

Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)

BCH-LMO-SCBD-104612-3

[? Decisions on the LMO ? Risk Assessments](#)

LAST UPDATED: 29 AUG 2014

Living Modified Organism identity

The image below identifies the LMO through its unique identifier, trade name and a link to this page of the BCH. Click on it to download a larger image on your computer. For help on how to use it go to the LMO quick-links page.



IFD-19907-9
Moonique carnation

CBD

<https://bch.cbd.int/database/record?documentID=104612>



Read barcode or type above URL into internet browser to access information on this LMO in the Biosafety Clearing-House © SCBD 2012

Name

Moonique carnation

EN

Transformation event

19907

Unique identifier

IFD-19907-9

Developer(s)

- [PERSON: DR YUKIHISA KATSUMOTO](#) | [BCH-CON-SCBD-104607-5](#)

PERSON

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RELATED ORGANIZATION

Description

Moonique is a flower colour modified carnation variety. Flowers have a violet/mauve

EN

colouration, due to the accumulation of delphinidin-related anthocyanins. A variant form of acetolactate synthase (ALS) from *Nicotiana tabacum* was used as a selectable marker to confer tolerance to sulfonylurea herbicide.

Recipient Organism or Parental Organisms

The term “Recipient organism” refers to an organism (either already modified or non-modified) that was subjected to genetic modification, whereas “Parental organisms” refers to those that were involved in cross breeding or cell fusion.

BCH-ORGA-SCBD-4954-7 ORGANISM | DIANTHUS CARYOPHYLLUS (CARNATION, DIACA) |
Crops

Characteristics of the modification process

Vector

pCGP2442 EN

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct

P-35S-CaMV 0.000 kb	L-cab-PETHY 0.000 kb	CS-SuRB-TOBAC 0.000 kb	T-SuRB-TOBAC 0.000 kb
P-ANS-DIACA 0.000 kb	CS-F35H-VIOLA 0.000 kb	T-ANS-DIACA 0.000 kb	
P-CHS 0.000 kb	CS-F35H-SALSN 0.000 kb	T-D8 0.000 kb	
P-DFR-PETHY 0.000 kb	CS-DFR-DIACA 0.000 kb	T-DFR-PETHY 0.000 kb	

Introduced or modified genetic element(s)

Some of these genetic elements may be present as fragments or truncated forms. Please see notes below, where applicable.

BCH-GENE-SCBD-15177-7 ACETOHYDROXY ACID SYNTHASE GENE | (TOBACCO PLANT) |
Protein coding sequence | Resistance to herbicides (Chlorsulfuron, Sulfonylurea)

BCH-GENE-SCBD-43793-4 FLAVONOID 3', 5'-HYDROXYLASE GENE | (PANSIES) |
Protein coding sequence | Changes in quality and/or metabolite content (Pigmentation / Coloration)

BCH-GENE-SCBD-15009-4 DIHYDROFLAVONOL-4-REDUCTASE | (PETUNIA) |
Protein coding sequence | Changes in quality and/or metabolite content (Pigmentation / Coloration)

BCH-GENE-SCBD-104606-2 FLAVONOID 3', 5'-HYDROXYLASE GENE | (SALVIA, ORNAMENTAL SAGE, SCARLET SAGE, TROPICAL SAGE) |
Protein coding sequence | Changes in quality and/or metabolite content (Flavonoids (e.g. anthocyanin), Pigmentation / Coloration)

BCH-GENE-SCBD-100287-7 CAMV 35S PROMOTER |

Promoter

[BCH-GENE-SCBD-101901-3](#) 5' UNTRANSLATED LEADER OF CHLOROPHYLL A/B-BINDING PROTEIN | (PETUNIA) |

Leader

[BCH-GENE-SCBD-100390-7](#) ACETOHYDROXY ACID SYNTHASE GENE TERMINATOR | (TOBACCO PLANT) |

Terminator

[BCH-GENE-SCBD-105427-1](#) ANTHOCYANIDIN SYNTHASE GENE PROMOTER | (CARNATIONS) |

Promoter

[BCH-GENE-SCBD-105424-1](#) ANTHOCYANIDIN SYNTHASE GENE TERMINATOR | (CARNATIONS) |

Terminator

[BCH-GENE-SCBD-103771-1](#) CHALCONE SYNTHASE GENE PROMOTER | (COMMON SNAPDRAGON, SNAPDRAGON) |

Promoter

[BCH-GENE-SCBD-103772-2](#) D8 GENE TERMINATOR | (PETUNIA) |

Terminator

[BCH-GENE-SCBD-105798-1](#) DIHYDROFLAVONOL-4-REDUCTASE PROMOTER | (PETUNIA) |

Promoter

[BCH-GENE-SCBD-104594-4](#) DIHYDROFLAVONOL-4-REDUCTASE | (CARNATIONS) |

Protein coding sequence | Changes in quality and/or metabolite content (Pigmentation / Coloration)

[BCH-GENE-SCBD-105799-1](#) DIHYDROFLAVONOL-4-REDUCTASE TERMINATOR | (PETUNIA) |

Terminator

LMO characteristics

Modified traits

Resistance to herbicides

Chlorsulfuron

Sulfonylurea

Changes in quality and/or metabolite content

Flavonoids (e.g. anthocyanin)

Pigmentation / Coloration

Common use(s) of the LMO

Ornamental

Additional Information

Other relevant website addresses and/or attached documents

? [IFD-19907-9 - ISAAA](#) (English)

? [Dianthus plant named 'FLORIAMETRINE' - US Patent PP21892 P3](#) (English)

[BCH-LMO-SCBD-104612-3](#)

Further Information

Questions about the Cartagena Protocol on Biosafety or the operation of the Biosafety Clearing-House may be directed to the Secretariat of the Convention on Biological Diversity.

**Secretariat of the Convention
on Biological Diversity**

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