



hygiena GA21 GMO Maize Multiplex Detection Kit User Guide

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hygiena GA21 GMO Maize Multiplex Detection Kit



Product Information

Specifications

- Product Name: GMO Maize Multiplex Detection Kit (GA21, MIR604)
- Product Number: KIT230217
- Revision: A
- Release Date: December 2023
- PCR Kit for qualitative detection of GA21 and MIR604 DNA using real-time PCR instruments
- For in vitro use only
- Intended for food testing purposes
- Kit contains materials for 50 reactions

Product Usage Instructions

Program Setup

Before setting up the PCR reactions, program your real-time PCR instrument with the following settings:

- Channels: FAM (GA21), VIC/HEX (MIR604), and Cy5 (Internal Control)
- Program: 2 minutes at 10°C, followed by 10 minutes at 60°C for 1 cycle
- Fluorescence detection: 15 seconds at 60°C for 40 cycles

Note: Some real-time PCR instruments may require specifying the probe quencher and the usage of a passive reference dye. This kit contains probes with a non-fluorescent dark quencher and no passive reference dye.

Data Interpretation

To interpret the results, follow these steps:

1. Verify results of positive (Control Template) and negative controls (H₂O)

2. Always compare samples to positive and negative controls
3. Review data from each channel
4. Interpret results as described in the table:

Channel	GA21	MIR604
FAM	+	–
VIC/HEX	+	–
Cy5	+ or + or +	–
Result Interpretation	Positive for GA21 and MIR604	Positive for MIR604
	Negative for GA21 and MIR604	Invalid

Preparation of the PCR Mix

Follow these steps to prepare the PCR mix:

1. Take appropriate precautions to prevent contamination, such as using filter tips and wearing gloves.
2. Thaw reagents, mix (do not vortex!), and briefly spin vials before opening.
3. Prepare PCR mix for each reaction in a suitable tube. The number of reactions should include samples, controls, and at least one additional reaction to cover pipetting loss.
4. Mix the PCR mix carefully but thoroughly by pipetting up and down.
5. Add the PCR mix to the designated wells or tubes.
6. Add samples and controls to the appropriate wells or tubes.
7. Carefully seal the strips or plate.
8. Briefly spin the strips or plate in a suitable centrifuge.
9. Start the real-time PCR run following the cycle described in the program setup section.

FAQ (Frequently Asked Questions)

- **Q: What is the purpose of this kit?**

A: This kit is designed for the qualitative detection of GA21 and MIR604 DNA in food samples using real-time PCR instruments.

- **Q: How many reactions does the kit provide?**

A: The kit contains materials for 50 reactions.

- **Q: Can I use this kit for any other purposes?**

A: No, this kit is intended for in vitro use only and specifically for food testing purposes.

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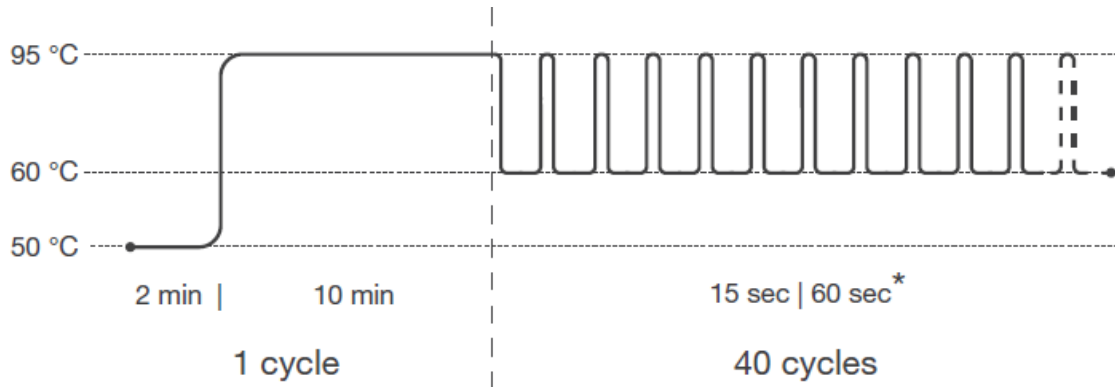
- GMO Maize Multiplex Detection Kit (GA21, MIR604)
- Ready Reference Guide

Revision A, December 2023

- Product No. KIT230217
- PCR kit for the qualitative detection of GA21 and MIR604 DNA 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 (GA21), VIC/HEX (MIR604) and Cy5 (Internal Control).



- **Pre-incubation: 1 cycle**
 - Step 1: 50 °C for 2 min
 - Step 2: 95 °C for 10 min
 - **Amplification: 40 cycles**
 - Step 1 : 95 °C for 15 sec
 - Step 2*: 60 °C for 60 sec
- * **Fluorescence detection**

For some real-time PCR instruments, the probe quencher as well as the usage of a passive reference dye has to be specified. This kit contains probes with a non-fluorescent “dark” quencher and no passive reference dye.

DATA INTERPRETATION

Verify results of positive (Control Template) and negative controls (H₂O), before interpreting sample results. Always compare samples to positive and negative control. Review data from each channel and interpret results as described in the table.

FAM	VIC/HEX	Cy5	Result Interpretation
+	+	+ or –	Positive for GA21 and MIR604
–	+	+ or –	Positive for MIR604
+	–	+ or –	Positive for GA21
–	–	+	Negative for GA21 and MIR604
–	–	–	Invalid

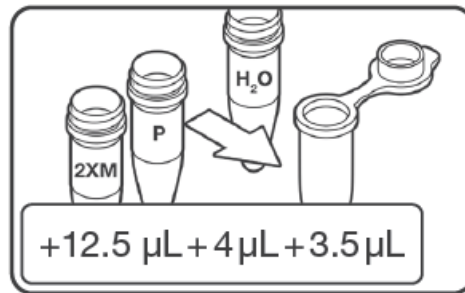
PREPARATION OF THE PCR MIX

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 MIX

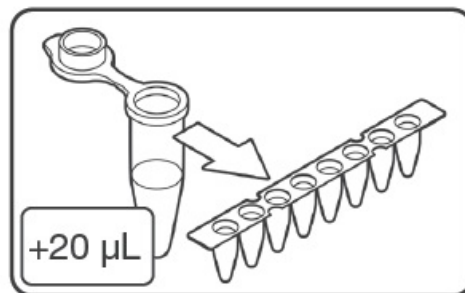
Add 12.5 μL Master Mix (2XM),
4.0 μL Primer/Probe Mix (P) and
3.5 μL PCR-grade H_2O (not included) } for each reaction to
a suitable tube.

(n samples + 2 controls + at least one additional reaction to cover pipetting loss). Mix carefully but thoroughly by pipetting up and down.



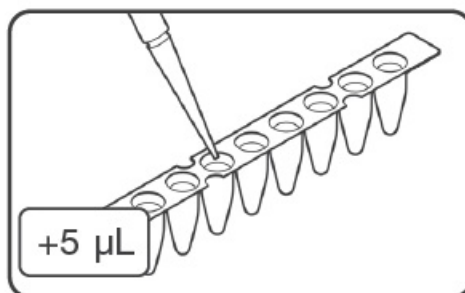
2. ADD PCR MIX

Pipette 20 μL of prepared PCR mix into each strip or plate well.



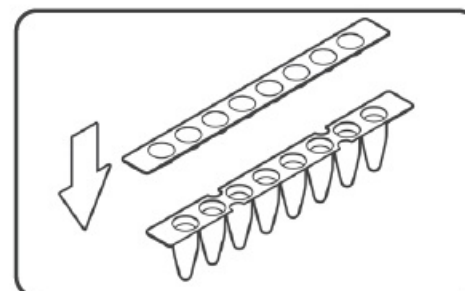
3. ADD SAMPLES AND CONTROLS

Pipette 5 μL of samples, negative control (PCR-grade H_2O) or Control Template (C) into respective wells.



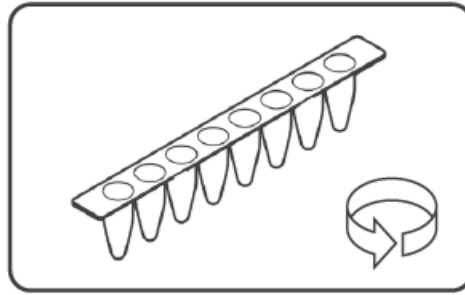
4. SEAL

Carefully seal strips/plate.



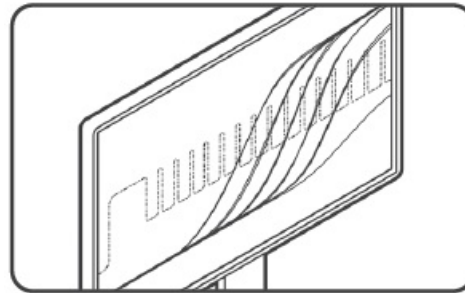
5. CENTRIFUGE

Briefly spin strips/plate in a suitable centrifuge.



6. START REAL-TIME PCR RUN

Cycle samples as described above.

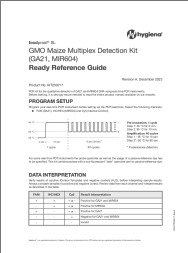


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- SL GMO Maize Multiplex Detection Kit (GA21, MIR604)
- KIT230217
- Kit for 50 reactions Store kit at -15 to -25 °C
- For food testing purposes FOR IN VITRO USE ONLY

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Documents / Resources

	<p>hygiena GA21 GMO Maize Multiplex Detection Kit [pdf] User Guide GA21, GA21 GMO Maize Multiplex Detection Kit, GMO Maize Multiplex Detection Kit, Maize Multiplex Detection Kit, Multiplex Detection Kit, Detection Kit, Kit</p>
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References

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- [User Manual](#)

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