

CENOS

.....engineered prescient

AT PATIENT TESTING (APT)[®] PLATFORM

RT-qPCR direct from crude
samples, at the Point-of-Decision



ABOUT US



One Health approach

Safeguarding global health at the human-animal-environmental interface. Targeted testing of humans, animals and the environment as part of a One Health approach helps to address the full spectrum of disease control - contributing to global health equity and security.

50 Years of innovation – it's in our DNA

BIOGENE and BG RESEARCH are two independently ISO-certified entities, bringing over 50 years of combined expertise across commercial strategy, intellectual property, R&D, and production. Together, the companies design, develop and deliver life-changing molecular technologies to where they are needed most – helping to significantly improve global health outcomes.

www.biogene.com



 **BIOGENE**
.....pure innovation

BIOGENE LTD.

- Admin
- Sales & marketing
- IP formulation and patenting
- Business strategy
- ISO 9001 certified



Incorporated May 1993

 **BG RESEARCH**
.....innovate

BG RESEARCH LTD.

- Engineering
- Product design and development
- Production and assembly
- Technical support & servicing
- QA & Regulatory compliance
- ISO 13485 certified



Incorporated March 2004

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Delivering actionable results at the Point-of-Decision

Real-time RT-qPCR at the Point-of-Decision. No central lab. No compromise. Human, animal, and environmental samples - one platform, one integrated approach to surveillance and control.

No extraction. No delay. Results in under 30 minutes direct from whole blood, saliva, swabs and homogenised tissue - earlier detection, faster response, containment at the source.

Clinical and operational impact



Cost-effective testing

High-performance real-time qPCR with a lower Full Economic Cost than traditional lab testing - reducing resource use and easing healthcare system pressure.



Streamlined workflow

No upstream purification enables faster results with minimal operator intervention and handling, improving operational efficiency.



Early detection and containment at the source

Lab-grade molecular testing anywhere - rapid results for early detection, triage, and containment.



RT-qPCR results - Without experts

Operable by non-experts with basic training - scalable testing without specialist staff.



Cross species surveillance

Targeted testing across humans, animals, and the environment strengthens One Health disease control and global health security.



Equitable access

Improves global access to RT-qPCR testing particularly in decentralised and resource-poor settings - where it is needed most.



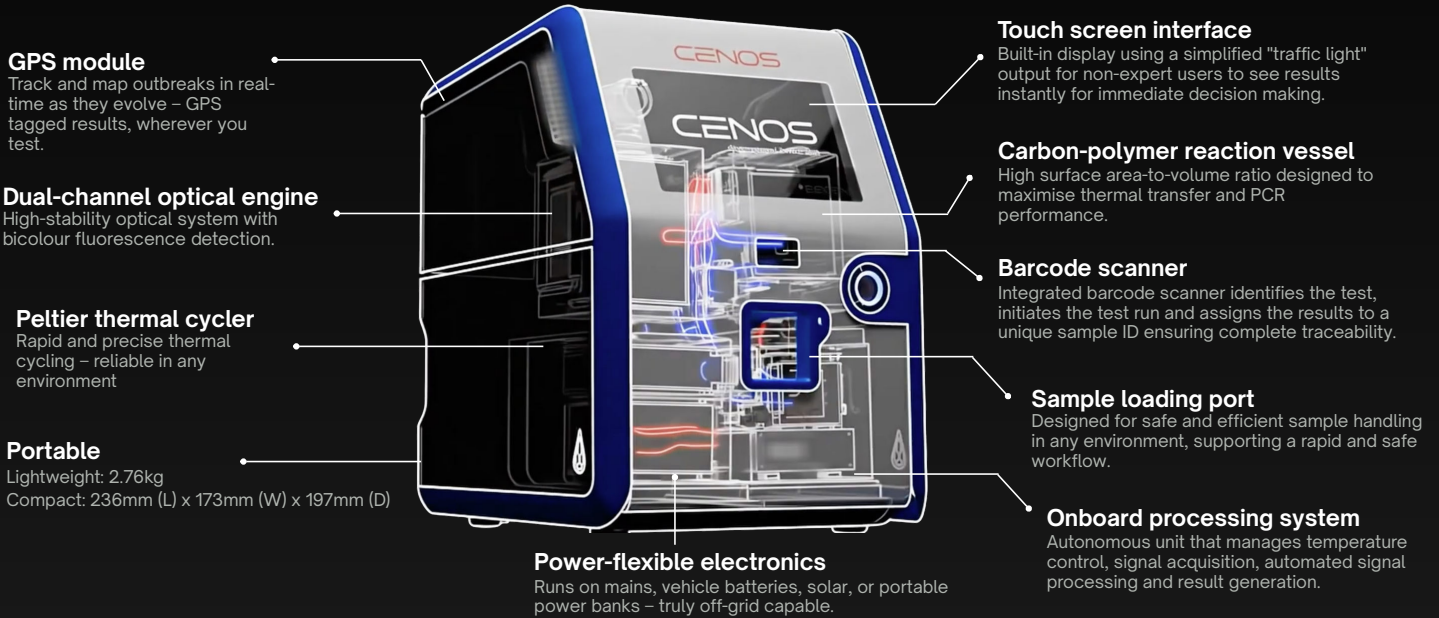
KEY APPLICATIONS

CENTRALISED LAB & CLINICAL SETTINGS



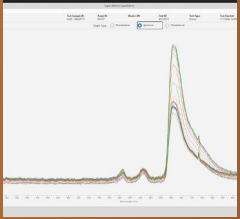
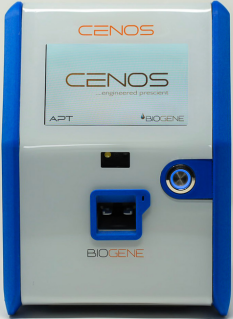
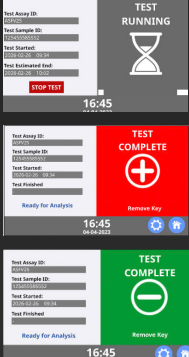
CENOS ANALYSER

A standalone, rugged, portable RT-qPCR instrument built for decentralised use. Solid-state Peltier thermal cycling delivers precise, repeatable temperature transitions; dual-channel fluorescence detection enables simultaneous multi-target monitoring - with onboard calibration and reference control.



DUAL-TIER SOFTWARE ARCHITECTURE

Simple in the field. Powerful in the lab.

<p>TIER 1 - FIELD / NON-EXPERT</p> <p>CENOS Analyser</p> <p>Onboard traffic-light results. Clear, concise, secure and rapid. Designed for non-expert use, no specialist training required.</p> <p>Decentralised Field use</p>	<p>TIER 2 - LAB / EXPERT</p> <p>THEIA GUI</p> <p>Advanced Windows-based interface for expert data review, validation, and reporting.</p> <p>Regulatory Research Development</p> 			
		<p>Amplification curve viewer</p> <p>Full fluorescence output and Ct values across optical channels</p>	<p>Run history & performance logs</p> <p>Traceable run history for QA, troubleshooting and regulatory audit trails</p>	<p>Multi-device monitoring</p> <p>View and manage multiple systems simultaneously</p>
<p>User access hierarchy</p> <p>Role-based permissions for field operators, lab supervisors and administrators</p>	<p>Data export for LIMS</p> <p>Export datasets for seamless external LIMS integration and downstream reporting</p>	<p>Supports Research & Regulatory Compliance</p> <p>Powerful deep analysis and validation tools</p>		

XTRACTION FREE REAGENT SYSTEM



30

Sample to result in under 30-minute results using the CENOS platform



Gold-standard real-time PCR performance from crude samples including whole blood



Supports multiplexing and internal positive controls



Compatible with both human and veterinary applications



Minimal hands-on time, designed for non-expert users

The **XF (Xtraction Free) Reagent System** uses our own proprietary reagents enabling true Point-of-Decision molecular testing - without the need for nucleic acid extraction processes, lab infrastructure, or specialist personnel.

HOW IT WORKS: Test to result in <30 minutes - 3 simple steps

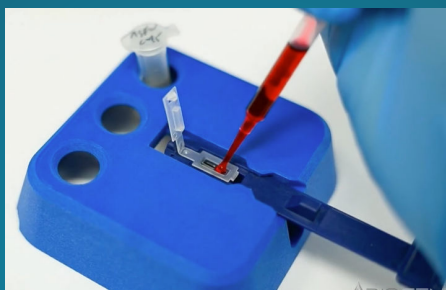
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Prepare XF reagents

- 30 second setup
- Minimal hands on time
- No specialist lab skills required (fixed volume pipette)
- Flexible reagent formats based on user requirements

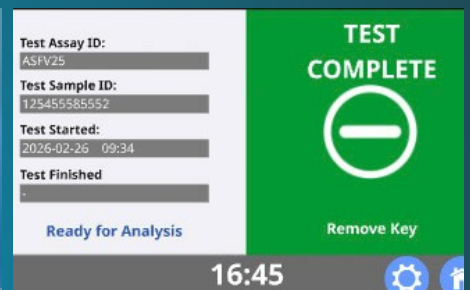
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Insert sample and start test

- Crude sample input including whole blood
- No extraction required
- Closed tube reaction
- Easy handling, even with PPE

03



Automated detection and reporting

- Operator is notified of completed test
- Instant, clear and concise output
- Results support immediate and effective triaging

TECHNICAL SPECIFICATIONS

Physical characteristics		Power Input (external DC power source required)	
Device dimensions	240 × 175 × 198 mm (H × W × D)	Nominal input voltage: 15 V DC Operating input voltage range: 14 V to 16.5 V DC Maximum permitted DC input voltage: 16.5 V DC Maximum continuous input current: 12 A Maximum input power: 180 W	
Device weight	2.76 kg	Optical system specifications	
Handle	Integrated flip up handle for safe and secure carrying	Spectrometer based detection	Blue excitation: 488nm. Collection from 530nm to 580nm Red excitation: 620nm. Collection from 650nm-800nm
Test Storage	≤ 40 test results	Multiplex	Up to 6 targets
Operating conditions		Excitation sources	LED
Operating temperature	10 to 35 °C	Software & data handling	
Operating humidity	10 to 90%	Software interface	THEIA software
Placement requirements	Even, flat, stable surface; kept away from water, corrosive environments, dust, chemical vapours, and direct sunlight	Operating modes	Online and offline (standalone)
Storage & transport conditions		Data download options	USB, Ethernet, Wi-Fi
Storage temperature	-10 to 40 °C	Device download format	JSON (JavaScript Object Notation)
Transport method	Must be transported in original Analyser protective case	THEIA export format	JSON (JavaScript Object Notation) or PDF
Shock & vibration protection	IP67 case includes EVA precision cut foam for protection and stabilisation	Interface & Connectivity	
Case protection	Waterproof and dustproof in the case (IP67), automatic pressure release valve for transportation	Interface options	Touch screen display, barcode scanner, USB
Analytical / performance specifications		Connectivity options	Ethernet, Wi-Fi, GPS
Measurement principle	RT-qPCR	Accessories & compatible components	
Sample preparation	Crude sample inputs	Reaction vessel	Analyser reaction vessel
Time to Result	≤ 30minutes	Key	Analyser key
Reaction vessel compatibility	Only with CENOS Analyser reaction vessel	Transport case	IP67 certified, shock absorbing
Thermal ramp rate	>8°C/sec	Additional accessories	Power supply, ethernet data cable, 90° USB adapter
Instrument warmup requirements	For temperatures below 10°C allow acclimatisation to temperature to minimally 10°C	Regulatory & compliance	
		Manufacturing standard	Designed and manufactured under ISO 13485 certified QMS (BG Research Ltd)
		Safety & labelling symbols	Refer to symbols and glossary section in instruction manual



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