

Clean **NA**

Clean Pathogen

DNA & RNA Kit

Pathogen RNA
and DNA
extraction based
on magnetic beads

Easy extraction from a complex matrix

Infectious diseases are a worldwide threat to public health. These diseases can be caused by different types of pathogenic micro-organisms such as bacteria, viruses and fungi. Being able to detect the pathogen quickly and perform more detailed studies on its genetic material helps to apply the right treatments and develop new ones.

Benefits:



Wide variety of sample types



Easy automation



Suitable for PCR



DNA and RNA

Our Clean Pathogen DNA & RNA Kit helps scientists with the first step of this process: isolating DNA or RNA from complex matrices like whole blood, serum, tissue, stool, and urine. Due to the use of magnetic beads, the kit is fully scalable and can easily be automated. Clean Pathogen includes a glass bead disruptor plate to lyse and mix samples, which makes the kit the right choice for the extraction of pathogen DNA as well as RNA from a wide variety of sample types.

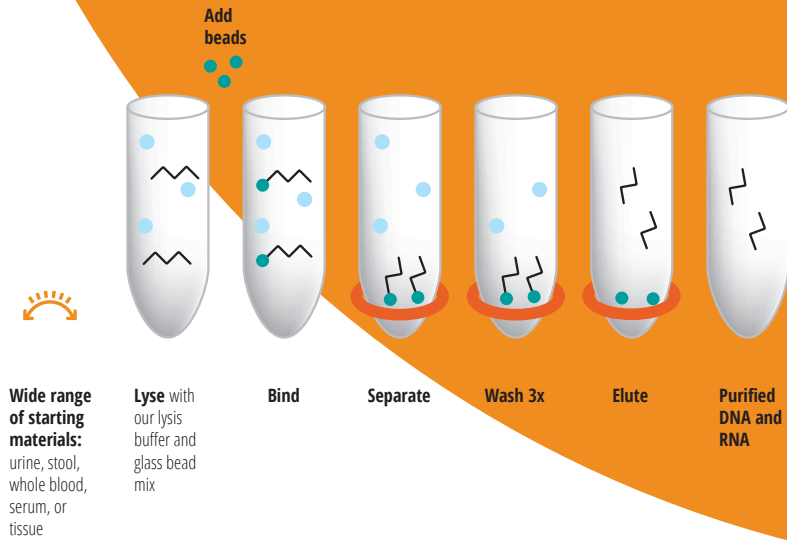
Application

By isolating host genomic DNA, bacterial DNA, fungal spore DNA, viral DNA as well as host RNA and viral RNA from different matrices, the Clean pathogen has lots of possibilities. Downstream applications include NGS, (q)PCR, Sanger Sequencing, and SNP analysis in a great variety of research fields, for example pathogen detection, women's health, metagenomics, and veterinary and food diagnostics.

Proof of principle

To show the functionality of our Clean Pathogen DNA & RNA Kit, we spiked serum, stool, and urine with different pathogens. The Clean Pathogen extraction procedure was followed by qPCR detection for the relevant pathogen DNA or RNA. The results are shown in Figures 1, 2, 3, and 4.

Workflow



We lyse the sample with the lysis buffer and the glass bead mix in the included disruptor plate. Next, add the magnetic beads to bind to the RNA or DNA. The magnetic plate separates the magnetic beads with RNA or DNA from the lysates and after a few rapid wash steps, trace contaminants (e.g. proteins and cellular debris) are removed. Finally, we elute the RNA or DNA in nuclease free water.

FIGURE 1. qPCR of bacterial DNA extracted with the Clean Pathogen DNA & RNA Kit from stool and urine spiked with Group B *Streptococcus*. Figure shows the average Ct-value of triplicate data.

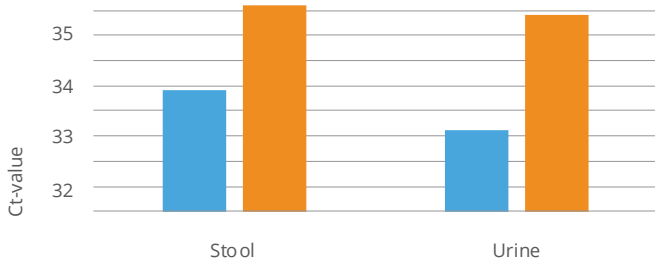
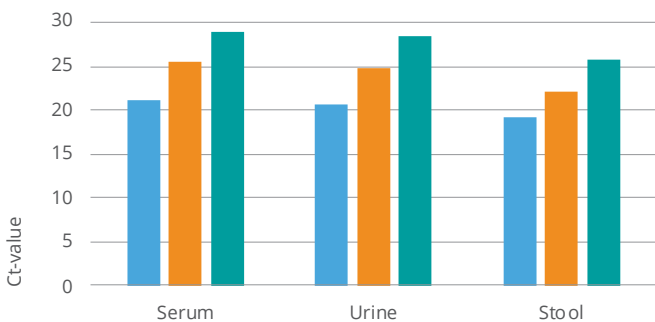


FIGURE 2. qPCR of fungal DNA extracted with the Clean Pathogen DNA & RNA Kit from serum, urine and stool spiked with *Cryptosporidium oocysts*. Figure shows the average Ct-value of triplicate data.



● Undiluted ● 1:10 ● 1:100

FIGURE 3. qPCR of viral RNA extracted with the Clean Pathogen DNA & RNA Kit from serum and urine spiked with Influenza A/B virus. Figure shows the average Ct-value of triplicate data.

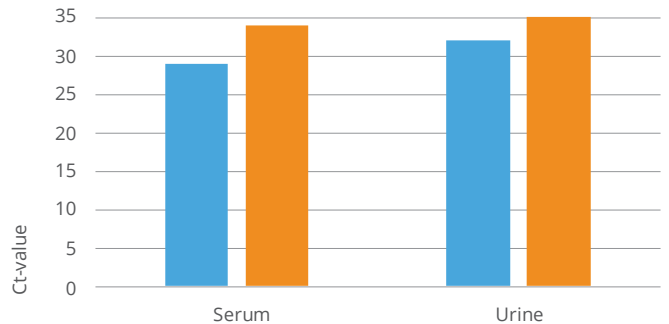
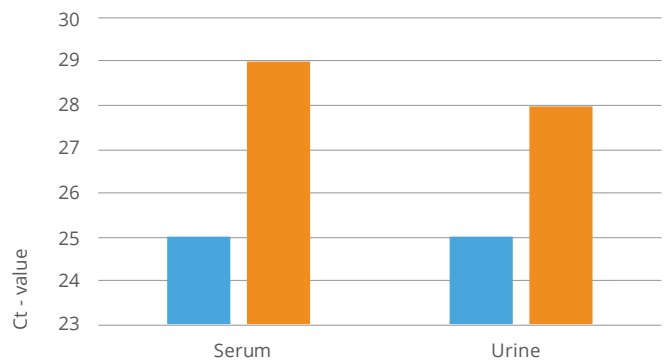


FIGURE 4. qPCR of viral DNA extracted with the Clean Pathogen DNA & RNA Kit from serum and urine, spiked with HBV virus. Figure shows the average Ct-value of triplicate data.



About CleanNA

Isolation of nucleic acids often comes with challenges and CleanNA thinks that no researcher should have to face them alone. At our facilities based in the Netherlands, we produce nucleic acid isolation kits and reagents. We offer complete solutions with magnetic beads that meet researcher's needs while significantly reducing their hands-on time.

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Ready to order?

Order via your local distributor or contact us via our details below.

Order info

Product	Preps	Part Number
Clean Pathogen DNA/RNA kit	96	CPT-DR0096
Clean Pathogen DNA/RNA kit	384	CPT-DR0384

Product	Pack size	Part Number
Clean Magnet Plate 96-Well	1 Plate	CMAG-RN50

The Clean Pathogen DNA & RNA Kit is distributed by: