Aspergillus PCR Detection Kit

Cat. No. *FPD-038*

Lot. No. (See product label)

Product Name

Aspergillus PCR Detection Kit

Product Overview

Aspergillus PCR Detection kit is designed to detect *Aspergillus flavus*, *fumigatus*, *niger*, and *terreus* in cannabis and cannabis-infused products.

Description

The *Aspergillus* kit is a multiplex test based on gene amplification and detection by real-time PCR. Ready-to-use PCR reagents contain oligonucleotides (primers and probes) specific for A. *flavus*, A. *fumigatus*, A. *niger*, and A. *terreus*, as well as DNA polymerase and nucleotides.

Species

Aspergillus

Applications

Food safety

Warning

This test must be performed by trained personnel.
Samples and enrichment cultures must be handled as potentially infectious material and discarded according to local rules and regulations.
All potentially infectious material should be autoclaved before disposal.

Size

96 tests

Kit Components

Lysis reagent 20 mL
Fluorescent probes 0.55 mL
Amplification mix 4.4 mL
PCR negative control 0.5 mL
PCR positive control0.25 mL
Lysis beads 17.6 g

Materials Required but Not Supplied

A. Equipment
Lab paddle blender for homogenizing test samples
Incubator for sample microbiological enrichment
Specific for extraction in sterile 1.5 mL conical screwcap tubes
-Benchtop centrifuge capable of 10,000-12,000 × g
-Dry heat block at 37 ± 2℃ and 95-100℃
-Cell disruptor, for example Disruptor Genie
Specific for extraction in deep well plate
-Heating thermoshaker capable of maintaining 37 ± 2℃ and 95-100℃, with a mixing speed of at least 1,300 rpm
-DW 40 Deepwell Microplate Washer
-Benchtop centrifuge with deep well rotor (capable of 2,250 × g)
Vortexer
Magnetic stir plate
20, 200, and 1,000 µL micropipets
Tips for repeat pipettors; sterile, individually packaged
B. Supplies
Enrichment medium

FOR RESEARCH OR FURTHER MANUFACTURING USE ONLY

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Chloramphenicol
Free DNA Removal Solution
Purification Reagent
Ethanol,96%
Filter sample bags
Powder-free gloves
Distilled sterile wate
Bleach, 5%

Technical Notes

The *Aspergillus* Kit is a multiplex test based on gene amplification and detection by real-time PCR.

Assay Protocol

A. Sample Enrichment
1. Homogenize n g of sample in 9 × n mL prewarmed BPW supplemented with 0.3 g/L chloramphenicol (for example, 10 g in 90 mL) in a stomacher bag with incorporated filter.
2. Incubate for 45-51 h at 37 ± 1℃.
B. Free DNA Removal Treatment
1. Dispense 100 µL activated FDRS and 1 mL of incubated sample to a 1.5 mL microcentrifuge tube or deep well plate.
2. Incubate for 15-30 min at 37 ± 2℃ without agitation.
3. Proceed to DNA Extraction. Be sure that the thermoshaker or heat block has reached 95-100℃ to properly inactivate the Free DNA Removal Reagent.
C. DNA Extraction
1. Turn on the heat block or thermoshaker to preheat before starting the test. Set it to 95-100℃. Keep the lysis reagent in suspension while pipetting by stirring at medium speed on a magnetic stir plate.
2. Open tubes and wells carefully to avoid any possible cross contamination.
3. Cool the deep well plate before pipetting directly through pre-pierced sealing film.
4. Gently shake the lysis reagent by hand first to resuspend the resin. Then pipet while it is stirring at medium speed with the magnetic bar contained in the bottle, in order to keep it in suspension.
5. Reconstitute the final lysis reagent as follows:
 a. Carefully pour all the contents from reagent F (lysis beads) into reagent A (lysis reagent).
 b. Use consumables with a wide enough tip to allow pipetting of the homogenized lysis reagent.
 c. The lysis reagent mixed with lysis beads (reagents A + F) has a shelf life of 6 months when stored at 4℃.
D. Real-Time PCR
1. Instrument and software setup.
2. PCR mix preparation.
3. Run PCR.
e. Data Analysis

Sample Type

Cannabis and cannabis-infused products

Format

ready-to-use

Max no. of Samples

94

Storage

This product should be stored at 2-8℃. Reagents stored at this temperature can be used until the expiration date indicated on the tubes.

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