BD MAX™ Enteric solutions

Simplify gastroenteritis testing with enhanced accuracy and sensitivity.[1-4]

The BD MAX™ Enteric solutions offer targeted syndromic panels that provide timely and accurate detection of the most common bacterial, viral and parasitic pathogens responsible for infectious diarrhea.[3-5]

"We chose the BD MAX™ Enteric Bacterial Panel on the BD MAX™ System because of its syndromic and operational advantages for regional stool pathogen detection."[6]

BD

Are you optimizing your gastroenteritis testing?

1.7 billion cases globally
of childhood diarrheal disease[7]

Diarrheal disease is the
2nd leading cause of death
in children under 5 years of age[7]

Globally, norovirus resulted in a total of
$4.2 billion
in direct health system costs[8]

Gastrointestinal infections challenge the healthcare system, creating a major burden for the hospital, both operationally and financially.

Traditional diagnostic methods such as culture, microscopy and immunoassays come with limitations that potentially impact laboratory workflow, budget, clinical decision-making and patient outcomes:

- Delayed results[3]
- Difficulty growing certain organisms on culture media[9]
- False negative results due to subjective interpretation of microscopy and poor sensitivity of immunoassays[10]

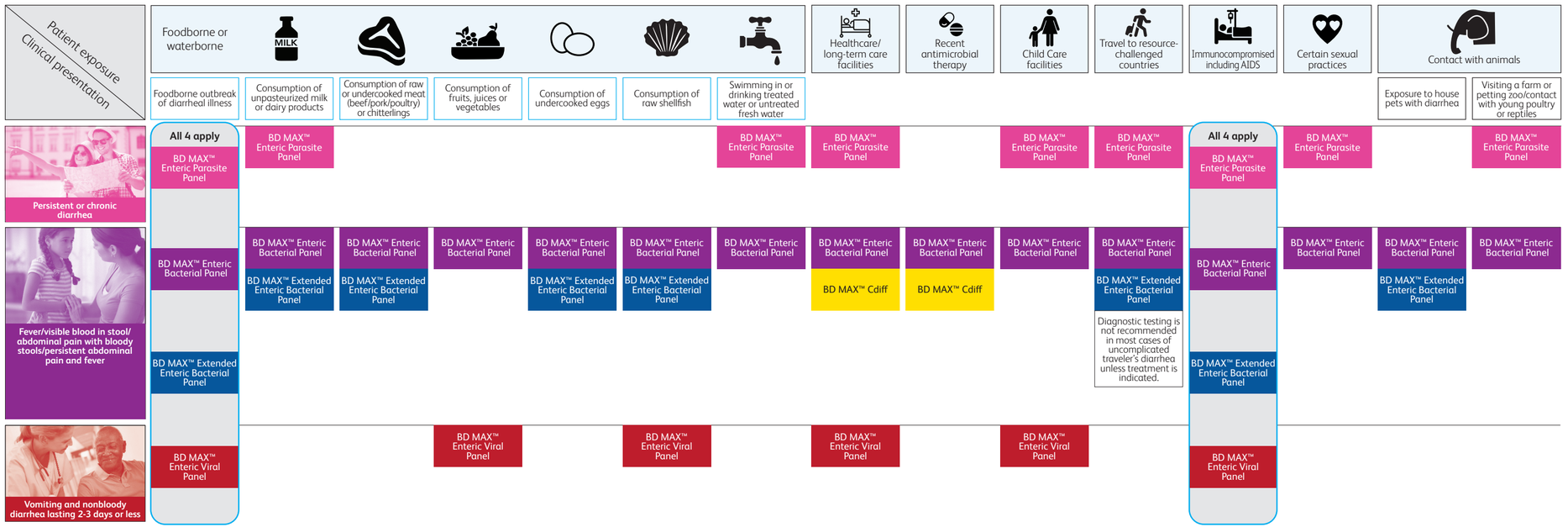
This could lead to less effective clinical decision-making, inappropriate antibiotic treatment, unnecessary patient isolation and extended hospital stays.[3]

Transitioning from culture to molecular testing can significantly improve the sensitivity, specificity, time to results and total cost of your laboratory's gastroenteritis testing.[2,6]

The BD MAX™ Enteric solutions allow for testing of a specific class of enteric pathogens following IDSA guideline-based patient exposure, risk factors and clinical presentations

IDSA Guidelines reinforce the importance of determining a specific diagnosis which can benefit a patient with infectious diarrhea by:[11]

- Directing appropriate therapy
- Allowing the judicious use of antimicrobial agents
- Improving patient satisfaction



The BD MAX™ Enteric solutions allow for the rapid detection of the most common pathogens responsible of infectious diarrhea

- Provide results for up to 24 specimens in 3 hours[3]
- Decrease hands-on time for laboratory technicians versus traditional methods[2]
- Implementation of timely and accurate detection of organisms can improve patient management and antimicrobial stewardship[3]

BD MAX™ Enteric Bacterial Panel

Among reported outbreaks of bacterial diarrhea, four of the major pathogens isolated are *Campylobacter* spp., *Salmonella* spp., *Shigella* spp., and Shiga toxin producing *E. coli*. Of these, non-typhoidal *Salmonella* species are the leading cause of hospitalization and death among food borne bacteria.[5]

BD MAX™ Extended Enteric Bacterial Panel

Some pathogens are seasonally and regionally implicated in bacterial gastroenteritis. Therefore, an extended panel is also available which will include the above-mentioned bacterial targets plus *Vibrio, Yersinia,* ***enterotoxigenic E. coli*** and *Plesiomonas.*
This test should be ordered with Enteric Bacterial Panel when additional food or waterborne bacteria are suspected. Alternatively, this panel may be ordered for every stool specimen if extended coverage is desired.[1]

BD MAX™ Enteric Parasite Panel

The most common parasites in developed countries are *Giardia lamblia, Cryptosporidium* spp. *and Entamoeba histolytica.*[4]
Using microscopy, pathogenic *E. histolytica* cannot be differentiated from the non-pathogenic species *Entamoeba dispar* which is essential for treatment decisions and public health information.[10]

BD MAX™ Enteric Viral Panel

Globally, norovirus is estimated to be the most common cause of acute gastroenteritis. It is responsible for 685 million cases every year, 200 million of these cases are among children younger than 5 years old.[12]
For a nosocomial outbreak situation, we offer a targeted viral panel for both norovirus and rotavirus with extended coverage for adenovirus, sapovirus and astrovirus.

BD MAX™ Cdiff

Clostridium difficile is recognized as the primary pathogen responsible for antibiotic-associated colitis and for 10%–20% of cases of nosocomial antibiotic-associated diarrhea.[13]
These test results should be used in conjunction with clinical diagnosis.

Streamlined integration into existing workflow with the BD MAX™ System family

The BD MAX™ System family offers you a fully integrated, automated real-time PCR platform with a broad menu of molecular IVD and open-system tests.[14]

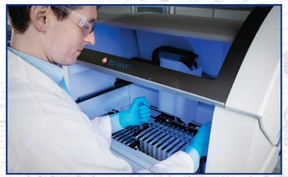
Snap

Assemble unitized reagent strips with extraction and PCR reagents.

Less than **1.5 minutes** hands-on time per sample[2,15]

Load

Load the Sample Buffer Tubes, PCR cartridges, and racks.



24 patient results in **2 to 3 hours,** on average[2]

Go

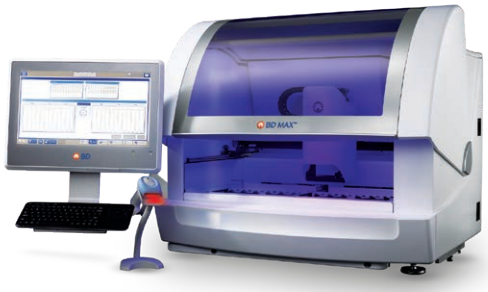
Come back in just over 2 to 3 hours hours for results.*

*Assay times may vary.

96 samples per **8 hour shift**[2]

Performance for gastroenteritis testing[1-3]

A single unpreserved soft to diarrheal stool specimen can be used to test across BD MAX™ Enteric solutions.



For more information, please visit:
go.bd.com/bd-max-enterics

Catalogue number	Assay Name	Sample Type	Targets
442963	BD MAX™ Enteric Bacterial Panel	• Unpreserved soft to diarrheal stool • Cary-Blair preserved stool	• *Salmonella spp.* • *Campylobacter spp.* • *Shigella spp.* (including enteroinvasive Escherichia coli [EIEC]) • Shiga toxin 1 (stx1) / Shiga toxin 2 genes (stx2) genes
443812	BD MAX™ Extended Enteric Bacterial Panel	• Unpreserved soft to diarrheal stool • Cary-Blair preserved stool	• *Plesiomonas shigelloides* • *Vibrio spp.(V. vulnificus, V. parahaemolyticus, and V. cholerae)* • Enterotoxigenic *E. coli (ETEC)* • *Yersinia enterocolitica*
442960	BD MAX™ Enteric Parasite Panel	• Unpreserved soft to diarrheal stool • 10% formalin fixed stool	• *Giardia lamblia* • *Cryptosporidium (C. hominis and C. parvum)* • *Entamoeba histolytica*
443985	BD MAX™ Enteric Viral Panel	• Unpreserved soft to diarrheal stool • Cary-Blair preserved stool	• Norovirus GI & GII • Rotavirus A • Adenovirus F40/41 • Sapovirus (genogroups I, II, IV, V) • Human Astrovirus (hAstro)
443418	BD MAX™ Cdiff	• Unpreserved soft to diarrheal stool	• *Clostridium difficile toxin B gene (tcdB)*

References: 1. Humphries RM and Linscott AJ. *Clin Microbiol Rev.* 2015;28(1):3–31. **2.** Felder RA et al. *J Lab Autom.* 2014;19(5):468–73. **3.** Mortensen JE et al. *BMC Clin Pathol.* 2015;15:9. **4.** Madison-Antenucci S et al. *J Clin Microbiol.* 2016;54(11):2681–8. **5.** Scallan E et al. *Emerg Infect Dis.* 2011;17(1):7–15. **6.** Bauman M. Transitioning from culture to molecular: implementation and integration of BD Max Enteric Bacterial Panel at Cincinnati Children's Hospital. *ADVANCE/LABORATORY.* June 2015. **7.** World Health Organization. *Diarrhoeal disease.* Updated 2 May 2017. Accessed 9 June 2022. Available at: https://www.who.int/news-room/fact-sheets/detail/diarrhoeal-disease. **8.** Bartsch SM et al. *PLoS One.* 2016;11(4):e0151219. **9.** Anderson NW et al. *J Clin Microbiol.* 2014;52(4):1222–4. **10.** Centers for Disease Control and Prevention. *DPDx - Laboratory Identification of Parasites of Public Health Concern. Amebiasis [Entamoeba histolytica].* Updated 15 October 2019. Accessed 9 June 2022. Available at: https://www.cdc.gov/dpdx/amebiasis. **11.** Fang FC, Patel R. *Clin Infect Dis.* 2017;65(12):1974–6. **12.** Centers for Disease Control and Prevention. *Norovirus Worldwide.* Updated 5 March 2021. Accessed 9 June 2022. Available at: https://www.cdc.gov/norovirus/trends-outbreaks/worldwide.html. **13.** Polage CR et al. *Clin Infect Dis.* 2012;55(7):982–9. **14.** BD MAX™ System User's Manual. Becton, Dickinson and Company: Sparks, MD. **15.** Hirvonen JJ et al. *Eur J Clin Microbiol Infect Dis.* 2015;34(5):1005–9.

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