



hygiena MON88017 GMO Maize Multiplex Detection Kit User Guide

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hygiena MON88017 GMO Maize Multiplex Detection Kit



GMO Maize Multiplex Detection Kit

Specifications

- Product Name: GMO Maize Multiplex Detection Kit
- Product Number: KIT230219
- Revision: A
- Release Date: December 2023
- PCR Kit for the qualitative detection of MON88017, NK603, and MIR162 DNA
- For use with real-time PCR instruments
- Kit Size: 50 reactions
- Intended Use: Food testing purposes, for in vitro use only

Program Setup

Before setting up the PCR reactions, program your real-time PCR instrument as follows:

- Select the following channels: u FAM (MON88017), VIC/HEX (NK603), ROX (MIR162), and Cy5 (Internal Control)
- **Set the cycling parameters as follows:**
 - 2 minutes at 10°C
 - 10 minutes at 60°C
 - 1 cycle of 15 seconds at 95°C and 60 seconds at 60°C
 - 40 cycles of 15 seconds at 95°C and 60 seconds at 60°C (Fluorescence detection)
- **Note:** For some real-time PCR instruments, you may need to specify the probe quencher and use of a passive reference dye. This kit contains probes with a non-fluorescent dark quencher and no passive reference dye.

Data Interpretation

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

Channel	Result Interpretation
FAM	Positive for MON88017, NK603, and MIR162
VIC/HEX	Positive for NK603 and MIR162
ROX	Positive for MON88017 and MIR162
Cy5	Positive for MON88017 and NK603
VIC/HEX	Positive for NK603
FAM	Positive for MON88017
ROX	Positive for MIR162
Cy5	Negative for MON88017, NK603, and MIR162
All Channels	Invalid

Preparation of the PCR Mix

Before starting, take appropriate precautions to prevent contamination, such as using filter tips and wearing gloves. Follow the steps below to prepare the PCR mix:

1. Thaw the reagents and briefly spin the vials before opening (do not vortex!)
2. Prepare the PCR mix for each reaction in a suitable tube
 - The number of reactions should be equal to the number of samples plus 2 controls, plus at least one additional reaction to cover pipetting loss
3. Mix the PCR mix carefully but thoroughly by pipetting up and down
4. Add the PCR mix to each reaction
5. Add the samples and controls to the respective wells
6. Carefully seal the strips/plate
7. Briefly spin the strips/plate in a suitable centrifuge
8. Start the real-time PCR run using the cycling parameters mentioned in the program setup section

FAQ (Frequently Asked Questions)

- **Q: Can this kit be used for human DNA testing?**

A: No, this kit is specifically designed for the qualitative detection of MON88017, NK603, and MIR162 DNA in maize samples for food testing purposes. It is not intended for human DNA testing.

- **Q: Can I use this kit with any real-time PCR instrument?**

A: The kit is compatible with most real-time PCR instruments. However, for some instruments, you may need to specify the probe quencher and use of a passive reference dye. Please refer to your instrument's manual or contact our customer support for compatibility information.

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GMO Maize Multiplex Detection Kit (MON88017, NK603, MIR162)

Ready Reference Guide

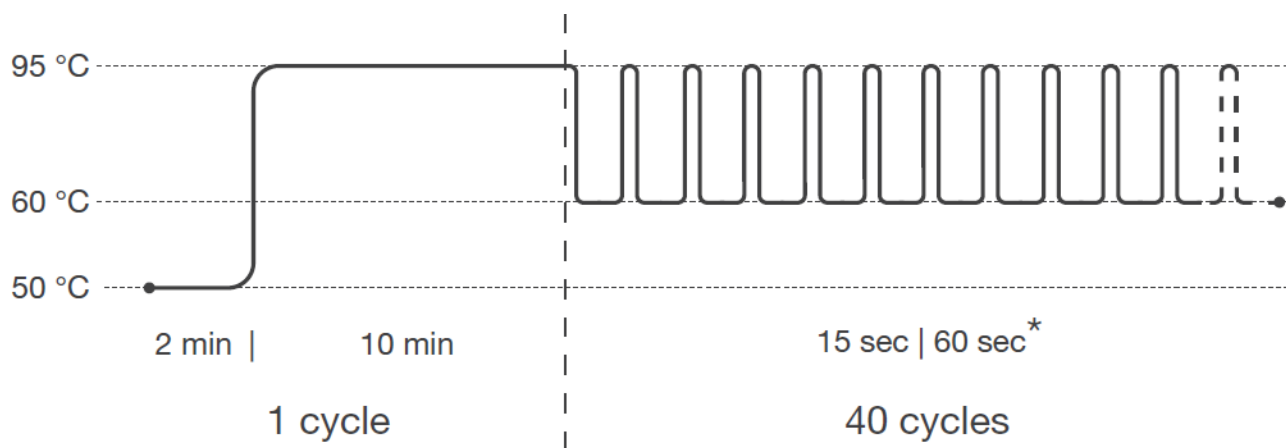
Revision A, December 2023

Product No. KIT230219

PCR kit for the qualitative detection of MON88017, NK603 and MIR162 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 (MON88017), VIC/HEX (NK603), ROX (MIR162) 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 use of a passive reference dye must 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 (H₂O) 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	VIC/HEX	ROX	Cy5	Result Interpretation
+	+	+	+ or –	Positive for MON88017, NK603 and MIR162
–	+	+	+ or –	Positive for NK603 and MIR162
+	–	+	+ or –	Positive for MON88017 and MIR162
+	+	–	+ or –	Positive for MON88017 and NK603
–	+	–	+ or –	Positive for NK603
+	–	–	+ or –	Positive for MON88017
–	–	+	+ or –	Positive for MIR162
–	–	–	+	Negative for MON88017, NK603 and MIR162
–	–	–	–	Invalid

PREPARATION OF THE PCR MIX

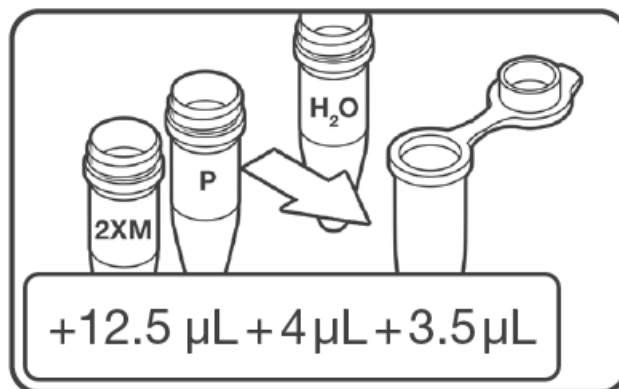
Take appropriate precautions to prevent contamination, e.g., by using filter tips and wearing gloves. Thaw

reagents, mix (do not vortex!) and briefly spin vials before opening.

1. PREPARE PCR MIX

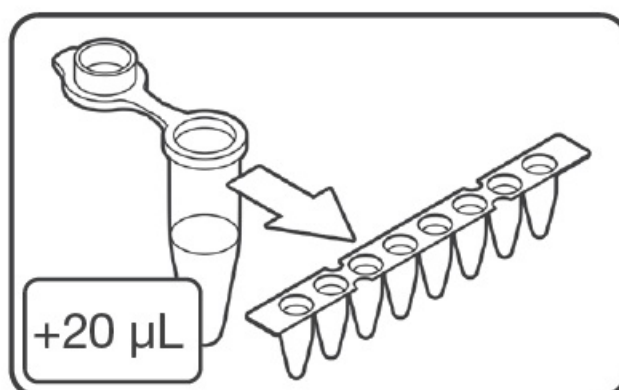
Add 12.5 μL Master Mix (2XM),
4.0 μL Primer/Probe Mix (P) and
3.5 μL PCR-grade H_2O (not included) } for each reaction to
a suitable tube.

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



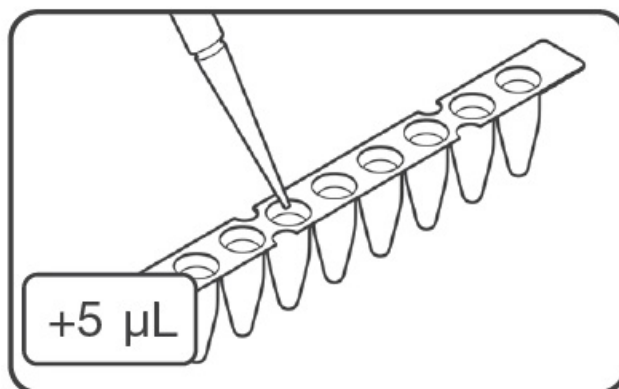
2. ADD PCR MIX

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



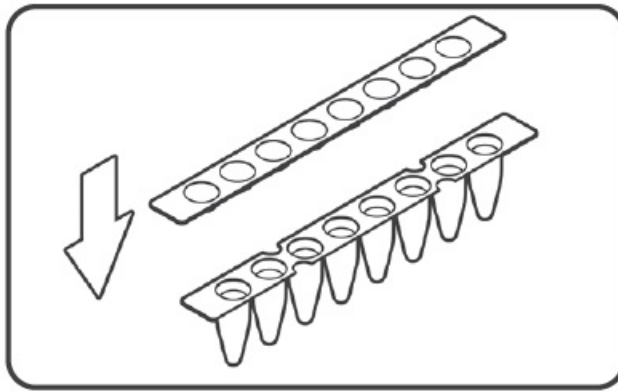
3. ADD SAMPLES AND CONTROLS

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



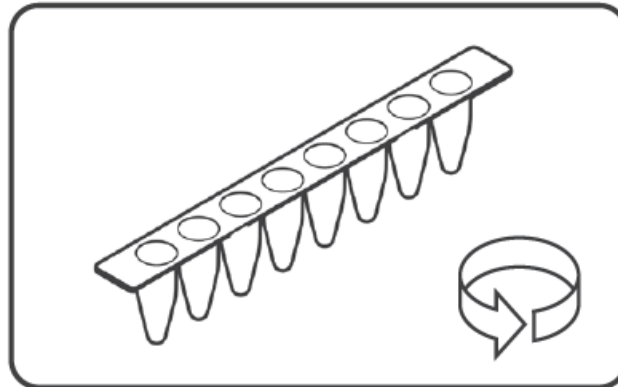
4. SEAL

Carefully seal strips/plate.



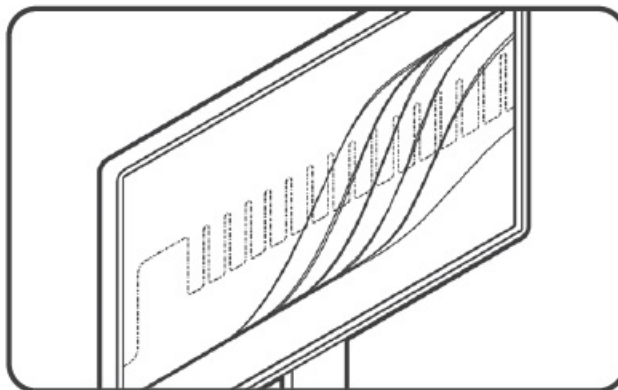
5. CENTRIFUGE

Briefly spin strips/plate in a suitable centrifuge.



6. START REAL-TIME PCR RUN

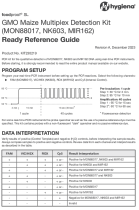
Cycle samples as described above.



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- Maize Multiplex Detection Kit (MON88017, NK603, MIR162)
- KIT230219
- Kit for 50 reactions Store kit at -15 to -25 °C
- For food testing purposes
- FOR IN VITRO USE ONLY

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KIT230219, MON88017, MON88017 GMO Maize Multiplex Detection Kit, GMO Maize Multiplex
Detection Kit, Maize Multiplex Detection Kit, Multiplex Detection Kit, Detection Kit, Kit

References

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