

Syndromic testing for gastroenteritis



Automated multiplex PCR detection of 24 leading viral, bacterial and parasitic GI pathogens in a single test

Simplified with 3base[®] technology

**EasyScreen[™] Pan-Enteric
Pathogen Detection Kit
and automated workflow**

Scan to learn more
about the full range of
syndromic solutions



geneticsignatures.com

Syndromic testing for 24 clinically significant gastrointestinal pathogens in a single test



Benefits of syndromic testing

Gastrointestinal infections can have similar signs and symptoms making it challenging to correctly identify and appropriately treat the cause of infection.

Traditional diagnostic methods such as culture, microscopy and immunoassay can be slow and labour intensive, less sensitive, or less specific.

In contrast, Genetic Signatures' comprehensive molecular solution provides highly sensitive and accurate syndromic testing in a multi-sample automated workflow.

AI-driven results calling software further reduces the decision making burden allowing confident same-day reporting of results.

EasyScreen™ Pan-Enteric Pathogen Detection Kit (PE001)

24 targets in 1 test - CE-IVD

Supports a range of stool sample types: fresh, frozen, faecal swabs, or bacterial cultures

Viruses

- > Adenovirus 40/41
- > Astrovirus
- > Enterovirus
- > Norovirus GI
- > Norovirus GII
- > Rotavirus A
- > Sapovirus

Bacteria

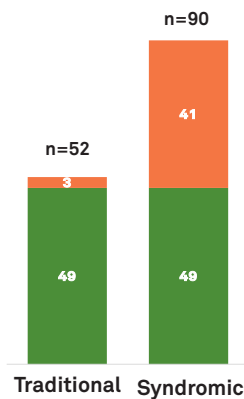
- > *Aeromonas* spp.
- > *Campylobacter* spp.
- > *Clostridioides difficile* (TcdA/B)
- > *E. coli* - eaeA
- > *E. coli* Labile Toxin (LT)
- > *E. coli* Stable Toxin (ST)
- > *E. coli*- stx-1
- > *E. coli*- stx-2
- > *E. coli*- 0157:H7
- > *Salmonella* spp.
- > *Shigella* spp. / EIEC
- > *Vibrio cholerae*
- > *Vibrio* spp.
- > *Yersinia* spp. (excl. *Y. pestis* & *Y. pseudotuberculosis*)

Parasites

- > *Cryptosporidium* spp.
- > *Entamoeba histolytica*
- > *Giardia lamblia/intestinalis*

Results of an evaluation study at a National Health Service (NHS) Hospital (2021)

445 primary prospective clinical samples



Comparative performance of the EasyScreen™ Pan-Enteric Pathogen Detection Kit and workflow to traditional detection methods

- +75% rate of positive detection
- Simpler and faster workflow - results in one shift supported by one user
- Broad coverage in a single test



Genetic Signatures' 3base® technology simplifies the genetic code for more efficient pathogen detection

Simplify to amplify!

C G T A G A C C T C A C T T C C A G G A C T G G C
↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
T G T A G A T T T T A T T T T A G G A T T G G T

1,048,576

sequence combinations
for a 10 digit number
with 4-base



59,049

sequence combinations
for a 10 digit number
with 3base®

- **Simplified with more efficient multiplex PCR**
 - Fewer primers, less competition and expanded pan-screening capabilities
 - Unique sample processing method is more efficient at lysing difficult pathogens, such as parasites
 - Reduced G-C content with 3base® conversion improves PCR performance for G-C rich pathogens
- **Simplified with uniform sample processing conditions**
 - Universal extraction process regardless of sample type, and is compatible with both DNA and RNA
- **Simplified to use in any laboratory with reduced contamination risks in routine diagnostic labs**
 - 3base® converted samples are not affected by environmental contamination by native 4-base sequences



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- Easy to use
- Maximised walk-away time
- Faster time to result
- Reliable, with local and global customer support
- Enabled menu expansion

REVIEW FLAGGED
RESULTS

- RESULTS PANEL



PLATE MAP LAYOUT

GS1 instrument specifications

Instrument configuration	<ul style="list-style-type: none"> Hamilton Microlab® Nimbus® pipetting workstation 4-channel pipetting Bar code scanner Customised deck configuration Automated UV decontamination (10-60 minutes) Integrated instrument software Microsoft Windows 10
Operating environment	<ul style="list-style-type: none"> System Temperature: 15°C to 35°C Humidity: 30% to 80% RH non-condensing Altitude: 0 - 2000 m above sea level
Dimensions	<ul style="list-style-type: none"> W × D × H: 41.2 in (104.6cm) × 27.9 in (70.9 cm) × 32.7 in (83.1 cm) Weight: 220 lb (100 kg)
Power requirements	<ul style="list-style-type: none"> 100-240 VAC, 50-60 Hz, 5A Meets standard power supply requirements (1x power supply socket required)
Pipetting	<ul style="list-style-type: none"> Capacitive Liquid Level Detection (cLLD) and Pressure Liquid Level Detection (pLLD) 50µl, 300µl, and 1000µl disposable tips
Communication type	<ul style="list-style-type: none"> Ethernet and USB
Waste management	<ul style="list-style-type: none"> Minimal liquid waste Disposable plastics discard
Instrument maintenance	<ul style="list-style-type: none"> Daily maintenance (approximately 5 minutes hands-on) Weekly maintenance (approximately 10 minutes hands-on) Cleaning during maintenance using GS-Clean 6-monthly Preventative Maintenance

GS-Analysis software specifications

Minimum system requirements	<ul style="list-style-type: none"> Hardware requirements <ul style="list-style-type: none"> Processor: 2GHz, 2GB RAM
	<ul style="list-style-type: none"> Supported web browsers <ul style="list-style-type: none"> Google Chrome: version 86 or later (preferred) Microsoft Edge: version 85 or later Mozilla Firefox: version 83 or later
Internet connection	<ul style="list-style-type: none"> Cable or DSL is recommended
Supported PCR cycler	<ul style="list-style-type: none"> BioRad CFX384™
Files	<ul style="list-style-type: none"> Customisable file export options (csv, pdf)
LIS connectivity	<ul style="list-style-type: none"> Yes, automated unidirectional or manual
User profile	<ul style="list-style-type: none"> Unique security access
Manual interpretation	<ul style="list-style-type: none"> Yes Option to automate release of valid negative results and with time-stamped traceability
Secure cloud-based data processing	<ul style="list-style-type: none"> Microsoft Azure network Data encryption Password protected authentication

*GS-Analysis is currently only available in EMEA for use with the **EasyScreen™** Pan-Enteric Pathogen Detection Kit (PE001). Contact us for more information on the regulatory status of our products in your region. When using our products always read the label and follow the directions for use within the product User Guide.

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brochure



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