

Apr 14, 2018

Version 1

RNA/DNA extraction from samples of acute gastroenteritis V.1

DOI

<https://dx.doi.org/10.17504/protocols.io.pgkdjuw>

Hengyun Guan¹, Chunrong Wang¹, Lanzheng Liu¹, Guoliang Yang¹

¹Jinan Center for Disease Control and Prevention, Jinan, China



Hengyun Guan

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.pgkdjuw>

Protocol Citation: Hengyun Guan, Chunrong Wang, Lanzheng Liu, Guoliang Yang 2018. RNA/DNA extraction from samples of acute gastroenteritis. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.pgkdjuw>

License: This is an open access protocol distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited

Protocol status: Working

We use this protocol in our group and it is working.

Created: April 13, 2018



Last Modified: April 14, 2018

Protocol Integer ID: 11500

Keywords: RNA, DNA, Extraction, acute gastroenteritis many types of sample, dna for virus detection, outbreaks of acute gastroenteritis, dna extraction from sample, dna extraction, acute gastroenteritis, virus detection, rna, extraction, dna

Abstract

Many types of sample would be collected in outbreaks of acute gastroenteritis. Therefore we have settled this protocol to extract RNA/DNA for virus detection rapidly and effectively.



Pretreatment of stool

- 1
 1. Add 2.0g stool to 1.0ml phosphate buffer saline (with Mg^{2+} and Ca^{2+}) in one 1.5ml Eppendorf tube with 6-8 particles of ceramic beads.
 2. Vortex for 2×20 sec at 4000rpm at room temperature.
 3. Centrifuge at 8000 rpm for 10 min at 4°C.
 4. Collect the supernatant.

Preparing swabs

- 2
 5. Throat swabs or environmental surface swabs were stored in Hank's solution.
 6. Vortex for 40 sec at 4000rpm at room temperature.

Pretreatment of water

- 3
 7. Add 15ml contaminated water to centrifugal filter (Merck Millipore Ltd., Ireland).
 8. Centrifuge at 8000rpm for 5min at 4°C.
 9. Repeat step 8 for three times.
 10. Collect the supernatant.

RNA/DNA extraction

- 4
 11. Add each above 200ul supernatant in sample cartridge to extract RNA/DNA followed the manufacturer's instructions (MagNA Pure LC Total Nucleic Acid Isolation Kit, Roche, Germany).
 12. RNA/DNA was suspended in 50ul of elution buffer.
 13. RNA/DNA was amplified immediately or stored at -80°C.