

MagNA Pure 96 System

Start here. Go anywhere.





Start here.



The **MagNA Pure 96 System** is a high-throughput instrument for automated nucleic acid purification. Typical run duration is less than one hour for **96** standard volume samples. Experience high throughput automation combined with high performance while increasing your laboratory productivity to meet your changing needs.

- Isolate DNA, RNA, and viral nucleic acids from a wide range of starting materials
- Simplify your workflow with pre-programmed protocols tailored to different sample requirements
- Utilize proven magnetic glass particle technologies
- Rely on eluates suitable for a broad range of genomic applications
- Magnify your lab's efficiency with seamless data management
- Expand capacity for diverse day to day throughput needs

Go anywhere
with confidence.



"The MagNA Pure 96 System helps us maximize staff productivity, decrease our turnaround times, and accommodate fluctuations in testing demands at the peak of respiratory virus season without making significant changes to staffing and workflows. Overall, we are very happy with the MagNA Pure 96 System and with our Roche partnership."

MagNA Pure 96 reagent kits

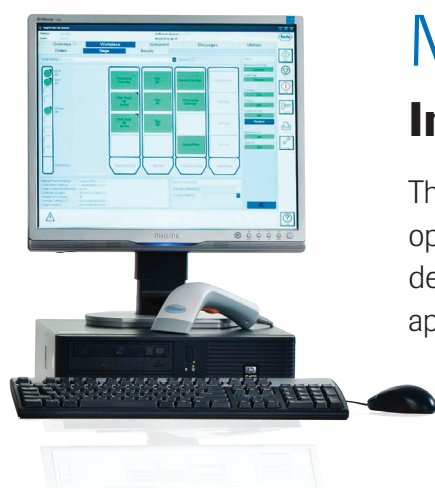
Prefilled, barcoded, and ready-to use

MagNA Pure 96 Kits are prefilled and ready-to-use reagent trays that can be easily loaded into racks, ensuring user ease and safety. These kits, as well as the consumables, are barcoded and read by the MagNA Pure onboard scanner for inventory check, loading errors, and process documentation.

Three kits that cover a large range of starting materials and targets

Reagents	Target	Starting material									
		Whole blood	Plasma	Cell culture	Serum	Body fluids	Fresh-frozen tissue	FFPE tissue	Swab	Stool	Sputum
MagNA Pure 96 DNA and Viral Nucleic Acid Small Volume Kit	Genomic DNA	●		●			●	●			
	Bacterial DNA	●	●	●	●	●			●	●	●
	Viral DNA/RNA	●	●	●	●	●			●	●	●
MagNA Pure 96 DNA and Viral Nucleic Acid Large Volume Kit	Genomic DNA	●		●			●				
	Bacterial DNA	●	●	●	●	●			●	●	●
	Viral DNA/RNA	●	●	●	●	●			●	●	●
	Cell-free NA		●								
MagNA Pure 96 Cellular RNA Large Volume Kit*	Total RNA	●		●			●	●			

* For life science research only. Not for use in diagnostic procedures.



MagNA Pure 96 Software

Intuitive user interface

The intuitive graphical user interface provides all instructions to operate the system, such as sample loading to run start. The software detects loading errors and provides information to the user for the appropriate corrective action.

Pediatric Hospital in the United States



Anatomy of a MagNA Pure 96 System

Effortless purification, confidence from automation

Proven performance

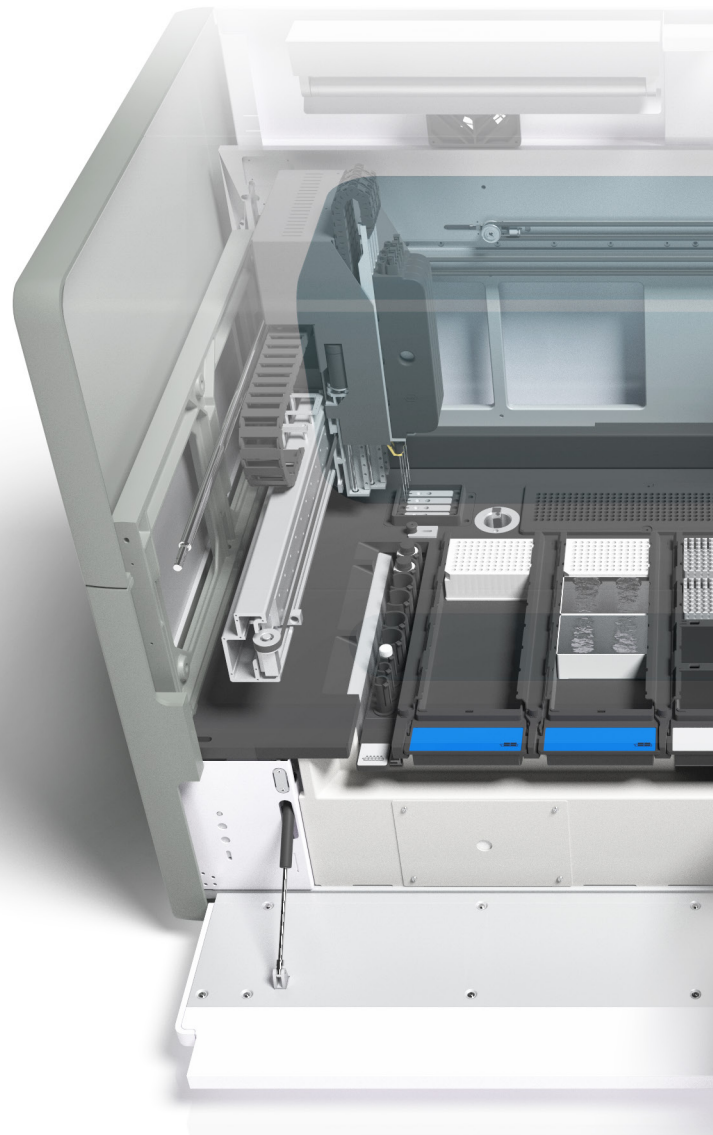
- ✔ Over 20 years of successful magnetic bead technology
- ✔ High quality extract with reproducible and consistent yields
- ✔ GMP-manufactured and IVD registered
- ✔ Dedicated, experienced support and service teams

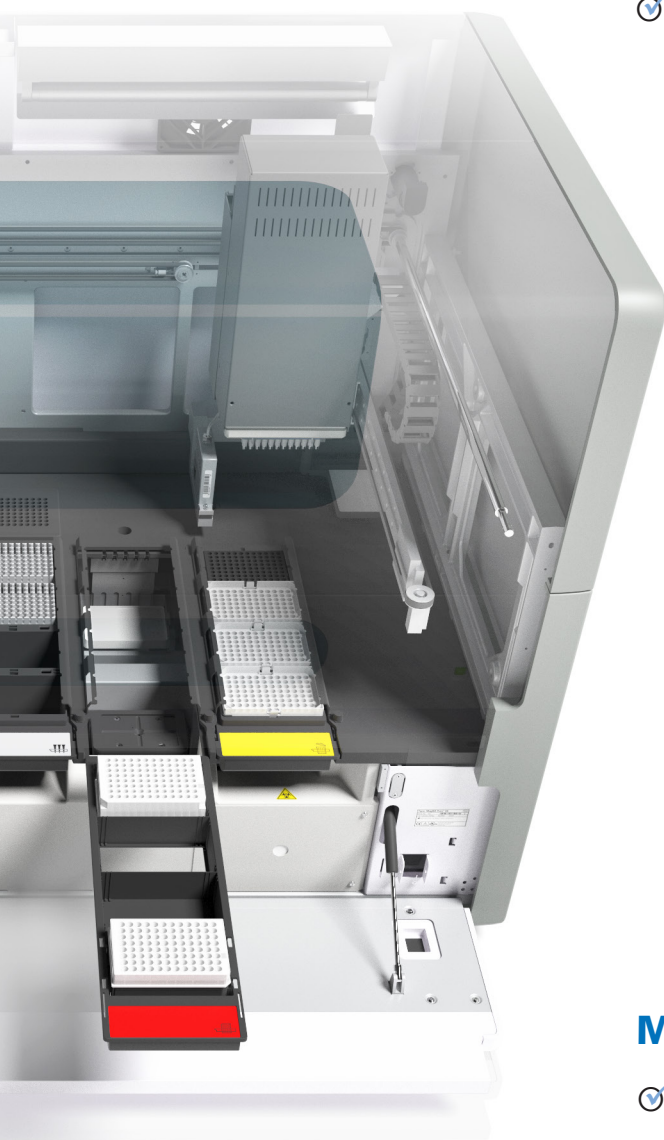
Simplified workflow

- ✔ Ready-to-use prefilled reagents
- ✔ Minimal consumables
- ✔ On-board barcode scanning for inventory
- ✔ Streamlined kit offering that purify a variety of nucleic acids
- ✔ Intuitive graphical interface

Contamination prevention

- ✔ UV lamp
- ✔ Drop catcher
- ✔ CO-RE Tip technology with stable lock-and-key fit which eliminates the risk of cross-contamination





Accelerated results

- ✓ 96 samples in less than one hour
- ✓ Parallel handling of all samples with 2 robotic arms
- ✓ Set-up in less than 5 minutes

Data management

- ✓ Software with audit trail and user management
- ✓ LIMS host connectivity

Optimized productivity

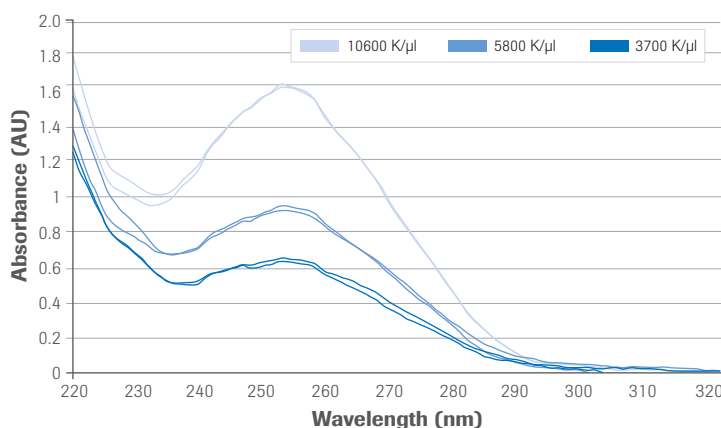
- ✓ Broad range of supported samples
- ✓ Pre-programmed protocols, including “Pathogen Universal” that extracts DNA and RNA from 10 common samples
- ✓ Eluate used for a variety of downstream applications

Minimized handling error

- ✓ Fully automated workflow
- ✓ Error detection with corrective action guidance
- ✓ Deck and volume surveillance
- ✓ Barcoding of kits and consumables

Flexibility for optimized productivity

Efficient purification



Experiment details

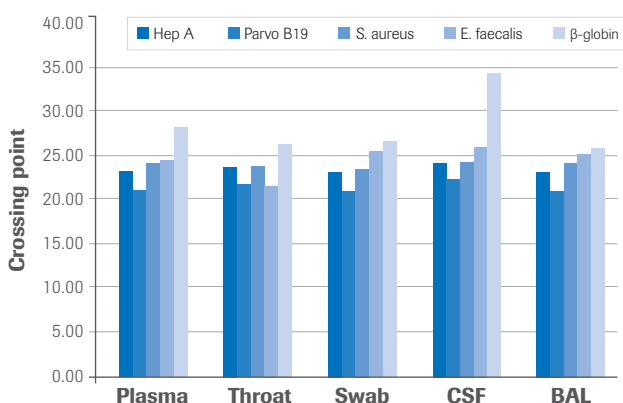
Kit: MagNA Pure 96 DNA and Viral NA SV Kit

Protocol: SV Blood protocol

Sample: Whole blood with various white blood cell counts (3700, 5800, 10600 K/μL)

DNA was measured with the UV-spectrophotometer. The alignment of the duplicate curves for the varying cell count indicates reproducibility and scalability of the MagNA Pure 96 System.

Flexibility along with convenience



A variety of targets from a wide range of sample types can be extracted efficiently on the MagNA Pure 96 System using one protocol, one kit, and within the same run as indicated by the crossing points detected on the Roche LightCycler® 480 Real-Time PCR Instrument*.

Experiment details

Kit: MagNA Pure 96 DNA and Viral NA LV Kit

Pretreatment: As described in Instructions for Use

Protocol: Pathogen Universal 1000

Sample: EDTA plasma, throat wash, swab, cerebrospinal fluid, bronchoalveolar lavage

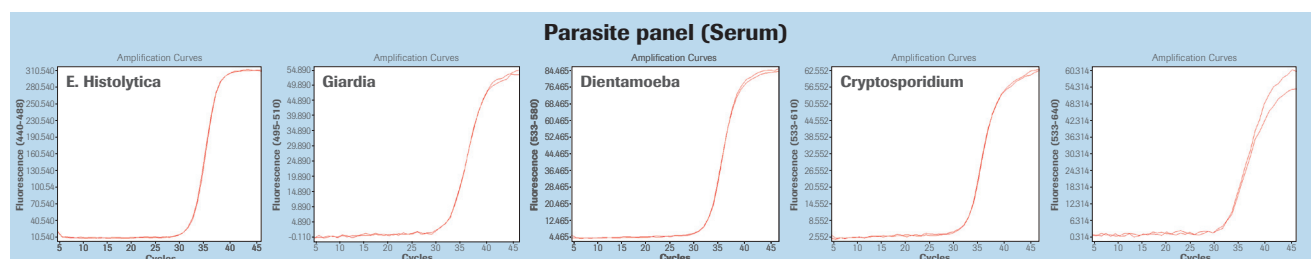
Pathogen spike-in: Hepatitis A virus (RNA virus), Parvo B19 virus (DNA virus), Staphylococcus aureus and Enterococcus faecalis (gram positive bacteria), β-globin (control)



“My lab techs have been so happy with the transition to the MagNA Pure 96 System. Setup takes less than 5 minutes and is very easy. We have moved almost all of our extractions to this instrument, and – across our sample types – it gives us highly consistent eluates.”

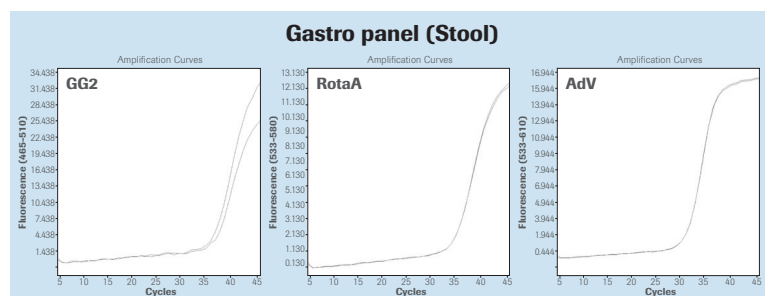
Increase efficiency in pathogen detection

The Roche workflow makes pathogen detection reliable and consistent. The high throughput MagNA Pure 96 System dramatically speeds up extraction by allowing different sample types to be supported by the same kit and protocols which enables faster downstream analysis. Increase efficiency even further with multiplex qPCR and assay panels offered by TIB MolBioI which can be run the LightCycler® 480 Instrument*.

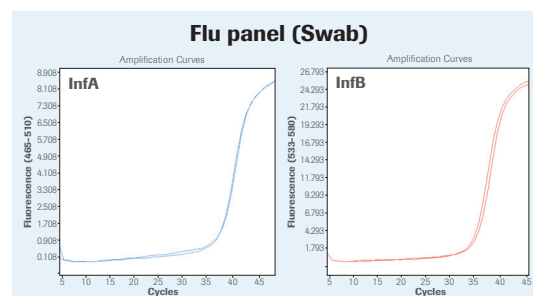


Parasite panel*	Channel	Cp	Std	Hits
E. Histolytica	440-488	29.6	0.1	2/2
Giardia	465-510	30.0	0.0	2/2
Dientamoeba	533-580	29.7	0.1	2/2
Cryptosporidium	533-610	29.6	0.1	2/2
Blastocystis	533-640	30.1	0.1	2/2

* For life science research only. Not for use in diagnostic procedures.



Gastro panel	Channel	Cp	Std	Hits
Norovirus GG2	465-510	35.1	0.2	2/2
Rotavirus A	533-580	33.0	0.0	2/2
Adenovirus V	533-610	29.2	0.0	2/2



Flu panel	Channel	Cp	Std	Hits
Influenza A	465-510	33.6	0.2	2/2
Influenza B	533-580	33.7	0.5	2/2

Experiment details

Kit: MagNA Pure 96 DNA and Viral NA SV Kit

Pretreatment: As described in IFU

Protocol: Pathogen Universal

Sample: Serum (Parasite panel), stool (Gastro panel), and swab (influenza panel)

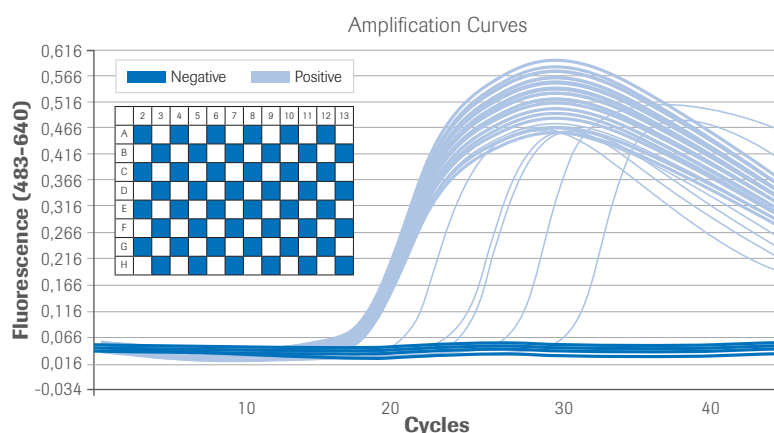
Women's Health Laboratory
in the United States



High throughput and scalability

Prevention of contamination

Three runs (each with 48 positive spiked plasma samples and 48 negative samples arranged in a checkerboard pattern) were extracted on the MagNA Pure 96 System and then analyzed on the LightCycler® 480 Instrument*. No cross-contamination was found.



Experiment details

Kit: MagNA Pure 96 DNA and Viral NA LV Kit

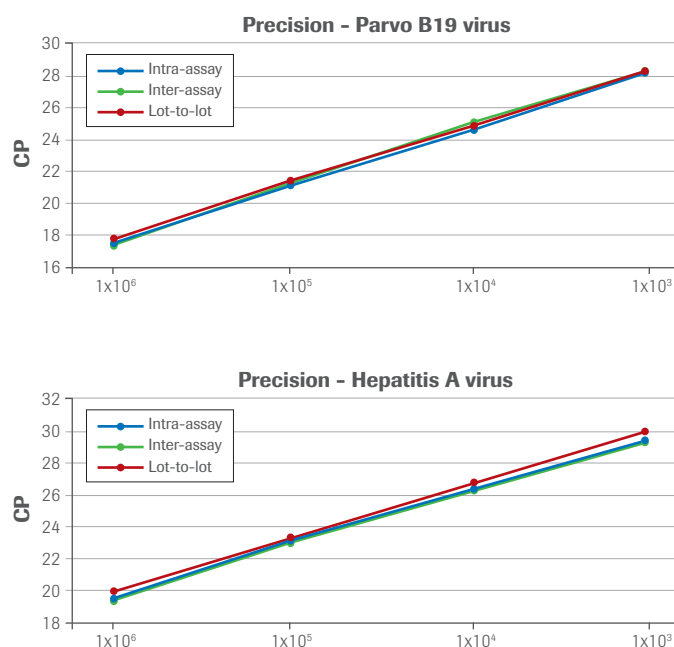
Protocol: Large Volume protocol (500µL)

Sample: EDTA plasma

Pathogen: Parvo B19 at 5×10^7 copies/mL (= 10^6 above detection limit)

Highly reproducible results

qPCR results from the MagNA Pure 96 System extracted samples are highly reproducible (CV < 2%) for intra-run and inter-run, and show reagents' lot-to-lot consistency.



Experiment details

Kit: MagNA Pure 96 DNA and Viral NA SV Kit

Protocol: Viral NA Universal SV

Sample: EDTA plasma

Intra-assay – single run, 8 replicates

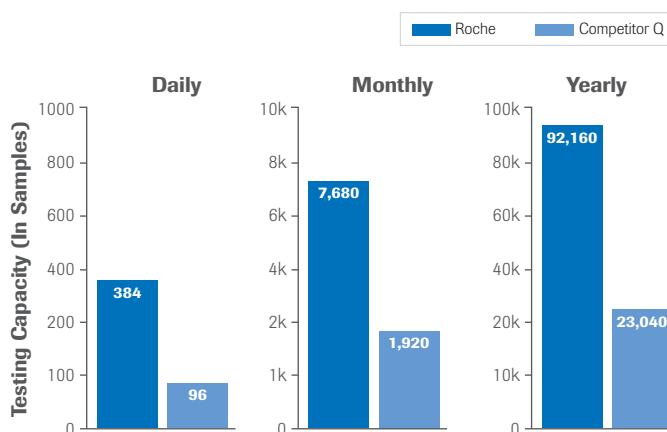
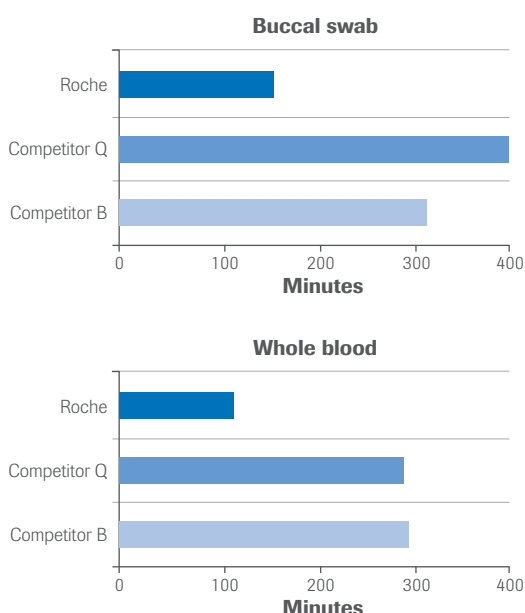
Inter-assay – 3 runs by different operators on different instruments in different labs

Lot-to lot – 6 different lots

Growing with your needs

Scale with ease

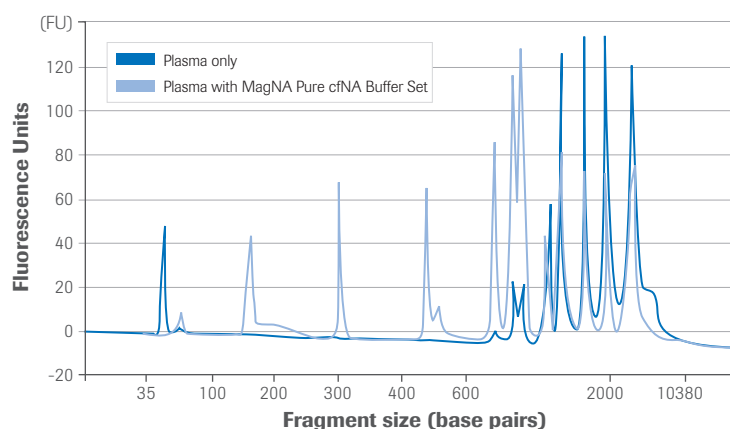
Go anywhere with scalability for your lab's growth. The MagNA Pure 96 System is significantly faster than two other competitor brands. When considering daily, monthly and yearly capacity needs, the MagNA Pure 96 System provides increased ability to meet growth and testing fluctuations.^{1,2}



(1) Source: extraction instrument comparison; clinical lab consulting, 2016
(2) Assumes 8 work hour day and whole blood extraction protocol

Beyond extraction

Unlock more of the answers you need with the new 4 mL volume protocol for circulating cell-free nucleic acids (cfNA) on the MagNA Pure 96 System by preferentially isolating smaller size fragments. Adapt to fluctuating demand with the only platform to have the scalability of up to 48 cfNA extractions in one run and rely on pre-optimized cfNA protocols to address specific eluate needs for a broad range of downstream genomic applications, including real-time PCR, arrays, and next-generation sequencing.



Experiment details

Kit: MagNA Pure 96 DNA and Viral NA LV Kit
Pretreatment: MagNA Pure cfNA Buffer Set

Protocol: cfNA ds 4000

Sample: EDTA plasma

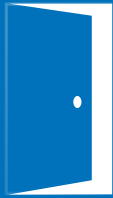
Spike in: DNA ladder (0.05, 0.15, 0.3, 0.5, 0.766, 1, 1.5, 2, 3, 5, 10kb)

Intra-assay – single run, 8 replicates

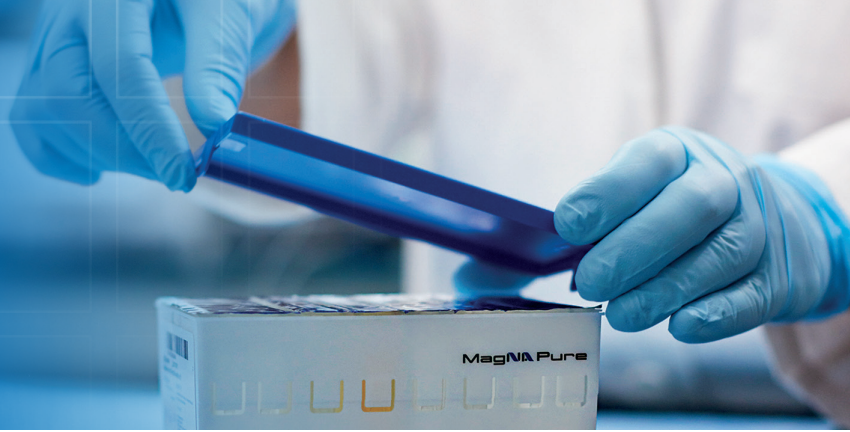
Inter-assay – 3 runs by different operators on different instruments in different labs

Lot-to lot – 6 different lots

Bioanalyzer data demonstrates a shift in extraction size capture with the MagNA Pure 96 DNA and Viral NA LV Kit (dark blue) and when MagNA Pure cfNA Buffer Set is used to enhance small fragment isolation (light blue). Enhance your studies in the genomic world with new protocols and solutions now offered on the MagNA Pure 96 System.



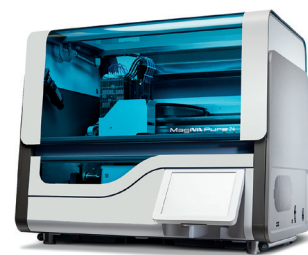
Start here.



The **MagNA Pure 96 System** family ensures purity, reproducibility, and laboratory efficiency obtained only by automated bead-based extraction. Whether your lab extracts just a few samples or thousands in one day, the MagNA Pure family has a fully automated extraction to meet your scalable needs.

From low throughput days

- Simplified sample preparation for dramatic reduction of handling errors
- Preloaded protocols for a broad range of sample types
- Pre-filled and barcoded reagent kits
- Intuitive software and guidance

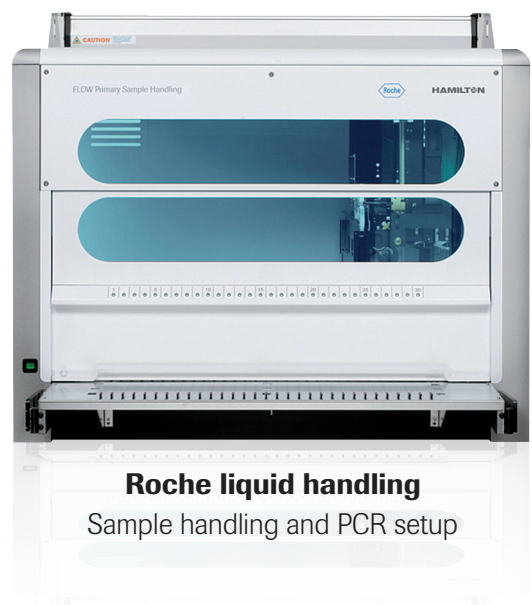


MagNA Pure 24 System

1-24 samples

To high demand times

Expand throughput and automation with Roche liquid handling which combines primary sample handling and PCR setup in one pipetting instrument.



Roche liquid handling

Sample handling and PCR setup

MagNA Pure 96 System

Technical specifications

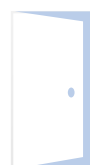
General	
Configuration	Benchtop standalone instrument with separate control unit
Number of samples	1 to 96 reactions per run
Sample input volume	50 µL to 1 mL Up to 4 mL for Plasma sample
Elution volume	50 to 200 µL
Run time	Approximately 50 to 90 minutes depending on protocol
Setup time	Approximately 5 minutes
Regulatory label	For <i>in vitro</i> diagnostic use. Compliant with IVD directive 98/79/EC

Software and connectivity	
Traceability	21CFR part 11 (subsection B), Audit trail, Process monitoring, User guidance
Data export	*.xml, LightCycler® sample input file in csv format (*.txt)
Interfaces	USB, LAN 10/100/1000 Base T, LAN 10/100 Base
Connectivity	LIMS (e.g., via HL7 transfer protocol), Bidirectional file sharing, remote Roche service with Axeda

Hardware	
Dimensions	W x D x H: 136 x 81.5 x 100 cm
Weight	235 kg
Process parallelization and speed	Two robotic heads: (1) Reagent head pipetting arm with four individually controlled fluid channels to transfer reagents and (2) 96-nozzle process head to transfer and process samples in parallel.
Contamination control	Drop catcher, UV Lamp, dual robotic arm engineering

Kits and applications	
Reagent design	Pre-filled, ready-to-use
Unopened kit storage	+15 to +25°C
Kit re-use	Up to 28 days after first use
Isolation principle	Magnetic glass particle technology
Nucleic acids	DNA, tNA, viral NA, total RNA, cell-free NA
Supported sample types	Whole blood, plasma, serum, fresh-frozen tissue, FFPE tissue, bacterial and cell cultures, urine, swabs, sputum, CSF, BAL, stool
Protocols	>30

Go Anywhere.



Ordering information

MagNA Pure 96 Instrument, kits, and consumables

Product name	Catalog #	Content
1. Instrument		
MagNA Pure 96 Instrument	06 541 089 001	Instrument, control unit, software, accessories
2. Reagent Kits and Lysis Buffers		
MagNA Pure 96 DNA and Viral NA LV Kit	06 374 891 001	Up to 288 isolations
MagNA Pure 96 DNA and Viral NA SV Kit	06 543 588 001	Up to 596 isolations
MagNA Pure 96 Cellular RNA LV Kit*	05 467 535 001	Up to 288 isolations
MagNA Pure 96 System Fluid (Internal)	06 430 112 001	2 containers
MagNA Pure 96 System Fluid (External)	06 640 729 001	1 container
MagNA Pure 96 External Lysis Buffer	06 374 913 001	100 mL
MagNA Pure 96 Bacterial Lysis Buffer	06 374 921 001	20 mL
MagNA Pure 96 DNA Tissue Lysis Buffer	06 640 702 001	200 mL
MagNA Pure cfNA Buffer Set†	07 794 398 001	Up to 96 isolations
MagNA Pure FFPET Buffer Set†	08 447 144 001	Up to 200 samples
S.T.A.R. Buffer	03 335 208 001	300 mL
3. Consumables		
MagNA Pure 96 Processing Cartridge	06 241 603 001	36
MagNA Pure 96 Output Plate	06 241 611 001	60
MagNA Pure Filter Tip 1000µl	06 241 620 001	8x5
MagNA Pure Sealing Foil†	06 241 638 001	100
MagNA Pure 96 Internal Control Tube	06 374 905 001	150 (15x10)



For more information or general inquiries, or to obtain updated protocols, please contact your local Roche representative or visit magnapure96.com

Published by
Roche Molecular Systems, Inc
4300 Hacienda Drive
Pleasanton, CA 94588 USA

All MagNA Pure 96 kits, consumables, and accessories are for in vitro diagnostic unless otherwise noted.

* For life science research only. Not for use in diagnostic procedures.

† For general laboratory use.

MAGNA PURE and LIGHTCYCLER are registered trademarks of Roche. All other product names and trademarks are the property of their respective owners.

© 2019 Roche Molecular Systems, Inc. All rights reserved.

MC--03479 12.2019

MC--03479