LIVING MODIFIED ORGANISM (LMO)

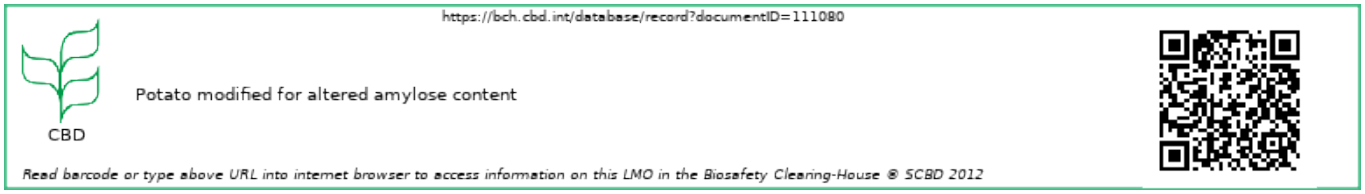
BCH-LMO-SCBD-111080-1 EN DE

? Decisions on the LMO ? Risk Assessments

LAST UPDATED: 21 OCT 2016

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.



Name

Potato modified for altered amylose content	EN

Transformation event

amf/T85; amf/T103; amf/T121

Developer(s)

- PERSON: MPIPZ | BCH-CON-SCBD-111079-2

PERSON

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RELATED ORGANIZATION

Description

The cDNA of the granule-bound starch synthase (CS-gbss-SOLTU) from Solanum tuberosum is arranged in antisense orientation. This causes the formation of an antisense RNA in the genetically modified plants, which inactivates the endogenous transcript, reducing or inhibiting the production of the corresponding endogenous potato enzyme.	EN

As a result of the genetic modification the starch metabolism in the genetically modified potato plants is altered to the effect that the synthesised starch is modified in terms of structure and/or composition. It differs from normal potato starch in its amylose content.

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-12106-6 ORGANISM | SOLANUM TUBEROSUM (POTATO, SOLTU)

Crops

Characteristics of the modification process

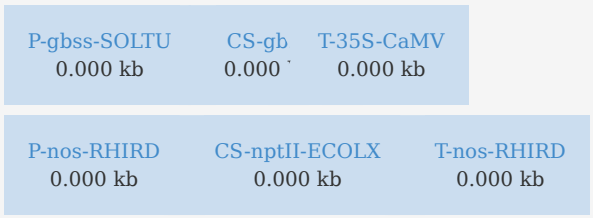
Vector

Derivative of pBIN19 EN

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct



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-14997-6 GRANULE BOUND STARCH SYNTHASE GENE PROMOTER | (POTATO)

Promoter

BCH-GENE-SCBD-48072-3 GRANULE-BOUND STARCH SYNTHASE GENE | (POTATO)

Protein coding sequence | altered carbohydrate composition: increased amylopectin content

BCH-GENE-SCBD-100290-6 CAMV 35S TERMINATOR

Terminator

BCH-GENE-SCBD-100270-6 NOPALINE SYNTHASE GENE PROMOTER

Promoter

BCH-GENE-SCBD-15001-5 NEOMYCIN PHOSPHOTRANSFERASE II | (BACTERIA)

Protein coding sequence | Resistance to antibiotics (Kanamycin)

BCH-GENE-SCBD-100269-8 NOPALINE SYNTHASE GENE TERMINATOR

Terminator

LMO characteristics

Modified traits

Resistance to antibiotics
Kanamycin
Changes in quality and/or metabolite content
Amylose and amylopectin ratio
Carbohydrates

Common use(s) of the LMO

Research

Additional Information

Other relevant website addresses and/or attached documents

? Field evaluation of transgenic potato plants expressing an antisense granule-bound starch synthase gene: increase of the antisense effect during tuber growth *(English)*

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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.

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