



Lateral Flow Devices for the Detection of GMO

Romer Labs
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Vision

Making the World's Food Safer



Romer Labs

USA/Canada

Latin/Europe/Africa

Asia/Pacific



An International Company



Services & Products

Reference Testing

Rapid Testing

**Reference-
Testing
Service**

**Chromato-
graphy**

**Antibody
Tests**

**Chemical
Tests**





Rapid Tests for Mycotoxins & GMOs

GMO's

LFD

Mycotoxins

LFD

Fluorometry

ELISA

- **Insertion of DNA material**
- Novel traits: **herbicide or insect resistance**
- The big four: **soybeans, corn, cotton and rapeseed**





Terminology

- Example: Roundup Ready®
- **Event name:**
 - unique DNA recombination event
 - one plant cell; generate entire transgenic plants
 - NK603

Roundup Ready is a registered trademark by Monsanto



Terminology

- **Trade name:** Name on market
 - Roundup Ready[®] (Monsanto)
- **Trait:** Novel characteristic
 - Glyphosate Herbicide tolerance
- **Inserted Gene:** gene responsible for novel trait
 - CP4 EPSPS
- **Protein detected:** CP4 EPSPS

Roundup Ready is a registered trademark by Monsanto



agbios :: GM Database

Information on GM Approved Products

HOME ABOUT US ARTICLES BRIEFINGS GM DATABASE NEWS

:: Recent Updates

1. **CS**- Virus resistant Plum
2. **BW7**- Herbicide tolerance Wheat
3. **MON89788**- Herbicide tolerance Soybean
4. **MIR604**- Insect resistance Maize

:: Synopsis

Overview of all products in database

:: Essential Information

- :: Biotech Crop Database
- :: Principles and Practice of Environmental Safety Assessment of Transgenic Plants
- :: The Safety of GM Livestock Feeds
- :: Bibliography Database
- :: Principles and Practice of Novel Food Safety Assessment
- :: The Regulation of Agricultural Products

:: Search the GM Crop Database

Our database of safety information includes not only plants produced using recombinant DNA technologies (e.g., genetically engineered or transgenic plants), but also plants with novel traits that may have been produced using more traditional methods, such as accelerated mutagenesis or plant breeding. These latter plants are only regulated in Canada.

Also, please note that regulatory approval should not be interpreted as an indication that the product is in commercial production. There are many examples of products that were granted regulatory approval but were never commercialized, or if they were, have been subsequently discontinued.

By setting conditions for more than one criterion from the options below, you can construct boolean queries. For example, selecting "maize" as the crop plant and "herbicide tolerance" as the trait will display a listing of herbicide tolerant maize products.

The values in the Event Name selection box, below, correspond to the identifiers commonly used by regulatory authorities and international organizations, such as the Organization for Economic Cooperation and Development (OECD).

:: Select values, then click the Submit button

Event Name	<input type="text" value="NK603"/>	
Crop Plant	<input type="text" value="Maize"/>	
Trait	<input type="text" value="Herbicide tolerance"/>	
Inserted Gene	<input type="text" value="--Any--"/>	
Type of Approval	<input type="text" value="--Any--"/>	
Country	<input type="text" value="--Any--"/>	
Original Developer	<input type="text" value="--Any--"/>	

GMO Compass

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Dec 11, 2007 | 11:44 am

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GMO Compass

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Latest News

▶ **German authority clears MON810**

06 December 2007

▶ **Proof of Golden Rice's efficiency**

30 November 2007

▶ **EFB urges Commissioner Dimas to follow scientific advice**

29 November 2007

▶ **Monitoring for StarLink corn to end**

28 November 2007

▶ **Food surveillance: a quarter of soya products contain traces of GMOs**

19 November 2007

[all messages](#)



Online Discourse Co-existence

What lies in the future for GM crops in Europe?

Take a look at the open discussion carried out with co-operation of experts from the field last autumn.

▶ [More details here](#)



Animation: The Authorisation Process in Motion!

Applying, consulting, and making a decision: The long and winding road to GMO



Stories

▶ **Preliminary studies raise hopes: Golden Rice works well!** Rice naturally contains only a negligible amount of beta-carotene, vitamin A deficiency is



GMO and trade

- 90% of soybean, 80% of maize, 70% of oilseed rape
- Most soybeans and its main derivatives used in the EU are coming from imports

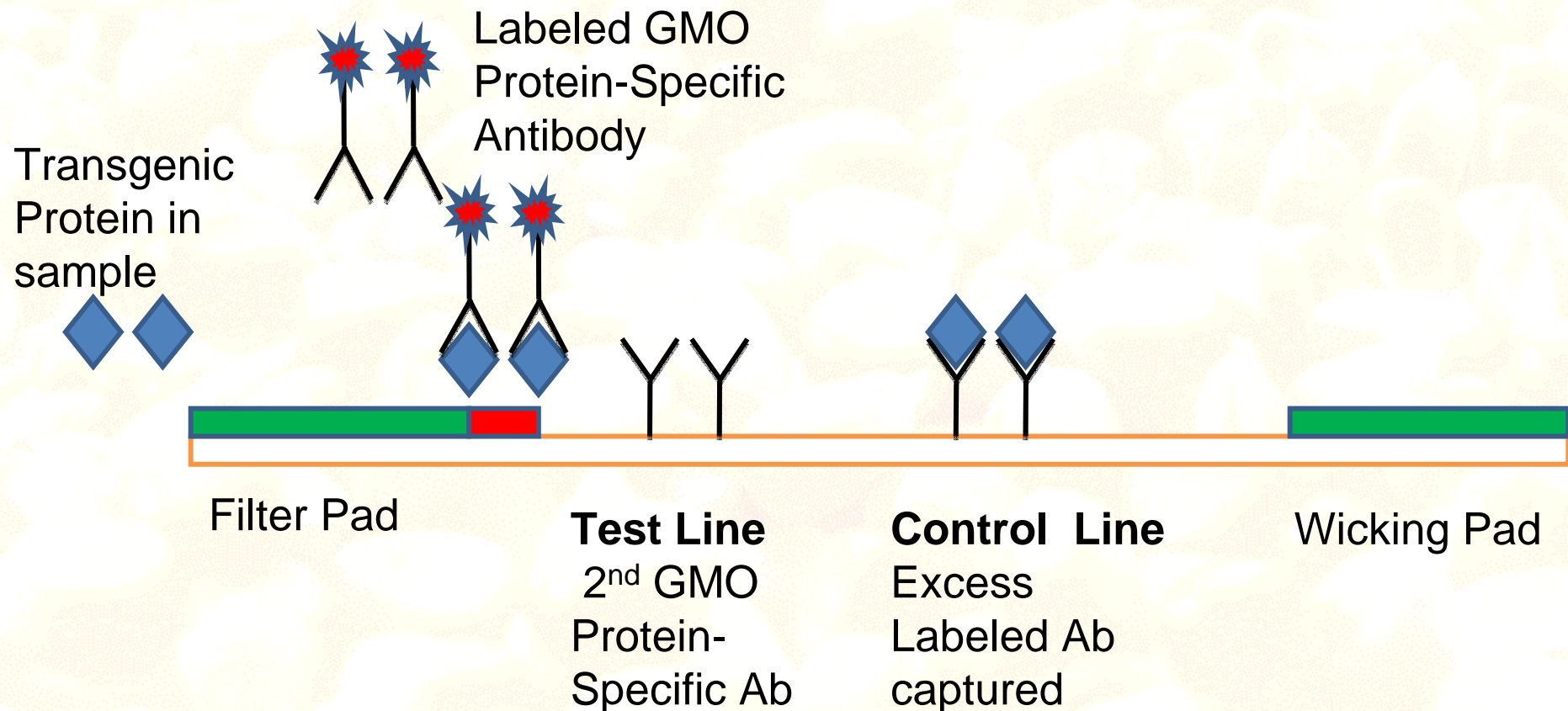




Non-GMO

**EU production
is largely
non-GMO**

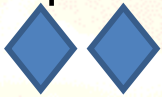
LFD principle





Positive Test Result

Transgenic Protein in sample



Filter Pad

Test Line
2nd GMO
Protein-
Specific Ab

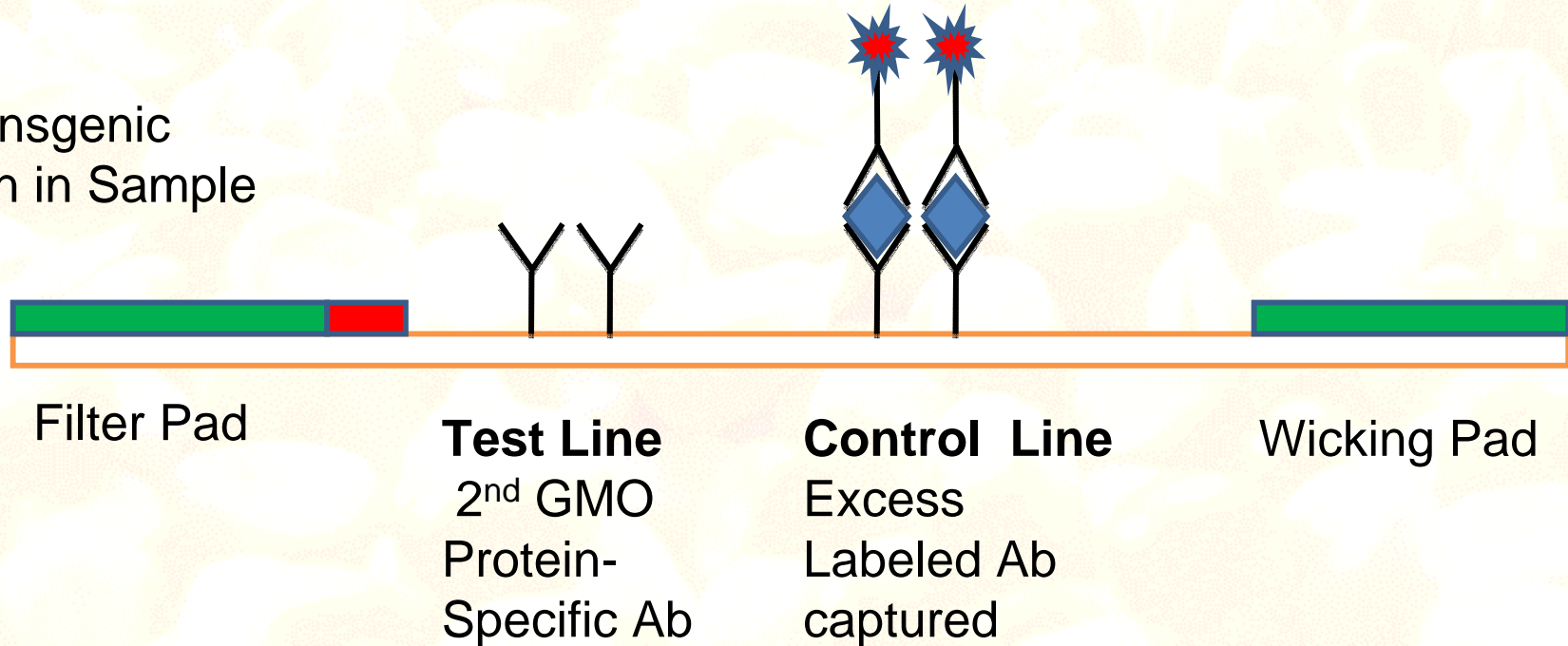
Control Line
Excess
Labeled Ab
captured

Wicking Pad



Negative Test Result

No transgenic
Protein in Sample





Limit of Detection

**1 transgenic
seed in 10000
seeds**



AgraStrip® GMO Lateral Flow Devices

	Item No.	Protein Detected	Limit of Detection
AgraStrip® <i>GMO RR</i>	COKAS7010	CP4 EPSPS	1 in 1000 seeds
AgraStrip® <i>GMO ST</i>	COKAS7110	Bt-Cry9C	1 in 1000 seeds
AgraStrip® <i>GMO YG RW</i>	COKAS7210	Bt-Cry 3Bb1	1 in 250 seeds
AgraStrip® <i>GMO YG</i>	COKAS7310	Bt-Cry1Ab/1Ac	1 in 100 seeds
AgraStrip® <i>GMO HX</i>	COKAS7410	Bt-Cry1F	1 in 100 seeds
AgraStrip® <i>GMO YG+</i>	COKAS7510	Bt-Cry3Bb1 and Bt-Cry1Ab	1 in 100 seeds
AgraStrip® <i>GMO HX RW</i>	COAXS7610	Bt-Cry34Ab1	1 in 1000 seeds
AgraStrip® <i>GMO MR</i>	COKAS8010	mBt-Cry3A	1 in 100 seeds



AgraStrip® GMO Lateral Flow Devices

- Easy to use
- Very rapid: 5 min
- Available in kit format
- Stable
- Cost-Effective
- Sensitive
- Reproducible





Conclusion

AgraStrip® GMO Lateral Flow Devices

A rapid, cost-effective and easy testing solution for GMO