MultNAT®
Gastrointestinal Panel

1 SAMPLE 1 TEST 15 PATHOGENS

Ustar Biotechnologies (Hangzhou) Ltd.

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THE CHALLENGES

1/

Acute gastroenteritis is a **leading cause of morbidity and mortality world-wide,** particularly in at-risk populations, such as children, older individuals, and immunocompromised patients.

2/

Stool culture is labor-intensive and time-consuming. Stool cultures for *C. difficile* require an appropriate culture environment to grow anaerobic micro-or-ganisms, and have a relatively slow turnaround time (45~96 hours).

3/

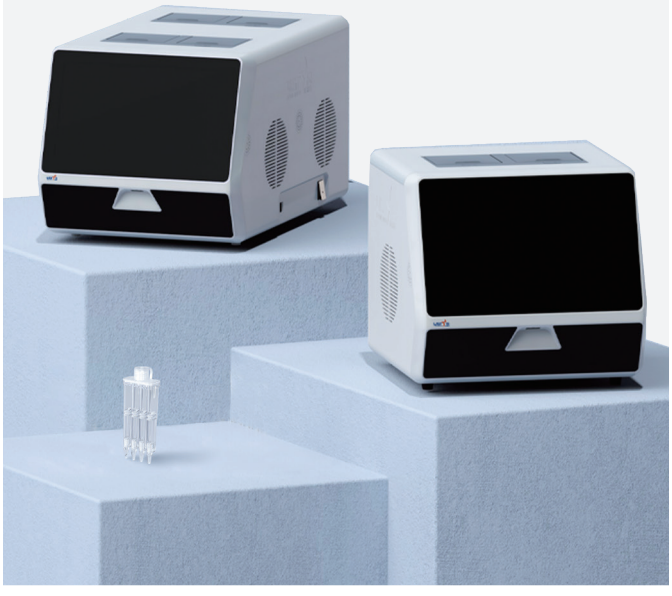
Rotavirus and *Escherichia coli,* are the two most common etiological agents of moderate-to-severe diarrhea in **low-income countries**. Other pathogens such as **cryptosporidium and shigella species** may also be important.

4/

A study proved that the use of antibiotics in the early stages of diarrhea has been shown to increase the risk of hemolytic uremic syndrome (HUS), which means **clinicians will need a quick and precise result for subsequent treatment on patients suffering from contagious diarrhea.**

5/

Antibiotics (e.g. Ciprofloxacin, Metronidazole, Doxycycline) are effective in the treatment of shigellosis, campylobacteriosis, clostridium difficile, traveler's diarrhea, and protozoal infections.



REFERENCES

1.Troeger, C. et al. Estimates of global, regional, and national morbidity, mortality, and aetiologies of diarrhoeal diseases: a systematic analysis for the Global Burden of Disease Study 2015. Te Lancet Infectious Diseases 17, 909–948, https://doi.org/10.1016/s1473- 3099(17)30276-1 (2017).

2.Valledor, S., Valledor, I., Gil-Rodríguez, M.C. et al. Comparison of several Real-Time PCR Kits versus a Culture-dependent Algorithm to Identify Enteropathogens in Stool Samples. Sci Rep 10, 4301 (2020). https://doi.org/10.1038/s41598-020-61202-z

3.Centers for Disease Control and Prevention

4.SAMIYA RAZZAQ, M.D. Hemolytic Uremic Syndrome: An Emerging Health Risk. American Family Physician.

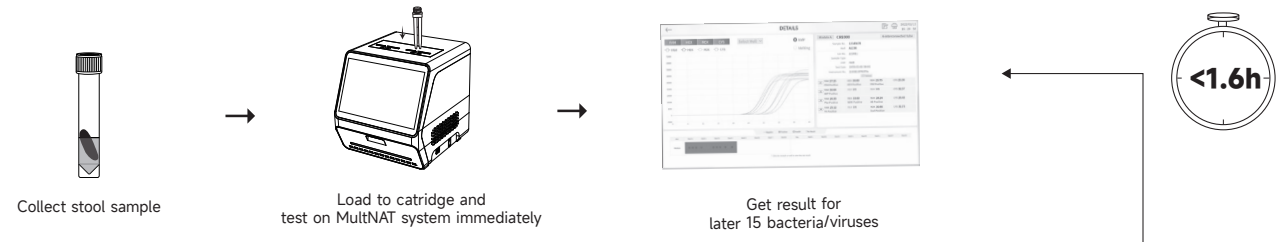
5.WHO. Diarrhoeal Diseases.

6.AAFP. Acute Diarrhea in Adults.

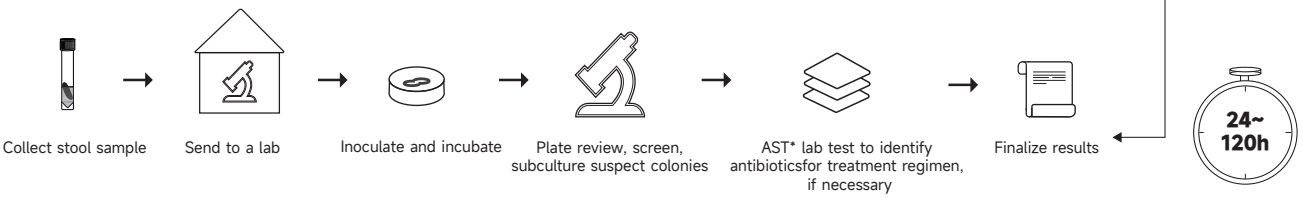
THE SOLUTION — MultNAT Gastrointestinal Panel

Ustar offers you comprehensive and flexible multiplex molecular RT-PCR testing right to the point of care on 15 diarrhea-related pathogens in a single stool sample, contributing to fast diagnosis and precise evidence-based therapy.

Ustar MultNAT solution:



Conventional bacterial culture:



PANEL MENU

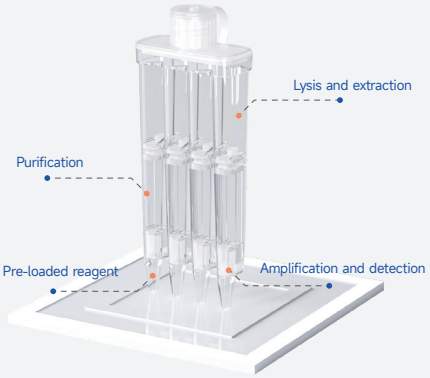
Organisms	
Bacteria (Bacterial toxins)	Salmonella
	Campylobacter
	Escherichia coli (0157)
	Yersinia enterocolitica (YE)
	Clostridium difficile Toxin A (ctdA)
	Enterotoxingenic E. coli (ETEC)
	Vibrio cholerae (Vc)
	Vibrio parahaemolyticus (VP)
	Vibrio vulnificus (vvh)
	Shigella (SF)
	Shiga toxin-producing Escherichia coli (STEC)
	Enteroinvasive E. coli (EIEC)
Viruses	Adenoviruses 40/41 (adv)
	Rotavirus (RV)
	Norovirus G I / II

THE FEATURES

Easy to use
2 min hands-on time

Fast and labor-saving
result in ~100 min for 15 pathogens

Interconnected Tube

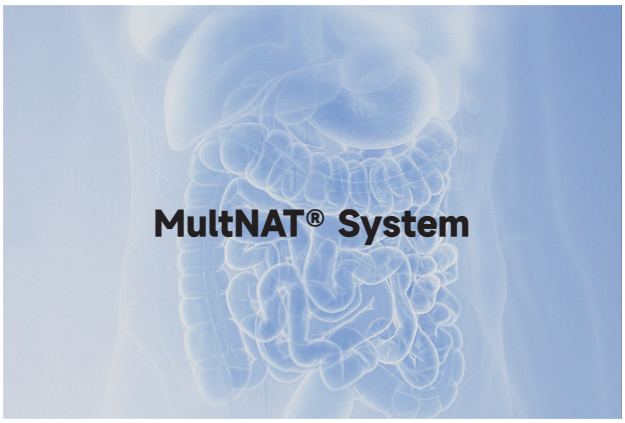


Safe
disposable sealed cartridge

Ambient transport
cartridge prefilled with glassified reagent, no need to redissolve it before use

Point-of-care testing
independent modules
run any test any time with 24/7 random access

CLINICAL VALUE



- Well suited for multiplex testing on diarrheal disease which has a broad range of potential pathogens
- Facilitate targeted and antimicrobial therapy
- Save time and labor for downstream procedures
- Avoid antibiotics abuse

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