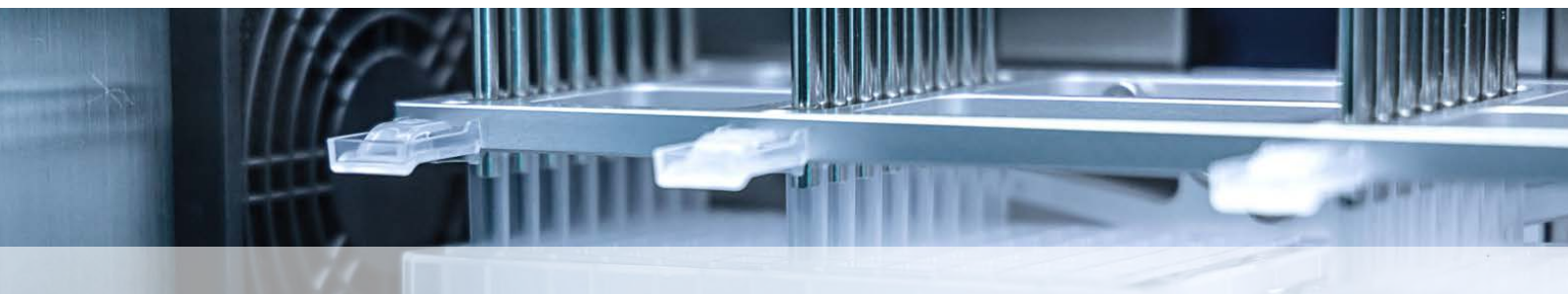


# IsoPure Mini – Cross-contamination tests



## Introduction

The IsoPure Mini is a bench-top robot device for automated nucleic acid extraction from various sample materials such as tissue, blood, food, plants, cell-free body fluids or environmental samples. It is ideally suited for low to medium sample throughput processing using the MACHEREY-NAGEL NucleoMag® kits.

The NucleoMag® procedure is based on reversible adsorption of nucleic acids to paramagnetic beads under appropriate buffer conditions. The magnetic rods of the IsoPure Mini device transfer the paramagnetic particles through the various purification steps of binding, mixing, washing and elution, thus guaranteeing minimal hands-on time. The IsoPure Mini allows parallel processing of up to 16 samples per run. The purified nucleic acids are of high quality and purity.

In the application data below, cross-contamination and reagent crossover were evaluated for the IsoPure Mini instrument using the NucleoMag® VET kit as an example.

IsoPure Mini (REF 747000)	
Description	Automated nucleic acid extraction instrument
Technology	Magnetic rods
Capacity	Up to 16 samples/run
Processing volume	Up to 1000 µL
Features	<ul style="list-style-type: none"> <li>Compact Bench-top robot (8" x 10")</li> <li>Easy-to-use touch screen</li> <li>Ready-to-use NucleoMag® scripts</li> <li>Built-in UV lamp for decontamination</li> <li>Built-in heating block for lysis and elution</li> <li>Android App and PC software compatible</li> <li>Pause function for emergency stop</li> <li>Open and flexible programming</li> <li>Intuitive method transfer via QR code scanning or bluetooth transfer</li> </ul>

The data on the right indicate a cross-contamination free workflow for the processing of MACHEREY-NAGEL NucleoMag® kits on the IsoPure Mini automated extraction robot. No qPCR signals were detected in the wells containing negative controls (RNase-free H<sub>2</sub>O).



IsoPure Mini nucleic acid extraction system

The IsoPure Mini is a minimal footprint nucleic acid extraction system adopting magnetic bead technology. The stand-alone instrument is capable of processing up to 16 samples at one time. Mixing, magnetic bead transfer, washing, and elution steps are performed fully automatically, providing a true walk-away DNA / RNA extraction solution.

	1	2	3	4	5	6	7	8	9	11	11	12
A	-					ND	+					27.06
B	+					27.25	-					ND
C	-					ND	+					27.25
D	+					27.20	-					ND
E	-					ND	+					27.31
F	+					27.19	-					ND
G	-					ND	+					27.24
H	+					27.33	-					ND
	Binding	1 <sup>st</sup> Wash	2 <sup>nd</sup> Wash	3 <sup>rd</sup> Wash	4 <sup>th</sup> Wash	Elution	Binding	1 <sup>st</sup> Wash	2 <sup>nd</sup> Wash	3 <sup>rd</sup> Wash	4 <sup>th</sup> Wash	Elution
	+	positive sample (saliva plus MS2 phage RNA spike)										
	-	negative control (RNase-free H <sub>2</sub> O)										

## NucleoMag® VET cross-contamination test

Positive (saliva spiked with MS2 phage RNA) and negative control (RNase-free H<sub>2</sub>O) samples (200 µL each) were arranged in an alternating pattern in the appropriate position on a 96-well deepwell plate and subjected to the NucleoMag® VET procedure on the IsoPure Mini automated extraction robot. Presence of spiked nucleic acids in the eluates (row 6 and 12) was examined by a qPCR Tagman probe assay for MS2 RNA (SensiFast™ Probe One-Step Lo-ROX kit from Meridian Bioscience®; Applied Biosystems® 7500 Real-Time PCR System). All positive samples were successfully amplified and detected (mean C<sub>t</sub> = 27.23 ± 0.08). Absence of qPCR signals (ND, C<sub>t</sub> undetermined) in the negative control samples indicate a cross contamination-free workflow.

NucleoMag® is a registered trademark of MACHEREY-NAGEL; IsoPure Mini is a brand of Accurus Instruments; SensiFast™ is a trademark of Meridian Bioscience®; Taqman® is a registered trademark of Roche Diagnostics.