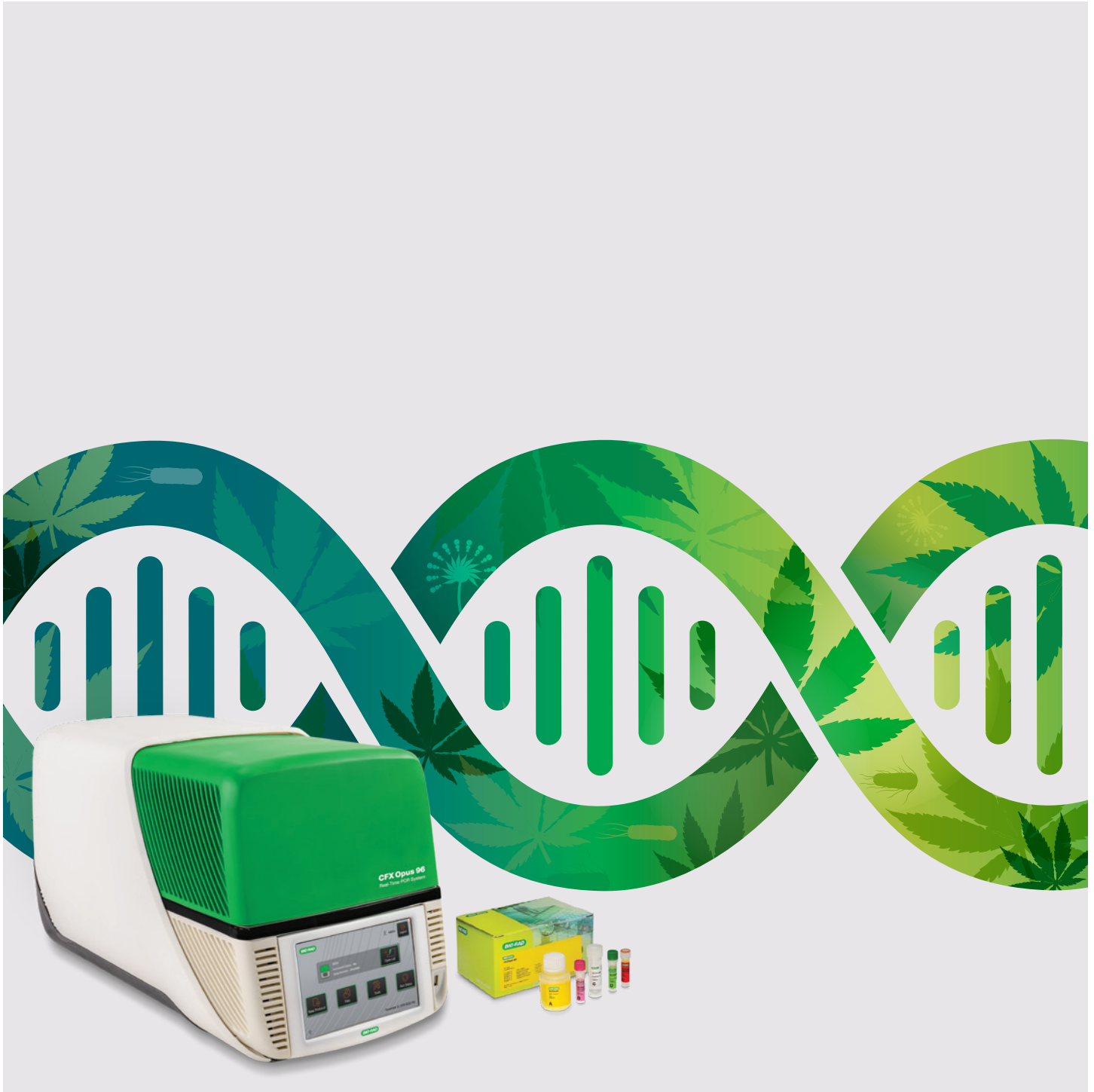


Cannabis and Hemp Microbial Testing

Enrichment, Detection, Confirmation, Identification, and Automation Solutions for Microbial Contaminant Analysis



Microbial Testing Using Real-Time PCR

Kits, Instruments, Software, and Reagents

iQ-Check™ Real-Time PCR Kits

Validated for a broad range of microbial targets and cannabis matrices by AOAC, iQ-Check Real-Time PCR Assays have served cannabis laboratories since the inception of testing regulations.

Key features:

- DNA primers and patented fluorescent double-stranded probes to ensure specificity to target organism
- Internal amplification controls for PCR inhibitor monitoring
- iQ-Design Assays for optional speciation of *Aspergillus* spp.

Real-Time PCR Instrument and Software

The CFX Opus Deepwell Real-Time PCR System is the next evolution in qPCR from Bio-Rad.

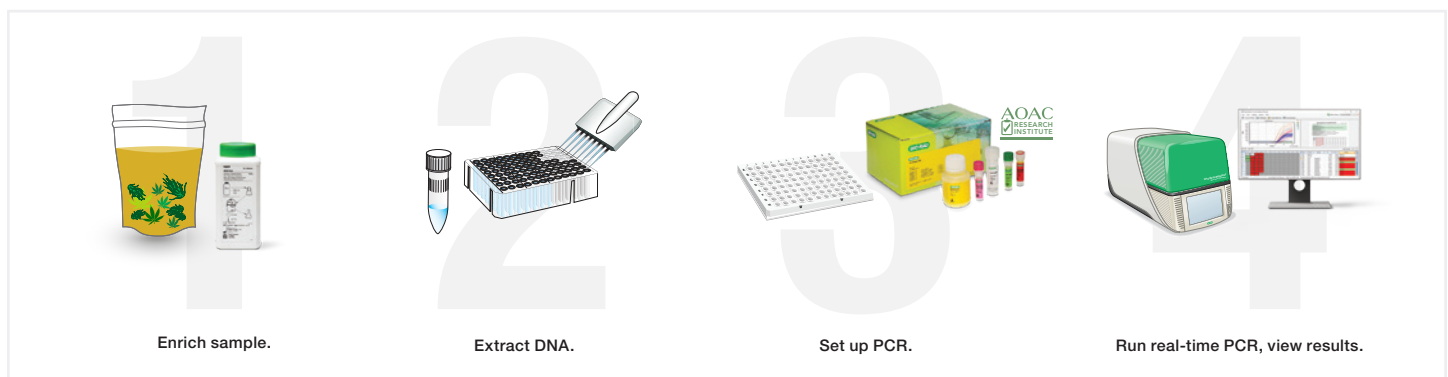
CFX Opus Deepwell Real-Time PCR System

- Sensitive 5-color multiplex performance
- Flexible connectivity for data management and instrument control
- Open platform

CFX Manager Software IDE

- Easy-to-use sample setup
- Secure and customizable reports
- Ability to use open software for other laboratory tests

Easy-to-Use Protocol



Automation with the iQ-Check Prep System



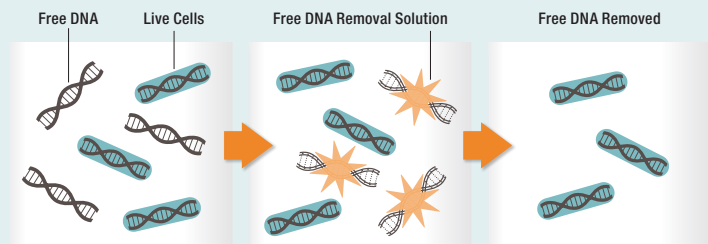
The iQ-Check Prep System fully automates DNA extraction and PCR setup, detection, and analysis with the most integrated PCR automation solution on the market.

Benefits:

- Run a few or as many as 500 tests in an 8 hr shift
- Reduce hands-on time with ready-to-use, load-and-go reagents
- Improve traceability, maximize reproducibility
- Avoid cross-contamination

Free DNA Removal

iQ-Check Free DNA Removal Solution (FDRS) is a noncarcinogenic, enzymatic treatment to remove free DNA from dead cells, which could otherwise generate ambiguous PCR data. FDRS has been demonstrated to have no impact on intact target cells and is part of the AOAC-approved iQ-Check workflow.

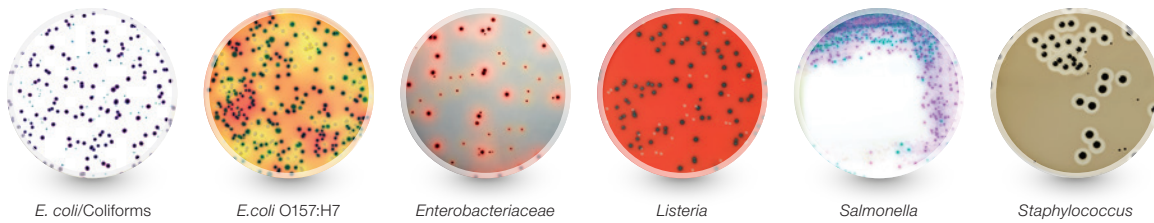


PCR Inhibition Removal

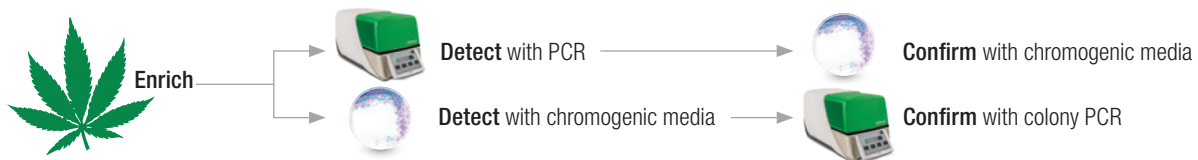
iQ-Check Purification Reagent offers a polymer-mediated treatment of extracted DNA to sequester PCR-inhibitory compounds such as polyphenols to provide a simple and effective approach for sample purification.

Microbial Testing Using Chromogenic Media


RAPID'Chromogenic Media



RAPID'Chromogenic Media can be used for easy and economical detection of microbial contamination in cannabis. Alternatively, chromogenic media offers a convenient option to confirm the presence of viable microbial cells after a presumptive positive PCR result.



Performance Specifications of Real-Time PCR Kits and Chromogenic Media

Parameter	iQ-Check Real-Time PCR	RAPID'Chromogenic Media
Assays available	<i>Aspergillus</i> [†] <i>E. coli</i> O157:H7 <i>Enterobacteriaceae</i> <i>Listeria</i> spp. <i>Listeria monocytogenes</i> <i>Salmonella</i> [†] STEC VirX [†] STEC SerO II [†]	<i>E. coli</i> <i>E. coli</i> O157:H7 <i>Enterobacteriaceae</i> <i>Listeria</i> <i>Salmonella</i> <i>Staphylococcus</i>
Principle	DNA-based detection of conserved genetic targets using patented double-stranded probes	Chromogen-based colorimetric detection utilizing bacterial enzymatic activity
Applications	Presumptive testing	Detection and/or confirmation post-PCR
Assay format	Qualitative real-time polymerase chain reaction, ready-to-use reagents	Qualitative and quantitative culture media, ready to use and dehydrated
Time to results	2–2.5 hr post-enrichment	24 hr post-enrichment
Result interpretation	Automated using software	Visual interpretation of colored colonies
Reagent shelf life	2 years	3 months (ready to use) 3 years (dehydrated)
 AOAC-approved cannabis matrices	Cannabis and hemp flower, solvent- and nonsolvent-based extracts, gummies, chocolate, concentrates	As part of the AOAC-approved iQ-Check <i>Salmonella</i> spp. method, RAPID' <i>Salmonella</i> was evaluated as an alternative method for the detection and confirmation of <i>Salmonella</i> in cannabis and hemp flower, gummies, chocolate, and concentrates

* *Aspergillus* speciation kits available.

† Approved by AOAC Performance Tested Methods program for cannabis matrices.

Ordering Information

Catalog #	Description
iQ-Check Kits	
12010806	iQ-Check <i>Aspergillus</i> Kit, 96 reactions
3578114	iQ-Check <i>E.coli</i> O157:H7 Kit, 96 reactions
12003068	iQ-Check <i>Enterobacteriaceae</i> Kit, 96 reactions
3578124	iQ-Check <i>Listeria monocytogenes</i> II Kit, 96 reactions
3578113	iQ-Check <i>Listeria</i> spp. Kit, 96 reactions
3578123	iQ-Check <i>Salmonella</i> II Kit, 96 reactions
12013174	iQ-Check STEC SerO II Kit, 32 reactions
3578139	iQ-Check STEC VirX Kit, 96 reactions
iQ-Design Assays	
12015337	iQ-Design Assay <i>Aspergillus flavus</i> , 100 reactions
12015260	iQ-Design Assay <i>Aspergillus fumigatus</i> , 100 reactions
12015336	iQ-Design Assay <i>Aspergillus niger</i> , 100 reactions
12018492	iQ-Design Assay <i>Aspergillus terreus</i> , 100 reactions
12015330	iQ-Design Assay <i>Aspergillus</i> Identification Positive Control
12018493	iQ-Design Assay <i>Aspergillus</i> + <i>terreus</i> Positive Control
Supplemental Reagents	
3594970	iQ-Check Free DNA Removal Solution, 1 vial lyophilized iQ-Check Free DNA Removal Reagent (to make 10 ml) and 1 vial of iQ-Check 10x Activation Buffer (9 ml)
3578138	iQ-Check Lysis II Reagent
3578136	iQ-Check Lysis Beads
12012383	iQ-Check Purification Reagent, 1 vial to make 25 ml for 96 tests
Media for Sample Enrichment	
3564684	Buffered Peptone Water Plus, dehydrated, 500 g
3554179	Buffered Peptone Water Plus, 225 ml x 6 bottles
3555795	Buffered Peptone Water Plus, 3 L x 4 bags
3555790	Buffered Peptone Water Plus, 5 L x 2 bags
12013259	Buffered Peptone Water Standard, dehydrated, 500 g
12013258	Buffered Peptone Water Standard, dehydrated, 5 kg
12013260	Buffered Peptone Water Standard, 5 L x 2 bags
3555703	<i>Listeria</i> Special Broth (LSB), 225 ml x 6 bottles
3564703	<i>Listeria</i> Special Broth (LSB), dehydrated, 500 g
3564753	<i>Listeria</i> Special Broth (LSB), dehydrated, 5 kg
12017463	<i>Listeria</i> Special Broth II (LSB II), 225 ml x 6 bottles
12017388	<i>Listeria</i> Special Broth II (LSB II), dehydrated, 500 g
12017378	<i>Listeria</i> Special Broth II (LSB II), dehydrated, 5 kg
Chromogenic Media for Confirmation	
3564748	RAPID' <i>E.coli</i> O157:H7 Agar, dehydrated, 100 g
3555299	RAPID' <i>E.coli</i> 2 Agar, ready to use, 100 ml x 6 bottles
3554012	RAPID' <i>Enterobacteriaceae</i> Agar, ready to use, 200 ml x 6 bottles
3564744	RAPID' <i>Listeria</i> spp. Agar, dehydrated, 500 g
3563694	RAPID' <i>L.mono</i> Agar, 90 mm x 20 plates
3563963	RAPID' <i>Salmonella</i> Agar, 90 mm x 120 plates
3563960	RAPID' <i>Staph</i> Agar, ready to use, 90 mm x 20 plates
Instruments and Software	
17007991	CFX Opus Deepwell Real-Time PCR System, 96 wells
3600037	CFX96 Touch Deep Well Real-Time PCR System, 96 wells
3594911	iQ-Check Prep System
3593893	CFX Manager Software, Industrial Diagnostic Edition (IDE)

Visit our website for more information and to see how our products can be incorporated into cannabis testing workflows:

iQ-Check Real-Time PCR Kits — bio-rad.com/iQCheck
RAPID'Chromogenic Media — bio-rad.com/RapidMedia

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“We use Bio-Rad’s iQ-Check Kits for their simplicity, ease of use, and scalability. The workflows are easily adaptable, which is very important to our lab’s dynamic throughput, where we could be testing one to a hundred samples a day. We also see Bio-Rad as a partner in innovation, as their sales and technical support teams work hand-in-hand with our lab to ensure our methods generate the highest quality data in the industry.”

NIKHIL KUMAR
CANALYSIS LABORATORIES

“In a high-throughput environment like a cannabis testing laboratory, having reliable and consistent automation is invaluable. Partnering with Bio-Rad and utilizing the iQ-Check Prep automated platform has allowed us to virtually eliminate operator error from our qPCR preparation. With the iQ-Check Prep we are able to train even the newest laboratory technicians to execute qPCR at an expert level over the course of a few days.”

MICHAEL ESPOSITO
MCR LABS

“Choosing Bio-Rad is choosing reliability. Bio-Rad’s iQ-Check Kits offer consistency, an intuitive workflow, and straightforward data analysis to meet our high-throughput needs as one of the largest cannabis testing labs in the country. What truly distinguishes Bio-Rad as our preferred partner is the ongoing support from their knowledgeable technical team and dedicated account managers.”

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BIO-RAD

**Bio-Rad
Laboratories, Inc.**

Life Science
Group

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