EZCheck 3

15 Mins Nucleic Acid Testing System

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Quick Results, Healthy Pets

EZCheck 3 stands at the forefront of advanced nucleic acid testing systems, presenting a paradigm shift in the way we approach diagnostics. With patented cassettes and enhanced Loop-Mediated Isothermal Amplification (eLAMP) technology, EZCheck 3 delivers rapid results in a mere 15 minutes. This innovation empowers veterinarians and animal owners, facilitating swift and on-the-spot pathogen testing for pets or livestock. The compact design of EZCheck 3, coupled with its user-friendly operation through Bluetooth-connected mobile app, ensures clarity in every step of the testing process. Each closed-system cassette guarantees zero contamination risk, allowing for the simultaneous detection of up to three targets. EZCheck 3 epitomizes efficiency, accuracy, and convenience, making it a game-changer in nucleic acid testing.

FAST Test to result within 15 minutes with TrustBio EZCheck system

One-Step Lysis :

Eliminates the need for traditional nucleic acid extraction processes.

Enhanced LAMP Technology:

Optimization by TrustBio's experts improves nucleic acid amplification efficiency by 1.5-2 times compared to traditional LAMP.

Rapid Results:

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Utilizes a combination of patented cassette and enhanced Loop-Mediated Isothermal Amplification (eLAMP) technology. The EZCheck 3 system provides nucleic acid test results in a rapid 15-minutes timeframe.

Multi-parameter Testing :

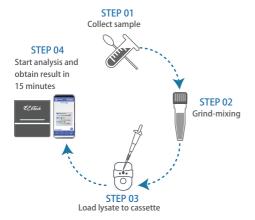
EZCheck 3 allows simultaneous testing of up to three different parameters.

EASY testing process maximizes convenience for vet clinicians



Intuitive Operational Design:

Simplifies nucleic acid testing procedures for ease of use by veterinarians, livestock owners, and even individuals.



Exclusive Mobile App:

Offers a straightforward and intuitive interface. The App guides the instructional steps, displays the status and generates the results in real time.

Lightweight and Portable:

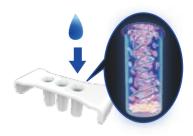
Weighs only 600g, supports power supply via a mobile power source. No need for special lab equipment, ensuring adaptability for various field applications.





Technologies

The advancement of eLAMP (enhanced Loop-mediated Isothermal Amplification) technology represents a significant improvement in nucleic acid amplification techniques. Compared to traditional LAMP, eLAMP offers enhanced efficiency, making it ideal for rapid and accurate nucleic acid detection.



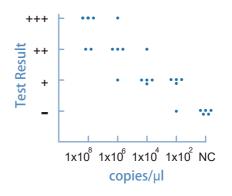
In the cassette, the eLAMP reaction involves several key steps:

- 1. Initial: Primers specific to the target sequence anneal to their complementary sequences on the template DNA.
- 2. Strand Displacement: The strand displacement activity of the Bst DNA polymerase allows the formation of loop structures, which are crucial for the amplification process.
- 3. Cycling: The stem—loop structures then serve as the starting materials for cycling of eLAMP.



Accurate

The reproducibility of serial dilutions (from 1x10° copies/µl to 1x10° copies/µl) was performed by EZCheck Babesia canis with its standard template and the results showed not only a high reproducibility in each dilution groups and also a good correlation between the determinations and their concentrations.



The following table shows the comparison of specificity and sensitivity between qPCR (quantitative Polymerase Chain Reaction) and eLAMP (enhanced Loop-Mediated Isothermal Amplification) based on the results of DNA sample dilution. In this experiment, specific primers and probes (for qPCR) and specific primers (for eLAMP) were used to amplify and detect the target DNA's specific sequence.

DNA Sample Dilution Factor	qPCR Specificity(%)	qPCR Sensitivity(%)	eLAMP Specificity(%)	eLAMP Sensitivity(%)
1X(Undiluted)	100%	100%	100%	100%
10X	100%	95%	100%	90%
100X	100%	85%	95%	80%
1,000X	95%	70%	85%	70%
10,000X	90%	55%	80%	60%
100,000X	85%	40%	70%	50%

Based on these data, we can observe that qPCR and eLAMP show similar specificity and sensitivity at high concentrations. At low concentrations, qPCR usually has slightly higher specificity, while LAMP demonstrates relatively higher sensitivity.

Technical info

Feature	Specification
Dimensions	130 x 100 x 130 mm (L x W x H)
Weight	Approx. 600 g
Power Adapter	
Input	AC100-240V · 600mA
Output	DC5V , 3A , 15W
Communication Spec.	Bluetooth
Operational Environmer	nt
Temperature	15°C ~30°C
Relative Humidity	20%~80%, non-condensing
Storage and Transportat	tion Environment
Temperature	20°C~55°C, with transport package
Relative Humidity	0%~93%
Thermal Parameters	
Efficiency	>2°C/sec (between RT and 70°C)
Stability	±1.0°C
Accuracy	±1.0°C
Optical Parameters	
Excitation Light Source	LED light sources
Detect System	CMOS image sensor
Optical Channel & Dye	Channel: FAM, SYBR Green I, etc.
Detecting Parameters	
Throughputs	One sample at a time





EZCheck Kit for Vet.

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Cat. #	Name	Туре	Analytes
RE003006	EZCheck Cassette Canine Diarrhea Panel	3 in 1	Canine coronavirus Canine parvovirus Giardia duodenalis
RE003007	EZCheck Cassette Canine Blood Disorder Panel	3 in 1	Babesia spp. Anaplasma spp. Haemobartonella canis
RE003008	EZCheck Cassette Canine Respiratory Infection Panel	3 in 1	Canine distemper virus Canine adenovirus Canine parainfluenza virus
RE003013	EZCheck Cassette Canine Tick-Borne Disease Panel 1	3 in 1	Babesia canis Babesia gibsoni Hepatozoon spp.
RE003014	EZCheck Cassette Canine Tick-Borne Disease Panel 2	3 in 1	Ehrlichia canis Anaplasma platys Rickettsia rickettsii
RE003054	EZCheck Cassette Canine Tick-Borne Disease Panel 3	3 in 1	Babesia canis Babesia gibsoni Borrelia burgdorferi
RE003055	EZCheck Cassette Canine Tick-Borne Disease Panel 4	3 in 1	Ehrlichia canis Anaplasma platys Hepatozoon spp.
RE003016	EZCheck Cassette Canine coronavirus	Single	Canine coronavirus
RE003017	EZCheck Cassette Canine parvovirus	Single	Canine parvovirus
RE003018	EZCheck Cassette Babesia spp.	Single	Babesia spp.
RE003019	EZCheck Cassette Anaplasma spp.	Single	Anaplasma spp.
RE003020	EZCheck Cassette Haemobartonella canis	Single	Haemobartonella canis
RE003021	EZCheck Cassette Canine distemper virus	Single	Canine distemper virus
RE003022	EZCheck Cassette Canine adenovirus	Single	Canine adenovirus
RE003023	EZCheck Cassette Canine parainfluenza virus	Single	Canine parainfluenza virus
RE003039	EZCheck Cassette Borrelia burgdorferi	Single	Borrelia burgdorferi
RE003041	EZCheck Cassette Leptospira interrogans	Single	Leptospira interrogans
RE003042	EZCheck Cassette Babesia canis	Single	Babesia canis
RE003043	EZCheck Cassette Babesia gibsoni	Single	Babesia gibsoni
RE003044	EZCheck Cassette Hepatozoon spp.	Single	Hepatozoon spp.
RE003045	EZCheck Cassette Ehrlichia canis	Single	Ehrlichia canis
RE003046	EZCheck Cassette Anaplasma platys	Single	Anaplasma platys
RE003047	EZCheck Cassette Rickettsia rickettsii	Single	Rickettsia rickettsii

Cat. #	Name	Туре	Analytes
RE003009	EZCheck Cassette Feline Diarrhea Panel	3 in 1	Feline coronavirus Feline parvovirus Giardia duodenalis
RE003010	EZCheck Cassette Feline Respiratory Infection Panel	3 in 1	Feline herpesvirus Feline calicivirus Mycoplasma felis
RE003056	EZCheck Cassette Feline Blood Disorder Panel	3 in 1	Feline leukemia virus Feline immunodeficiency virus (subtype c) Haemobartonella feline
RE003024	EZCheck Cassette Feline parvovirus	Single	Feline parvovirus
RE003026	EZCheck Cassette Feline coronavirus	Single	Feline coronavirus
RE003027	EZCheck Cassette Feline leukemia virus	Single	Feline leukemia virus
RE003028	EZCheck Cassette Feline herpesvirus	Single	Feline herpesvirus
RE003029	EZCheck Cassette Feline calicivirus	Single	Feline calicivirus
RE003030	EZCheck Cassette Mycoplasma felis	Single	Mycoplasma felis
RE003063	EZCheck Cassette Trichomonas fetus	Single	Trichomonas fetus
RE003064	EZCheck Cassette Feline infectious peritonitis virus	Single	Feline infectious peritonitis virus

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Cat. #	Name	Туре	Analytes
RE003057	EZCheck Cassette Zoonotic Diseases Panel 1	3 in 1	Dirofilaria immitis Toxoplasma gondii Leptospira interrogans
RE003025	EZCheck Cassette Dirofilaria immitis	Single	Dirofilaria immitis
RE003032	EZCheck Cassette Salmonella spp.	Single	Salmonella spp.
RE003033	EZCheck Cassette Toxoplasma gondii	Single	Toxoplasma gondii
RE003034	EZCheck Cassette Giardia	Single	Giardia duodenalis

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Cat. #	Name	Туре	Analytes
RE003015	EZCheck Cassette Feather Disease/PDD	3 in 1	Avian polyomavirus Beak and feather disease virus Avian bornavirus
RE003048	EZCheck Cassette Avian polyomavirus	Single	Avian polyomavirus
RE003049	EZCheck Cassette Beak and feather disease virus	Single	Beak and feather disease virus
RE003050	EZCheck Cassette Avian bornavirus	Single	Avian bornavirus

		Reptiles
Cat. # Name	Туре	Analytes
RE003051 EZCheck Cassette Herpervirus	Single	Herpervirus
E003052 EZCheck Cassette Salmonella spp.	Single	Salmonella spp.
003053 EZCheck Cassette Poxvirus	Single	Poxvirus



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