



Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)

BCH-LMO-SCBD-14752-6

? Decisions on the LMO ? Risk Assessments

LAST UPDATED: 21 FEB 2018

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. https://bch.cbd.int/database/record?documentID=14752 ACS-BNØ11-5 Navigator™ canola Name Navigator™ canola Transformation event. Maxigator™ canola

Oxy-235

Unique identifier

ACS-BNØ11-5

Developer(s)

- ORGANIZATION: BAYER CROPSCIENCE (AVENTIS (RHÔNE POULENC)) | BCH-CON-SCBD-4893-2

ORGANIZATION

Bayer CropScience (Aventis (Rhône Poulenc)) Website: http://www.bayercropscience.com

Description

Line Oxy-235 was developed to allow the use of oxynil herbicides, ioxynil and bromoxynil, as weed control options in canola. Canola tolerant to the oxynil herbicides created through insertion of the bxn gene isolated from the bacterium Klebsiella ozaenae, encoding a nitrilase enzyme that hydrolyzes oxynil herbicides to non-phytotoxic compounds. Bromoxynil is very effective on broadleaf weeds that are common in canola fields and the deployment of transgenic bromoxynil-tolerant canola will allow the post-emergence control of these weeds without crop injury.

ΕN

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-12083-7 ORGANISM BRASSICA NAPUS (TURNIP, RAPESEED, CANOLA PLANT, OILSEED RAPE, RAPE, BRANA)

Point of collection or acquisition of the recipient organism or parental organisms

Canola variety Westar

Characteristics of the modification process

Vector

pRPA-BL-150a

Techniques used for the modification

Agrobacterium-mediated DNA transfer

Genetic elements construct

P-35S-CaMV	L-SSU_5UTR-MAIZE	CS-bxn-KLEPO	T-nos-RHIRD
0.000 kb	0.000 kb	0.000 kb	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-14976-5 BROMOXYNIL-SPECIFIC NITRILASE

Protein coding sequence | Resistance to herbicides (Bromoxynil)

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

Promoter

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

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BCH-GENE-SCBD-103768-2 RUBISCO SMALL SUBUNIT GENE 5'UTR | (MAIZE, CORN)
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Leader

Notes regarding the genetic elements present in this LMO

Transgenic Oxy-235 contains a single copy of the bxn gene isolated from the bacterium Klebsiella pneumoniae (subsp. ozaenae), which encodes a nitrilase enzyme that hydrolyzes oxynil herbicides to non-phytotoxic compounds. Constitutive expression of the bxn gene was regulated via the 35S promoter from cauliflower mosaic virus (CaMV) and levels of nitrilase enzyme were detected in samples of leaf (1000 ng/mg total protein) and seed (<10 ng/mg total protein) tissue. No nitrilase was detectable in samples of refined oil (detection limit 20 ppb), and it was concluded that there will be no human exposure to this proteins.

ΕN

LMO characteristics

ΕN

ΕN

Resistance to herbicides Bromoxynil

Additional Information

Other relevant website addresses and/or attached documents

? ACS-BNO11-5 (OXY-235) - OECD UID Database (English)

? ACS-BNO11-5 (OXY-235) - CERA GM Database (English)

? ACS-BNO11-5 (OXY-235) - GMO Detection Method Database (GMDD) (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. Secretariat of the Convention on Biological Diversity 413 rue Saint-Jacques, suite 800 Montreal, Québec, H2Y 1N9 Canada Fax: +1 514 288-6588 Email: secretariat@cbd.int