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Product Name: ADNap 20 Automated nucleic acid extraction system

Part Number:

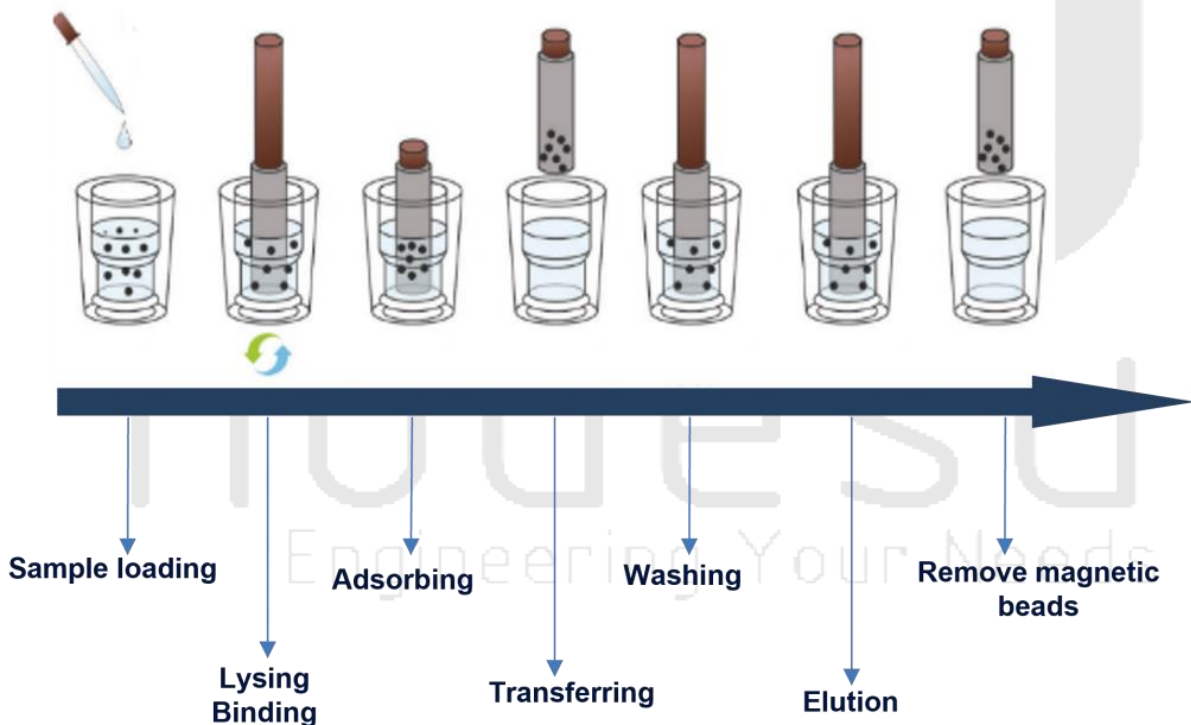
Product Description:

ADNap 20 Automated nucleic acid extraction system

ADNap 20 is a fully automated bench top system for high-throughput extraction of nucleic acids from a variety of sources. The system relies on an automated 96-channel magnetic head for reliable and rapid extraction of high-quality nucleic acids. Like all of Aurora's liquid handlers, this system is open and flexible.

Principle

The ADNap 20 uses a 96-channel head of magnetic bars combined with disposable tip combs to mix and transfer magnetic beads. The magnetic bars move up and down, allowing mixing of the reagents and beads following lysis. Once the magnetic beads collect at the bottom of the tip comb (that surrounds the magnetic rods) the magnetic head moves to a different plate and the beads are released into the new plate by moving the magnetic rods out of the tip comb. This process is repeated for bead washing and elution steps.



[GET MORE INFORMATION ON ADNap 20](#)

Applications

Extracted nucleic acids can be used for a number of applications including

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- High throughput genomic applications such as next generation sequencing.
- Processing samples for genetic testing
- Microbiome research including infectious diseases.
- Drug development.

Features and Benefits

Compact bench top system

High quality and reproducibility

Open and flexible system.

Easy to use touch-screen interface.

Stores up to 1000 different programs

Heating blocks (up to 90 °C)

Built-in UV lamp combined with the use of disposable magnetic tip combs and extraction tubes delivers effective and decontamination

Typical extraction workflow on the ADNap 20



Plate prep
~15 mins



Program selection
1 min



Plate loading
1 min



Start run



Run time
30-60 mins

The ADNap series



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96-channel magnetic head



32-channel magnetic head



16-channel magnetic head

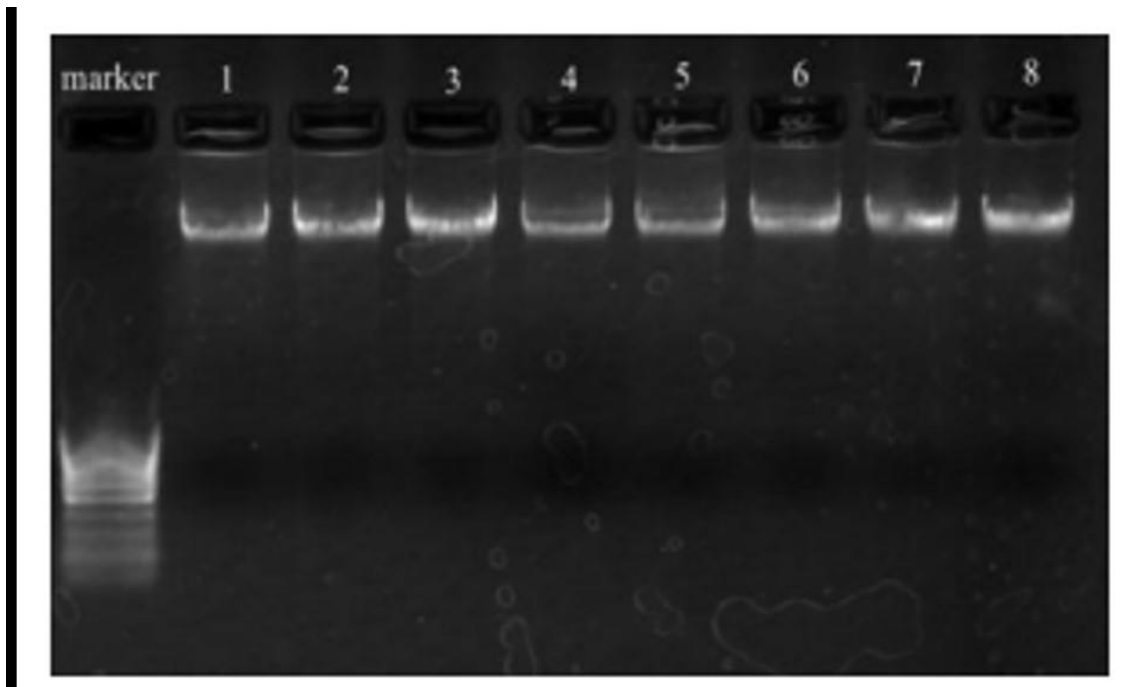
Performance

Positive COVID-19 samples (n=20) were extracted by three different methods (reagents), and the positivity detection rates were compared. Saliva samples were diluted with normal saline at 1:9 dilution and made up to 50 and 30 copies/mL of the viral culture.

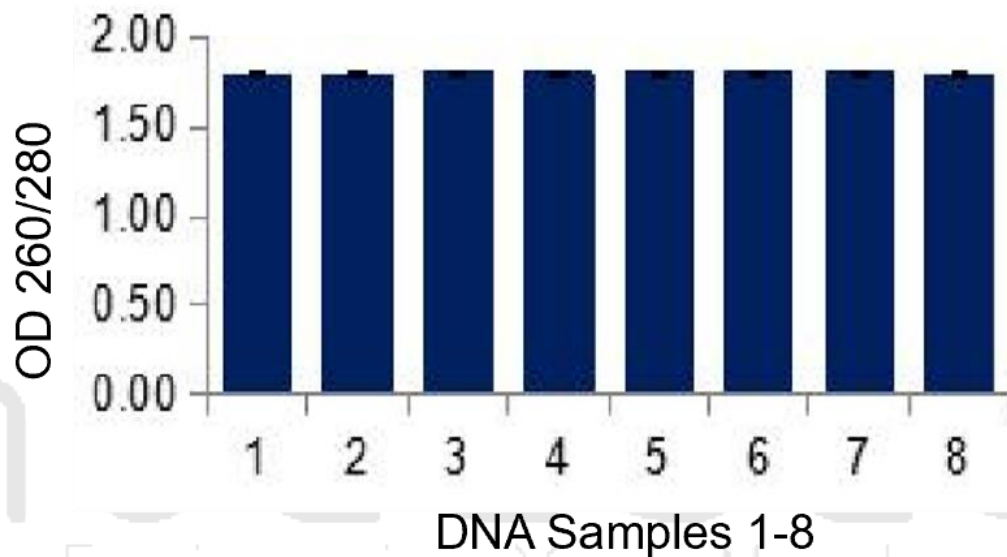
COVID-19 viral target gene sequence	<i>Orf1ab</i>	<i>Nucleoprotein (N)</i>
50 copies/mL	Detection rate	100.00%
	Positive rate	100.00%
30 copies/mL	Detection rate	80.00%
	Positive rate	95.00%

Gel electrophoresis and nanodrop readings of DNA extracted from whole blood.

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Agarose gel electrophoresis of gDNA samples from blood shows high yield of genomic DNA using ADNAP-20. The bands are clear without smearing indicating pure and undegraded gDNA



Nanodrop readings of DNA extracted from whole blood. The readings are around the 1.8 value indicating pure gDNA

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Product Specification

MODELS	ADNAP 20 (96)	ADNAP 20 (32)	ADNAP 20 (16)
Samples per run	96	32	16
Processing volume	20-1000 μ L	30-1000 μ L	30-1000 μ L
Sample volume	\leq 500 μ L	\leq 500 μ L	\leq 500 μ L
Deep well disc	96 well	96 well	96 well
Magnetic rods	96 pieces	32 pieces	16 pieces
Consumables	SBS Standard 2.2mL Square 96-deep well plate + 96 Tip comb	SBS Standard 2.2mL Square 96-deep well plate + 96 Tip comb	SBS Standard 2.2mL Square 96-deep well plate + 96 Tip comb
Purification sensitivity	>95% positivity detection at 100 copies/mL sample	>95% positivity detection at 100 copies/mL sample	>95% positivity detection at 100 copies/mL sample
CV	<1%	<3%	<3%
Heating blocks	up to 90°C	up to 120°C	up to 120°C
Mixing	speed adjustable	speed adjustable	speed adjustable
Processed bead size	>100nm	>100nm	>100nm
Reagent type	Magnetic bead-based reagents	Magnetic bead-based reagents	Magnetic bead-based reagents
Operation interface	7-inch touch screen display	10-inch touch screen display	7-inch touch screen display
Internal procedure	It can store more than 1000 programs, and each program can store more than 1000 steps	It can store more than 1000 programs, and each program can store more than 1000 steps	It can store more than 1000 programs, and each program can store more than 1000 steps
Program management	Create, edit, delete, copy programs using touch screen display	Create, edit, delete, copy programs using touch screen display	Create, edit, delete, copy programs using touch screen display
UV light	Yes	Yes	Yes
Exhaust mode	Negative pressure	Negative pressure	Negative pressure
Run time	15-30 minutes/run (time depends on specific kits/ reagents used)	15-30 minutes/run (time depends on specific kits/ reagents used)	15-30 minutes/run (time depends on specific kits/ reagents used)
Weight	55 Kg	35 Kg	12 Kg
Dimension (L *W * H)	60 cm x 50 cm x 50 cm	40 cm x 40 cm x 45 cm	25 cm x 32 cm x 27.5 cm