

## Biosafety Clearing-House (BCH)

LIVING MODIFIED ORGANISM (LMO)


BCH-LMO-SCBD-101250-8

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

LAST UPDATED: 24 JUL 2013


### 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.



BCS-GH002-5 X ACS-GH001-3  
GlyTol™ Liberty Link™ cotton

<https://bch.cbd.int/database/record?documentID=101250>



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

Name

GlyTol™ Liberty Link™ cotton

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Transformation event

GHB614 x LLCotton25 (a.k.a. GT x LL or Glytol x LL)

Unique identifier

BCS-GH002-5 x ACS-GH001-3

Developer(s)

- **ORGANIZATION:** BAYER CROP SCIENCE K.K | [BCH-CON-JP-11695-3](#)

#### ORGANIZATION

Bayer Crop Science K.K  
Marunouchi Kitaguchi Building, 1-6-5, Marunouchi  
Chiyoda-ku, Tokyo  
Japan  
Website:

Description

GHB614 × LLCotton25 has been obtained by cross breeding between two living modified cotton parental lines: GHB614 and LLCotton25.

The stacked LMO GHB614 × LLCotton25 inherited the following traits from the parental lines: tolerance to glyphosate from GHB614 and tolerance to glufosinate ammonium herbicides from LLCotton25.

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## 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-12080-6](#) ORGANISM | GOSSYPIMUM HIRSUTUM (COTTON) |

Crops

[BCH-LMO-SCBD-46334-8](#) LIVING MODIFIED ORGANISM | BCS-GHØØ2-5 - GLYTOL™ COTTON GHB614 |

Bayer CropScience | Resistance to herbicides (Glyphosate)

[BCH-LMO-SCBD-14851-7](#) LIVING MODIFIED ORGANISM | ACS-GHØØ1-3 - LIBERTY LINK™ COTTON |

Resistance to herbicides - Glufosinate

## Characteristics of the modification process

### Vector

pTEM2 and pGSV71

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### Techniques used for the modification

Cross breeding

### Genetic elements construct

[P-h4a748-ARATH](#)  
1.011 kb

[I-H3-ARATH](#)  
0.516 kb

[TP-OPT](#)  
0.372 kb

[CS-epsps-MAIZE](#)  
1.337 kb

[T-H4-ARATH](#)  
0.742 kb

[P-35S-CaMV](#)  
1.384 kb

[CS-bar-STRHY](#)  
0.551 kb

[T-nos-RHIRD](#)  
0.259 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-46333-8](#) 5-ENOLPYRUVYL SHIKIMATE-3-PHOSPHATE SYNTHASE | (MAIZE, CORN) |

Protein coding sequence | Resistance to herbicides (Glyphosate)

[BCH-GENE-SCBD-14972-12](#) PHOSPHINOTHRICIN N-ACETYLTRANSFERASE GENE |

Protein coding sequence | Resistance to herbicides (Glufosinate)

[BCH-GENE-SCBD-104647-3](#) HISTONE H4 GENE PROMOTER | (THALE CRESS) |

Promoter

[BCH-GENE-SCBD-104648-2](#) HISTONE H3 GENE II INTRON 1 | (THALE CRESS) |

Intron

[BCH-GENE-SCBD-101419-4](#) OPTIMIZED TRANSIT PEPTIDE |

Transit signal

[BCH-GENE-SCBD-104646-4](#) HISTONE H4 GENE 3' UTR | (THALE CRESS) |

Terminator

[BCH-GENE-SCBD-100287-7](#) CAMV 35S PROMOTER |

Promoter

[BCH-GENE-SCBD-100269-8](#) NOPALINE SYNTHASE GENE TERMINATOR |

Terminator

Notes regarding the genetic elements present in this LMO

**DNA insert from GHB614 vector pTEM2**

The T-DNA cassette from this LM cotton line contained the 2mepsps coding sequence which confers tolerance to the glyphosate herbicide.

**DNA insert from LLCotton25 vector pGSV71**

The T-DNA cassette from the LLCotton25 line contained the coding sequence for the bar gene which confers tolerance to the glufosinate herbicide.

For additional information on this LMO, please refer to the records of the parental LMO.

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## LMO characteristics

Modified traits

Resistance to herbicides

Glufosinate

Glyphosate

Common use(s) of the LMO

Food

Feed

Fiber/textile

## Detection method(s)

External link(s)

? [BCS-GHØØ2-5 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) ( *English* )

? [ACS-GHØØ1-3 - EU Reference Laboratory for GM Food and Feed \(EURL-GMFF\)](#) ( *English* )

[BCH-LMO-SCBD-101250-8](#)

## 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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