

Catalog Number	Kit Size
TBS42026-100	100 assays
TBS42026-200	200 assays

DESCRIPTION

The O157H7 E. coli qPCR Kit has been designed to identify the O157H7E. coli strain in a single PCR reaction using real-time quantitative polymerase chain reaction (qPCR) and probe fluorescence labels. The detection of the target DNA confirms ingredient authenticity and prevents food fraud, ethical issues, or health concerns.

PRINCIPLE

Authenticating ingredients utilizes real-time PCR which is based on the amplification of a specific region of the relevant target genome. The amplified product is detected using target-specific fluorescent probes that bind to the amplified product. As the PCR product accumulates, there is an increased fluorescent signal from the bound probes. Monitoring the fluorescence intensities during the PCR run allows the detection of the accumulating PCR product in real time.

The O157H7 E. coli qPCR Kit include aspergillus target positive and negative controls, PCR internal controls labeled with Hex, a qPCR super mix, and the primer-probe mix in which the probe is labeled with Cy5 for O157H7 species. These aids in the straightforward interpretation of the results.

KEY FEATURES

- ❖ High sensitivity and specificity for O157H7 E. coli detection.
- ❖ High efficiency: the optimal systemic conditions for PCR amplifications.
- ❖ Streamlined protocol: Just add DNA Template and water.
- ❖ No cross reactivity with other species.

APPLICATIONS

Detect O157H7 target DNA in plant, cannabis, cannabis ingredients, grain, food, herbals, and animal feed.

KIT CONTENTS

Name	100x rxn	200x rxn
qPCR Super Mix	0.8mL	1.6mL
Primer-probe Mix	0.6mL	1.2mL
Positive Control DNA	60µL	100µL
Negative Control DNA	60µL	100µL

The O157H7 probe is labeled with **Cy5**, and PCR internal control is labeled with **Hex**.

STORAGE CONDITION

The kit is shipped on ice and stored at -20°C for long-term storage. Shelf life of 12 months after receipt.

PCR PROTOCOL

1. Set up PCR reaction for each sample in 20µL

Reaction Component	Volume (µL)
qPCR Super Mix	7.0
Primer-probe Mix	5.0
Nuclease-free Water	3.0
DNA sample	5.0
Final Volume	20µL

Internal control should be included as below: Positive Control (5µL DNA /reaction) Negative Control (5µL DNA/reaction)

2. Suggested PCR conditions

Step	Amplification HOLD	PCR	
		CYCLE (40x cycles)	
		Denature	Anneal/ Extend
Temperature	95°C	95°C	60°C
Time	2 min	15 sec	60 sec

DATA ANALYSIS

Positive Reaction: Sample Ct ≤ 37 w/ Positive, Negative and Blank controls normal.

Negative Reaction: Sample Ct ≥ 38 w/ Positive, Negative and Blank controls normal.

PCR internal control is positive in all samples, positive and negative controls. The positive response indicates a normal PCR amplification. Otherwise, the PCR reaction may be inhibited.

Repeat Reaction: If one of the control reactions is not normal, PCR reaction is failed, and should be repeated.

RELATIVE PRODUCTS

- TBS6025: Microbial DNA Magnetic Extraction
- TBS42020: Universal Aspergillus Species qPCR
- TBS42021: Aspergillus Flavus qPCR
- TBS42022: Aspergillus Fumigatus qPCR
- TBS42023: Aspergillus Niger qPCR
- TBS42024: Aspergillus Terreus qPCR
- TBS42025:4-In-1 Aspergillus qPCR
- TBS42027: STEC qPCR
- TBS42028: Salmonella qPCR
- TBS42029: STEC and Salmonella Multiple qPCR
- TBS42030: Mycoplasma Detection qPCR
- TBS42031: Listeria Monocytogen qPCR
- TBS42032: Listeria Genus qPCR
- TBS42033: Bacillus Cereus qPCR

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