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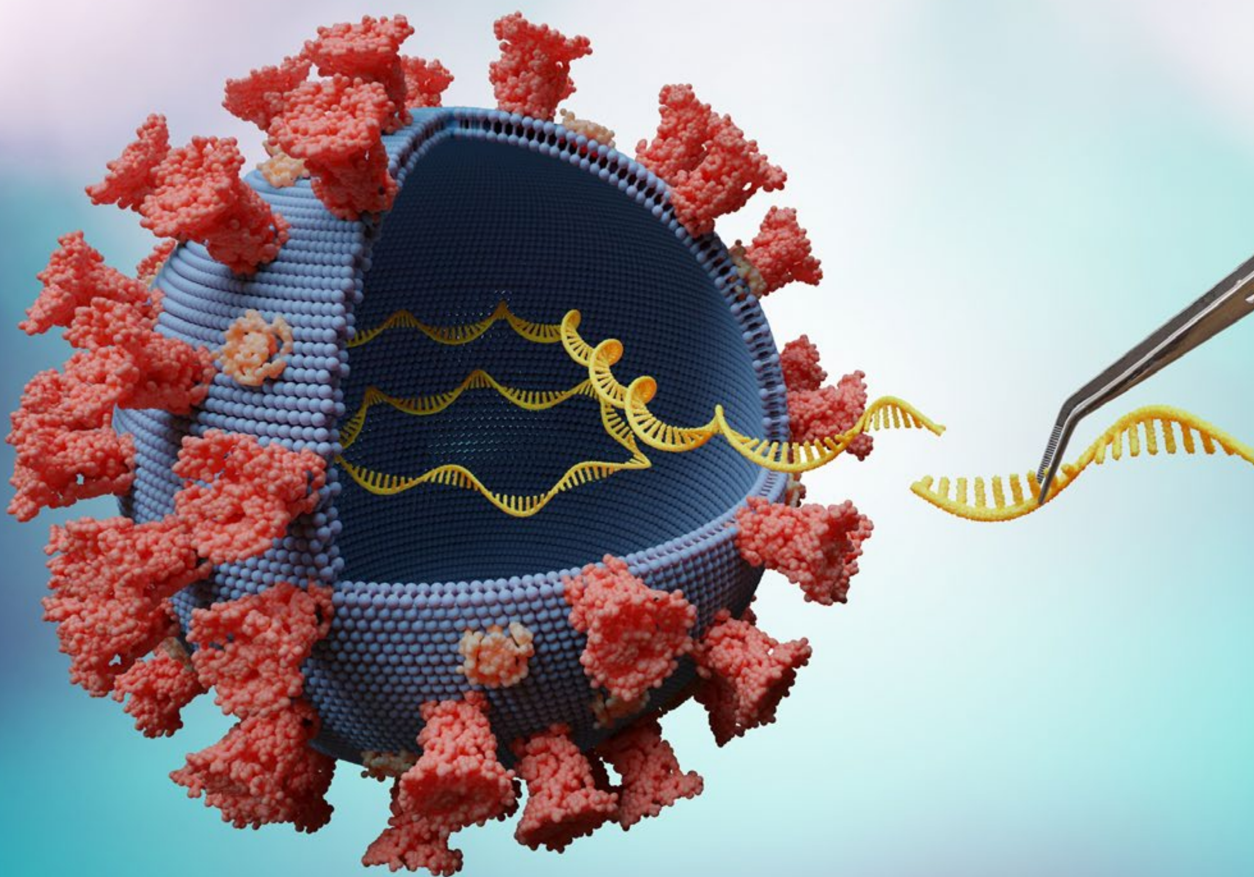
MagSi-NA Pathogens

FAST AND COST-EFFECTIVE
EXTRACTION OF TOTAL NUCLEIC ACIDS
FOR PATHOGEN DETECTION



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TOTAL NUCLEIC ACID EXTRACTION FOR PATHOGEN DETECTION

The MagSi-NA Pathogens kit allows cost-effective extraction of DNA and RNA from a variety of sample materials like serum, plasma, oropharyngeal swab / nasopharyngeal swab, or any other respiratory samples. Purified total nucleic acids can be used for qPCR based or any other enzymatic pathogen detection method. The ready-to-use reagents and simple protocol are convenient in use and easy to automate. The included MagSi-PA VII magnetic beads are optimized for fast separation even from viscous sample lysates.

FEATURES

- Short protocols, complete processing at room temperature possible
- Consistently high yield of total nucleic acids
- Very strong magnetic beads enable fast magnetic separation even from viscous sample lysates
- Suitable for many enzymatic down-stream applications including qPCR, qRT-PCR isothermal amplification
- Preparation time for 96 samples: <30 min

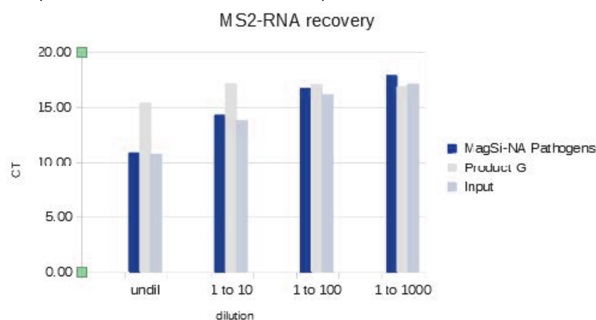

Figure 1: MS2 RNA recovery. Variable amounts of MS phage RNA were spiked to human serum samples. MS2 RNA was detected using a qRT-PCR assay. High recovery rates were obtained with reference to the spiked RNA (Input) and in comparison to a competitive kit (Product G).

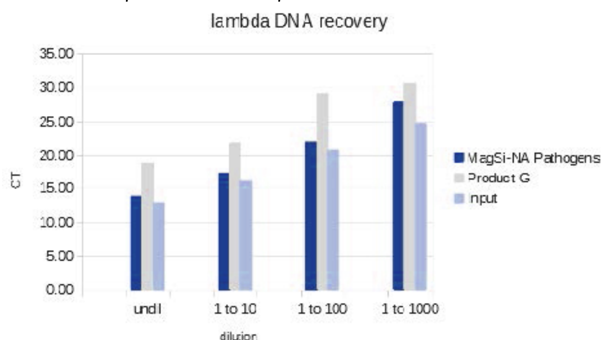

Figure 2: lambda DNA recovery. Variable amounts of lambda DNA were spiked to human serum samples. Lambda DNA was detected using a qPCR assay. High recovery rates were obtained with reference to the spiked DNA (input) and in comparison to a competitive kit (Product G).

The purification procedure starts with a liquid sample (e.g. serum/plasma, suspended stool, swab washes (obtained from dried swabs rinsed out in PBS buffer or saline) or swab transport medium (e.g. Copan eNAT etc.). Liquid sample is incubated with the optimized Lysis Buffer PA1. Typically a lysis incubation with shaking at room temperature is sufficient to release pathogen nucleic acids. Subsequently the MagSi-PA VII beads and Binding Buffer U1 are added. Following a binding incubation and magnetic separation the MagSi-PA VII beads are washed three times to remove inhibitors and contaminants. Finally the purified total nucleic acids are eluted at room temperature, magnetic beads are removed and the purified fraction containing nucleic acids can be directly used for further pathogen detection.

FLEXIBILITY

- Suitable for various sample materials
- Suitable for small, medium and high-throughput automation
- Small elution volumes

EASY TO AUTOMATE

- Minimal accessory requirements
- KingFisher™ / Biosprint 96 protocols available
- Consumables for KingFisher™ / Biosprint available
- Compatible with liquid handling robots (e.g. Hamilton®, TECAN®)
- Magnetic separators for microtubes and microplates available

Description	Pack Size	Catalogue No.
MagSi-NA Pathogens	96 preps	MDKT00210096
MagSi-NA Pathogens	10 x 96 preps	MDKT00210960

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE, U.K.
T: +44 (0) 1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141.
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Switzerland
Via Lisano 3
(CP.683)
6900 Massagno
T: +41 (0) 91 604 55 22
F: +41 (0) 91 605 17 85