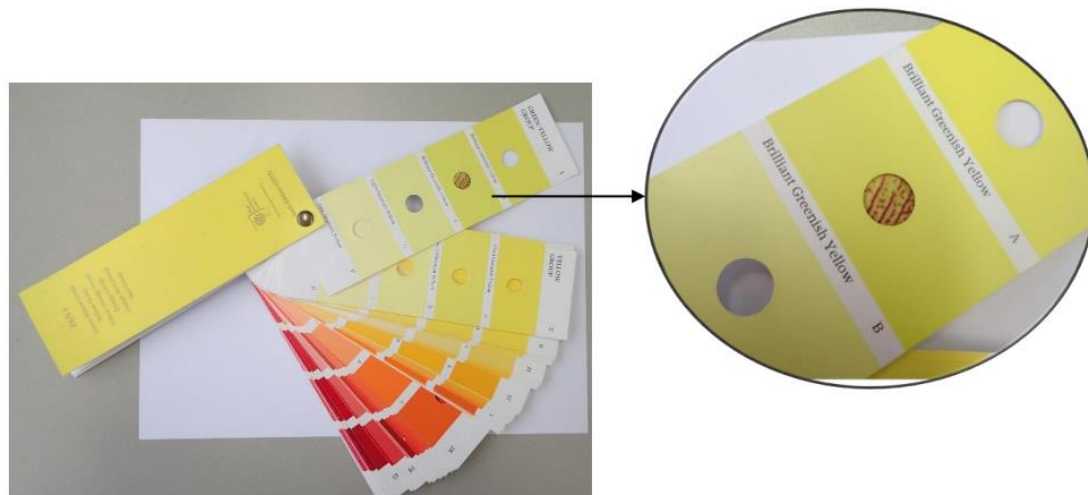
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



91 Lateral lobe: number of stripes /// 侧裂片：条纹数量

QN - VG/MS

Notes and states of expression:

- 1: none
- 2: few
- 3: medium
- 4: many

代码和表达

- 1: 无
- 2: 少
- 3: 中
- 4: 多



92. Lateral lobe: colour of stripes /// 侧裂片：条纹颜色

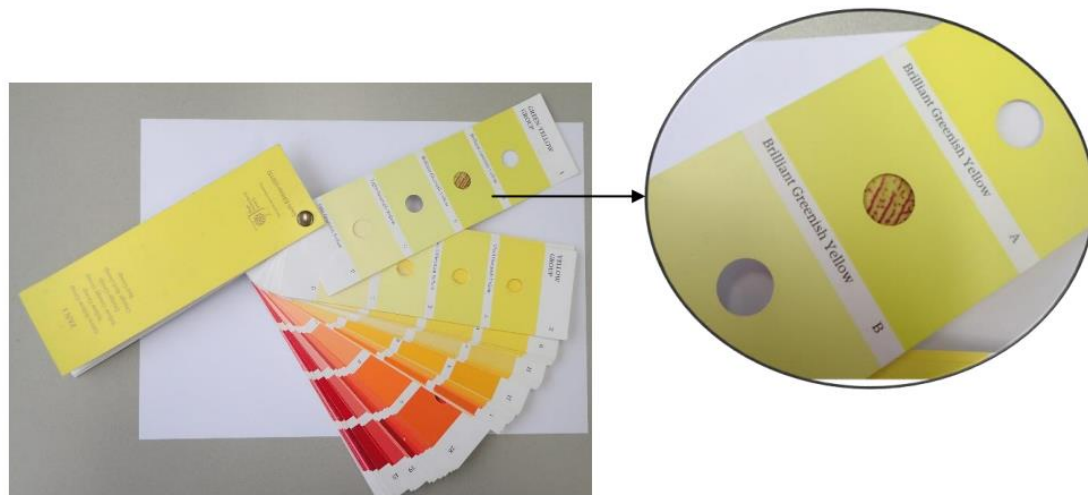
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



93. Lateral lobe: density of netting /// 侧叶：网纹密度

QN – VG/MS

Notes and states of expression: 代码和表达

- 1: none
- 2: low
- 3: medium
- 4: high

- 1: 无
- 2: 疏
- 3: 中
- 4: 密



94. Lateral lobe: colour of netting /// 侧裂片：网纹颜色

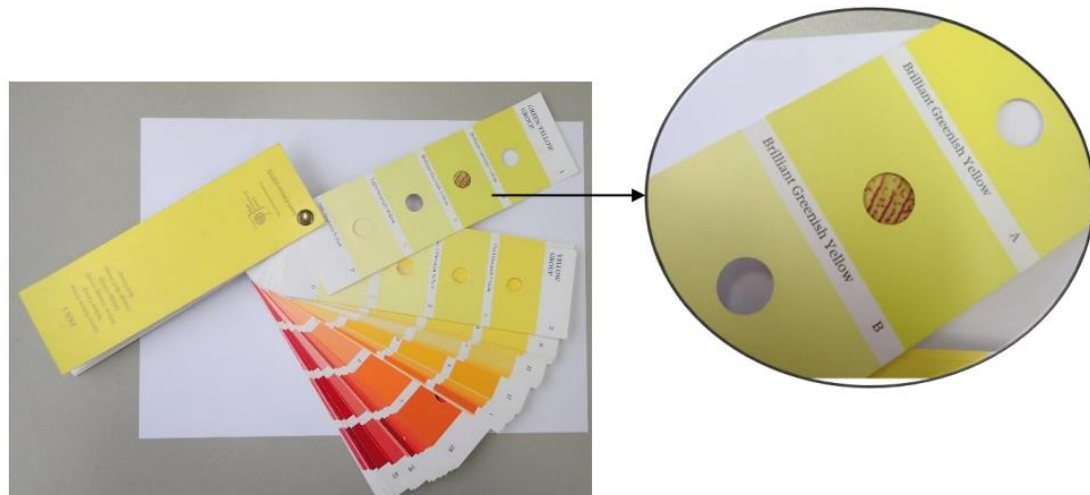
PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)

代码和表达

参照RHS比色卡 (注明标号)



95. Lip: callus /// 唇瓣：肉突

QN – VG/MS

Notes and states of expression:

- 1: flat or slightly raised
- 2: moderately raised
- 3: strongly raised

代码和表达

- 1: 平滑或微凸形
- 2: 中凸形
- 3: 强凸形



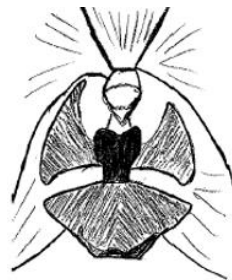
1

flat or slightly raised
1: 平滑或微凸形



2

moderately raised
2: 中凸形



3

strongly raised
3: 强凸形

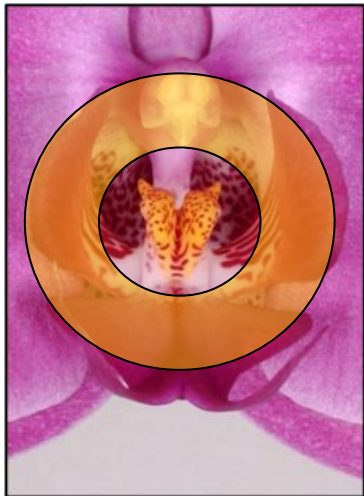


96. Callus: colour /// 肉突：颜色

PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number)



代码和表达

参照RHS比色卡 (注明标号)



97. Callus: pubescence /// 肉突：软毛

QL - VG



1 absent

1: 无



9 present

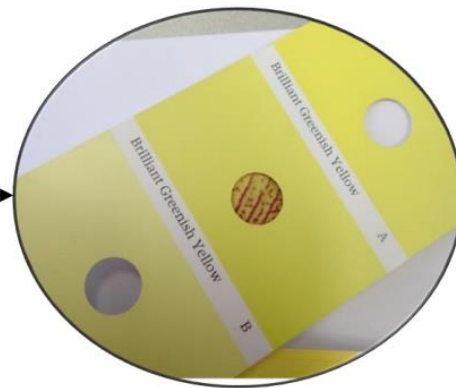
9: 有

98. Column: colour /// 柱状物：颜色

PQ - VG

Notes and states of expression:

RHS Colour Chart (indicate reference number) 代码和表达 参照RHS比色卡 (注明标号)



Distinctness /// 特异性

Approaches for assessing Distinctness /// 特异性评价方法

'side-by-side' visual comparison in the growing trial /// “并排”试种，目测比较

varieties must be grown closely together; in case of Phalaenopsis, we can move the plants in pot /// 品种必须紧密并排生长；蝴蝶兰可以花盆移栽

'notes'/single variety records /// “代码” /单一品种记录

one record for state of expression of the characteristic /// 性状表达状态：一条记录

Several records for state of expression (plants/plant parts/plots), but variety representation by one record (mean/mode) /// 植株 / 植株部位 / 种植小区表达状态：多条记录；品种表达状态：一条记录（平均数/众数）

> For Phalaenopsis mainly side-by-side /// 蝴蝶兰主要使用并排试种法



Distinctness /// 特异性

DNA database (approximately 2500 varieties) /// DNA数据库 (约2500个品种)

Living reference collection /// 活体参考集

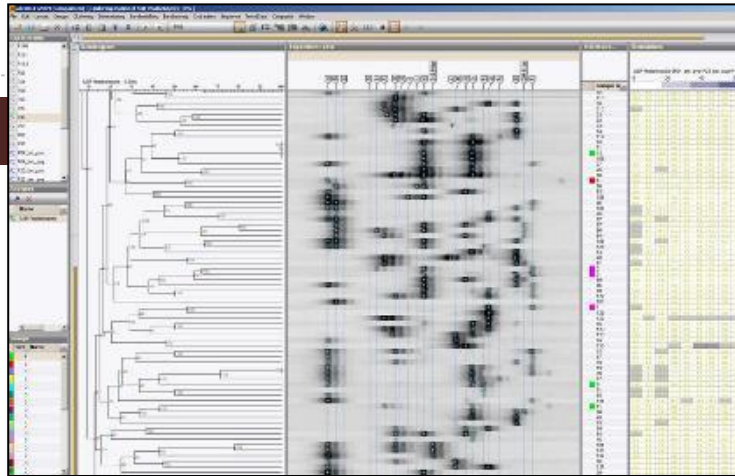
External Crop Experts /// 外部作物专家

Photo database /// 照片数据库

Description database (Naktuinbouw) /// 描述数据库 (荷兰园艺检验局)

Internet (PlantScope/Pluto) /// 网络资料 (PlantScope / Pluto)

Exhibitions/Catalogs of breeding companies /// 育种者展示资料/品种目录



Distinctness // 特异性

DNA database // DNA数据库



nak *tuinbouw*



Distinctness // 特异性

Living variety collection // 活体品种集



nak / tuinbouw

Distinctness /// 特异性

External Crop Experts /// 外部作物专家

- group of experts in the field, at least two persons /// 专家组（至少两人）
- with extensive knowledge about varieties of a species /// 对相关品种具有深入的认识
- who will give advice of the use reference varieties before, during and/or after the trial /// 在试验前/中/后提供参考品种的使用建议
- they have no influence on the decision /// 不影响判定结果

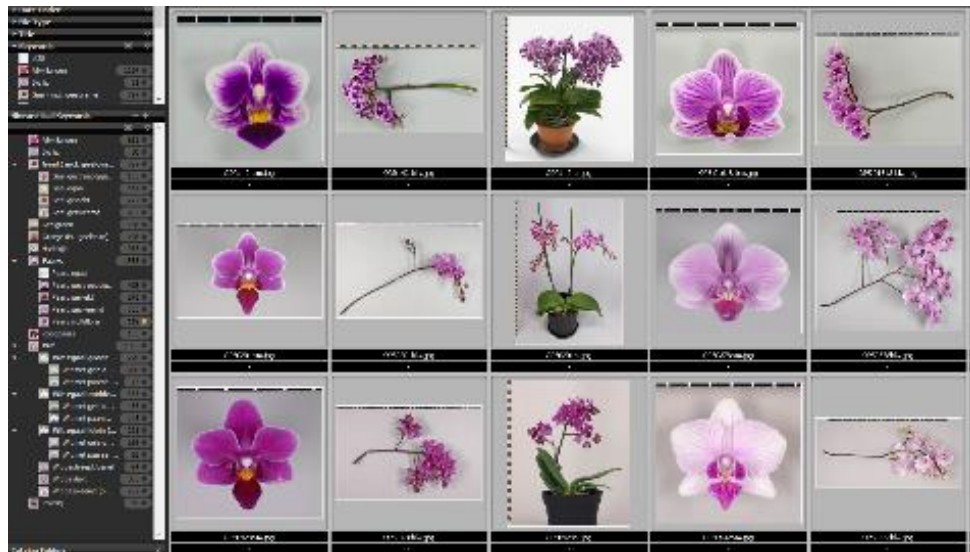
[External Crop Experts Ornamental Crops \(naktuinbouw.com\)](http://naktuinbouw.com)

[外部作物专家：观赏植物](http://naktuinbouw.com)

Distinctness /// 特异性

Photo database /// 照片数据库

- Detail single flower /// 单花细节
- Flowering stem /// 花茎
- Whole plant /// 全株



Uniformity /// 一致性

“A variety is deemed to be uniform if, subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its relevant characteristics” /// “一个品种从其繁殖的特点预期可能出现变异的情况下，如果其有关性状表达足够整齐一致，则该品种应被认为具有一致性。”

Acceptance levels for uniformity are set according to method of propagation. /// 根据繁殖方法设定一致性接受水平。

- Vegetatively propagated varieties /// 无性繁殖品种
- Self-pollinated varieties /// 自花授粉品种
- Cross-pollinated varieties /// 异花授粉品种



For the assessment of uniformity, a population standard of 1% and an acceptance probability of at least 95% should be applied /// 对于一致性评价，应采用1%的群体标准和95%的接受概率

In the case of a sample size of 10 plants, 1 off-type is allowed /// 样本量为10株时，允许出现1个异型株。



Uniformity /// 一致性



Homogeneous in its Heterogeneity
异质中的同质性



Chimaera or not?
是嵌合体吗？

Uniformity /// 一致性

How to deal with the in Phalaenopsis frequently problems with chimaera-like structures and misshaped flowers? /// 如何处理蝴蝶兰常见的嵌合体状扇面和畸形花问题？



nak / tuinbouw



Uniformity /// 一致性



Assessment on basis of off-types /// 基于异型株的评估

- deformed flowers /// 畸形花
- difference in size/color of flowers/plants within sample /// 样本内花/植株的大小/颜色差异
- chimaera-like sectors /// 类嵌合体状扇面

Relation amount of flowers & chimera

| AMOUNT FLOWERS PER PLANT | MAX. AMOUNT OF BIG CHIMERA (per plant) | MAX. AMOUNT OF MEDIUM SEIZED CHIMERA (per plant) | MAX. AMOUNT OF SMALL CHIMERA (per plant) |
|--------------------------|--|--|--|
| < 30 | 0 | 0-1 | 1 |
| 31 - 60 | 0-1 | 1 | 2 |
| 61 - 90 | 1 | 2 | 3 |
| > 91 | 2 | 3 | 4 |

THANK YOU
感谢聆听

 @IPKey_EU