



## foodproof<sup>®</sup> GMO Screening LyoKits

Worldwide cultivation of genetically modified organisms (GMO) is constantly rising. Transgenic crops are grown on more than 190 million hectares in countries such as the USA, Brazil, Argentina, India and Canada. Many countries have implemented legislation for the use, cultivation and labeling of GMOs, including the European Union (EU). According to EU law, foods, feed and additives with more than 0.9% relative amount of GMO must be labeled. Similar standards are defined in the USA, with a guidance on testing methods based on international ISO standards. Thus, reliable methods for GMO screening, identification and quantification are required.

The **foodproof GMO Screening LyoKits** are based on real-time PCR technology, which is the gold-standard for the detection of GMOs. The multiplex assays are developed for the detection of genetically modified plants in food and animal feed. The methods comply with ISO standards and the German Food and Commodities Act (LFGB) §64 for the detection of genetically modified DNA sequences.

The **foodproof GMO Soya and Maize Identification LyoKits** detect and identify modified plants, which are not covered by screening, and therefore provide a complete analysis of the sample on soya and maize events authorized in the EU.

**Fast:** 3 h to result with < 60 min of hands-on time.

**Safe:** Prevention of carry-over contamination using Uracil-N-Glycosylase. Internal amplification control as inhibition control included.

**Sensitive:** LyoKits Limit of Detection (LOD) is 0.01% relative GMO content or 1 target copy/ $\mu$ L.

**Complete:** 8 screening targets for minimum effort and maximum coverage.

**Convenient:** Easy pipetting, low risk of contaminations, easy storage, higher sensitivity.

**Validated:** The assays comply with ISO 21569 and see the German Food Law § 64 LFGB.

### Best Specificity

**100% Inclusivity/Exclusivity**  
Validated with reference material  
Detection of > 95% of all approved genetically modified plants.

### Matrices

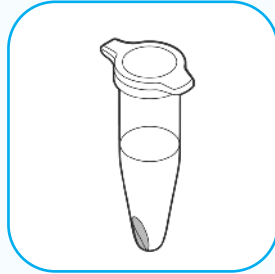
#### For food and feed products

Compatible with all relevant food matrices such as tofu, fruit yogurt, rice waffle, fat, vegetable burger, soya drink, flour, cracker, salt sticks and barbecue sauce.

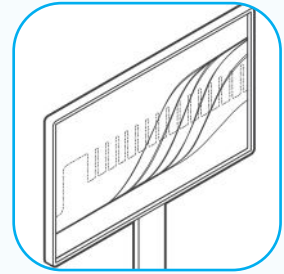
## Workflow



**Sample Homogenization**  
0.2, 1.0 or 2.0 g



**DNA Extraction**  
Duration depending on protocol and number of samples



**Real-Time PCR**  
120 min

## DNA Extraction Kits

### Manual

**foodproof** Sample Preparation Kit III  
KIT 2301 74

### Automated

**foodproof** Magnetic Preparation Kit III  
KIT 2301 82

## Real-Time PCR Kits

**foodproof** GMO Screening 1 LyoKit

Targets: 35S, NOS, FMV  
KIT 2300 84 (LP), KIT 2300 85 (RP)

**foodproof** GMO Screening 2 LyoKit

Targets: bar, P-35S-pat, CTP2-CP4-EPSPS, P-NOS-nptII, P-35S-nptII  
KIT 2300 86 (LP), KIT 2300 87 (RP)

**foodproof** Plant Detection LyoKit

DNA quality and process control: detection of plant DNA  
KIT 2300 90 (LP), KIT 2300 91 (RP)

**foodproof** Plant Taxon Screening LyoKit

Detection of soya, maize and rapeseed  
KIT 2300 30 (LP), KIT 2300 31 (RP)

**foodproof** GMO Screening Kit

Targets: 35S, NOS, bar, FMV; with process control (plant DNA detection)  
KIT 2300 45

**foodproof** GMO Soya Identification 1 LyoKit

Targets: DAS-44406-6, MON87701, MON87708, MON87769  
KIT 2300 95 (LP), KIT 2300 96 (RP)

**foodproof** GMO Soya Identification 2 LyoKit

Targets: BPS-CV127-9, DP-305423-1, DAS-68416-4, and DAS-81419-2  
KIT 2300 97 (LP), KIT 2300 98 (RP)

**foodproof** GMO Maize Identification 1 LyoKit

Targets: DAS-40278-9, LY038 and VCO-01981-5  
KIT 2300 22 (LP), KIT 2300 23 (RP)

## Tests

50

480

## Tests

96

96

96

96

2 x 64

96

96

96

## LyoKits

### Fast & Convenient

Lyophilized, prefilled reaction mix reduces hands-on time and minimizes contamination risks.

### Easy Storage & Safe Transportation

Ships at room temperature, store at 2 °C to 8 °C .

## Instrument Compatibility

### Different Profile (DP):

e.g., Dualo 32® R<sup>2</sup>

### Low Profile (LP):

e.g., LightCycler® 480, LightCycler® 96, AriaMx, Bio-Rad CFX96™, Applied Biosystems™ 7500 Fast, QuantStudio™

### Regular Profile (RP):

e.g., Mx3005P

Other cyclers on request.

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