foodproof®

GMO Screening Kit (35S, NOS, bar, FMV)
Ready Reference Guide

Revision A, December 2023

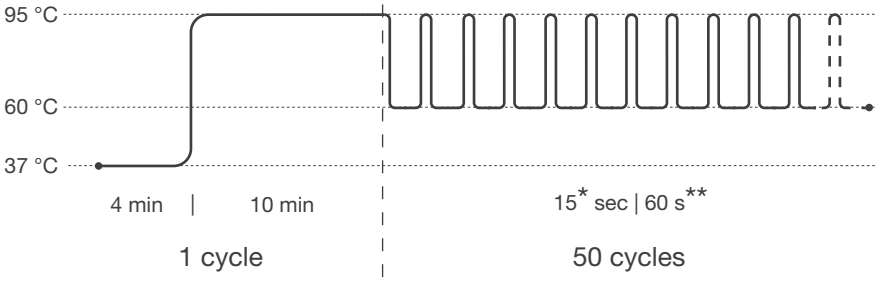
Product No. KIT230045

PCR kit for the qualitative detection of genetically modified plants using real-time PCR instruments.
Before starting, it is strongly recommended to read the entire product manual available on our website.

PROGRAM SETUP

Program your real-time PCR instrument before setting up the PCR reactions. Select the following channels:

- FAM (P-35S / Plant), HEX (T-NOS / Internal Control), ROX (bar) and Cy5 (P-FMV).



Pre-incubation: 1 cycle
Step 1: 37 °C for 4 min
Step 2: 95 °C for 10 min
Amplification: 50 cycles
Step 1 : 95 °C for 15* s
Step 2**: 60 °C for 60 s

* Use 5 s for LightCycler® 480

** Fluorescence detection

For some real-time PCR instruments the probe quencher as well as the use of a passive reference dye must be specified. This kit contains probes with a non-fluorescent "dark" quencher and no passive reference dye.
A Color Compensation is necessary for users of the LightCycler® 480 System: Color Compensation Set 3 (Product No. KIT230005).

DATA INTERPRETATION

Verify results of positive (Control Template) and negative (H_2O) controls, before interpreting the sample results. Always compare samples to positive and negative controls. Review data from each channel and interpret results as described in the table.

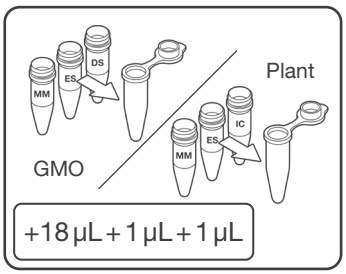
	FAM	HEX	ROX	Cy5	HEX (Plant Mix)	Result Interpretation
GMO Mix	+	-	-	-	+ or -	Positive for P-35S
	-	+	-	-	+ or -	Positive for T-NOS
	-	-	+	-	+ or -	Positive for bar
	-	-	-	+	+ or -	Positive for P-FMV
	-	-	-	-	-***	Invalid
	-	-	-	-	+***	Negative for GMO

*** The result for the Internal Control can also be negative in case of a positive signal for amplification of plant DNA.

	FAM	HEX	Result Interpretation
Plant Mix	+	+ or -	Positive for Plant
	-	+	Negative for Plant
	-	-	Invalid

PREPARATION OF THE PCR MIX

Take appropriate precautions to prevent contamination, e.g., by using filter tips and wearing gloves.
Thaw reagents, mix (do not vortex!) and briefly spin vials before opening.



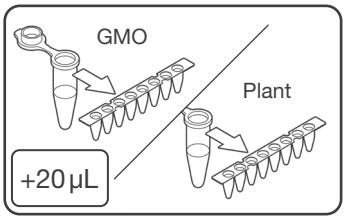
1. PREPARE PCR MIXES

GMO PCR mix: Add 18 µL of Master Mix (yellow cap), 1 µL of Enzyme Solution (red cap) and 1 µL of Dye Solution (black cap) for each reaction to a suitable tube.

Plant PCR mix: Add 18 µL of Master Mix (green cap), 1 µL of Enzyme Solution (red cap) and 1 µL of Internal Control (white cap) for each reaction to a suitable tube.

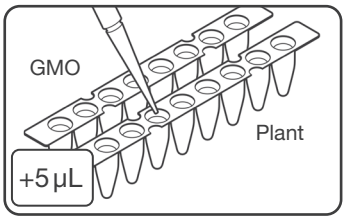
(n samples + 2 controls + at least one additional reaction to cover pipetting loss).

Mix carefully but thoroughly by pipetting up and down.



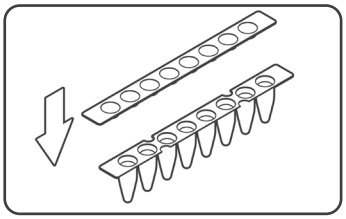
2. ADD PCR MIX

Pipet 20 µL of prepared GMO and Plant PCR mix into respective strip or plate well.



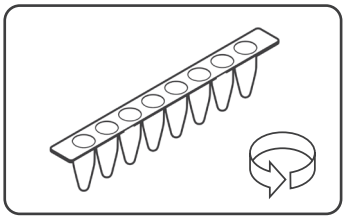
3. ADD SAMPLES AND CONTROLS

To each PCR mix (GMO and Plant), pipet 5 µL of samples, Negative Control (colorless cap) or Control Template (purple cap) into respective wells.



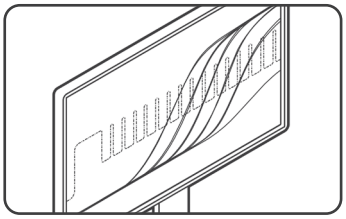
4. SEAL

Seal strips/plate accurately.



5. CENTRIFUGE

Briefly spin strips/plate in a suitable centrifuge.



6. START REAL-TIME PCR RUN

Cycle samples as described above.

foodproof®
GMO Screening Kit

KIT230045
Kit for 2 x 64 reactions
Store kit at -25 to -15 °C

For food testing purposes
FOR IN VITRO USE ONLY
Made in Germany

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Hygiena® | Camarillo, CA 93012 USA | diagnostics.support@hygiena.com | www.hygiena.com