



## Maize GMO Standards

**NK603, GA21 and CBH-3511 Starlink®** ..... The use of genetically modified organisms (GMO) is still a widely debated topic in Europe. Consumers in the European Union are wary of GMOs and indeed many retailers avoid stocking foods containing them.

However, in order to measure the presence or absence of GMOs a suitable standard is required. Fluka is now presenting a new range of GMO Maize Standards, extracted from actual plant material. It is now easier to obtain positive controls for NK603, GA21 and CBH-3511 Starlink maize varieties.

## Introduction

The use of genetically modified organisms (GMO) is still a widely debated topic in Europe. Consumers in the European Union are wary of GMOs and indeed many retailers avoid stocking foods containing them.

In April 2004 the legislation regarding the labelling of genetically modified foods and feed products changed. This new legislation requires that even highly modified foods such as lecithin, starch and oil, as well as feed products containing GMOs are labelled clearly as such.

Maize is now, therefore, subject to the new labelling legislation, requiring more stringent control and labelling than was previously required.

However, in order to measure the presence or absence of GMOs a suitable standard is required, which has historically been difficult to source.

This new range of GMO Maize Standards from Sigma-Aldrich's Fluka brand, contains some varieties that are not approved in the European Union and many other countries worldwide. It is now easier to obtain positive controls for three different GMO maize varieties.

## Description

These GMO standards NK603, GA21 and CBH-3511 Starlink® maize DNA, extracted from actual plant material. Total maize DNA is comprised of approximately 1% of GMO DNA. This GMO DNA was extracted as described in the official protocols (1) and tested in several validation studies (2-4). The extracted DNA was quantified and diluted to form a 1% solution, which was then aliquoted and lyophilised, enabling a longer storage period.

### Cat. No. 69407 Maize GMO Genomic DNA Standard

1 Set containing Maize NK603, GA21 and CBH-3511 Starlink®

## Ordering Information

Contact your local office for pricing and ordering information.  
For online ordering, please visit [www.sigma-aldrich.com/order](http://www.sigma-aldrich.com/order)

## Do you want to know more about the Sigma-Aldrich products for Plant Biotechnology?

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## There are numerous benefits to be gained from the use of these standards:

- The process of DNA extraction for use as a positive control can be avoided, thereby eliminating the need for time-consuming manual extraction procedures.
- Since the DNA is extracted from plant material, the application of these standards is no longer limited to a certain sequence information or protocol. Therefore, it is possible to use them with all DNA-based methods and even with your own optimized protocols
- The world wide availability of GMO standards having the same characteristics and composition can ensure the standardization of measurements and procedures, therefore allowing comparison of results obtained in different facilities.

## Use

The new GMO standards are used solely as *qualitative standards*. The DNA is lyophilised and can be used as a positive control after resolution. The native maize content of the samples is approximately 100 times higher than GMO maize.

## References

- (1) SLMB2001: Swiss Food Manual (SLMB 2001) Eidgenössische Drucksachen und Materialzentrale CH-3003 Bern, Switzerland (2001)
- (2) U. Pauli, B. Schouwey, P. Hübner, P. Brodmann, A. Eugster. Quantitative Detection of Genetically Modified Soybean and Maize: Method Evaluation in a Swiss Ring Trial. Mitt. Gebiete Lebensm. Hyg. 92, 145-158 (2001)
- (3) M. Lipp, A. Bluth, F. Eyquem, L. Kruse, H. Schimmel, G. Van den Eede, E. Anklam. Validation of a method based on polymerase chain reaction for the detection of genetically modified organisms in various processed foodstuffs. Eur Food Res Technol 212, 497-504 (2001)
- (4) H. Hird, J. Powell, M.-L. Johnson, S. Oehlschläge.: Determination of Percentage of RoundUp Ready Soya in Soya Flour Using Real-Time Polymerase Chain Reaction: Interlaboratory Study. Journal of AOAC International 86, 66-71 (2003)

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