A&A BIOTECHNOLOGY
innovating life science

Manual

MagnifiQ™ 1 Plasmid Mini instant kit

Kit for automated, magnetic isolation of plasmid DNA in the strip format. Contains ready-to-use, reagent-filled strips and all necessary consumables.

catalog #	size	compatible devices *
620A-1V-32	32 isolations	Auto-Pure Mini Auto-Pure S32
620A-1V-160	160 isolations	Auto-Pure Mini Auto-Pure S32

*** Compatible devices**
The kit has been tested with specific Allsheng brand isolation devices. This does not preclude it from working with other devices. If your device is not listed, please contact us at info@aabiot.com.

For research use only.

Guarantee
A&A Biotechnology provides a guarantee on this product.
The company does not guarantee the correct performance of this kit in the event of:

- not adhering to the supplied protocol
- use of not recommended equipment or materials
- use of other reagents than recommended or which are not a component of the product
- use of expired or improperly stored product or its components.

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Advantages

- Requires only a few minutes of manual work while adding the samples. The rest of the procedure is carried out in an automatic extraction device.
- No need of the initial preparation of buffers. Just add samples to the strip and after about 30 min you get extracted material.

Specification

protocol time	~30 min
sample type	bacterial cultures
sample size	up to 3 ml
elution volume	60 µl
elution solution	Tris buffer
binding capacity	30 µg DNA
downstream applications	PCR, real-time PCR, sequencing

Description

MagnifiQ™ 1 Plasmid Mini instant kit is designed for high-copy plasmid DNA isolation. The isolated material is perfect for further analyzes and tests by PCR and real-time PCR methods and for sequencing.

The **MagnifiQ™** product series is based on the automated isolation of nucleic acids with use of magnetic beads.
This method significantly shortens working time and reduces risk of mistake in comparison to manual methods.

Contents

	620A-1V-32		620A-1V-160		
component	**quantity**	**cat #**	**quantity**	**cat #**	**storage**
XS-P - extraction strip	4 x 8 pcs	K-S1V22XP	20 x 8 pcs	K-S1V22XP	15–25 °C
L1 cell suspension solution	10 ml	K-L1-10	45 ml	K-L1-45	2–8 °C
L2 lysis solution	10 ml	K-L2-10	45 ml	K-L2-45	15–25 °C
L3 neutralizing solution	10 ml	K-L3-10	45 ml	K-L3-45	15–25 °C
tip comb 8	16 pcs	K-C8U-16	2 x 40 pcs	K-C8U-40	15–25 °C

Additional equipment and reagents

Necessary

- 2 ml Eppendorf tubes (sample lysis)
- pipette
- pipette tips

Optional

- centrifuge

Important notes

- SDS detergent is a component of **L2** lysis solution and precipitates at low temperatures. Whenever the L2 lysis solution is not clearly transparent it must be warmed at 40 °C to form a thoroughly clear solution.

Material preparation

Material preparation is based on the LySee visual control system. For more information, see the Additional information.

1. Centrifuge up to **3 ml** (**1.5-3 ml**) of overnight bacterial culture.
   Discard the supernatant.

2. Suspend the bacterial pellet in **250 µl** of **L1** cell suspension solution.

   Attention. During the pellet suspension, the solution will change color from a transparent deep pink to opaque light pink. The suspension is completed with complete disappearance of the pellet at the bottom tube.

3. Add **250 µl** of **L2** lysis solution and gently mix.

   Attention. After the addition of L2 lysis solution, gently mix the tube to avoid fragmentation of the chromosomal DNA. Gently mix the tube by inverting a few times. The mixture should change appearance and color.

4. Keep for **3 min** at **room temp**.

   Attention. After 3 min of incubation, the lysate must be completely clear and uniformly raspberry. If not, mix the lysate a few times and incubate again for 3 min at room temp.

5. Add **250 µl** of **L3** neutralizing solution and gently mix until the disappearance of the raspberry color of the lysate.

   Attention. After the addition of L3 neutralizing solution followed by the rapid precipitation of the potassium salts SDS, chromosomal DNA and certain proteins. After mixing, the tube contents should change the color to yellowish. No traces of raspberry color indicates complete neutralization and successful ending of the alkaline lysis.

6. Centrifuge for **10 min** at **10 000-15 000 RPM**.

7. **Attention.** In the isolation protocol, use the supernatant as the sample.

   Follow point 1. of the protocol.

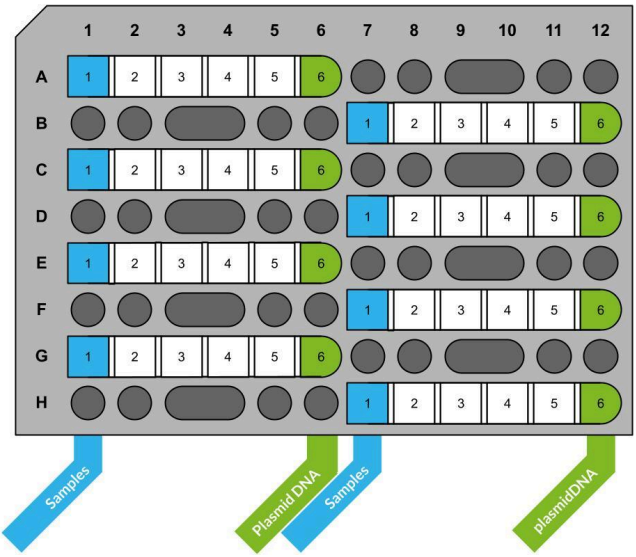
Protocol

Protocol files

device	protocol name	protocol file	installation
Auto-Pure Mini	MQ-PSD-MI	aabiot.com/protocols/magnifiq/MI/MQ-PSD-MI.txt	1. Create folder "items" on a USB drive and copy the protocol file to it. 2. Insert the USB drive into a USB slot in the device. 3. On a device screen, go to Settings > System > Transfer >Import. 4. Select the protocol and tap "Import".
Auto-Pure Mini (QR code)	MQ-PSD-MI		1. On a device screen, go to Run > ☰ > ⌜⌝ 2. Scan the QR code with the device's scanner.
Auto-Pure S32	MQ_PSD_S32	aabiot.com/protocols/magnifiq/S32/MQ_PSD_S32.txt	1. Create folder "im_export_protocols" on a USB drive and copy the protocol file to it. 2. Insert the USB drive into a USB slot in the device. 3. On a device screen, go to Protocols >Import. 4. Select the protocol and tap "Import".

Extraction protocol

1. Place **XS-P** strips in the rack.



2. Remove the foil from the **XS-P** stripes starting from well **6**.

Note. The wells are numbered on the side of the strip. Well **6** is distinguished by a rounded edge.

Carefully peel back the foil by removing it slowly at an approximately 45° angle so that all plastic comes off the top of the strip/cartridge. Ensure that all foil and any residual adhesive are completely removed before placing stripes/cartridges in the extraction device (see figure).

3. Add **up to 600 µl** of samples to the well **1** (first from the left) on the **XS-P** strip.

4. Place the rack in the extraction device.

5. Place the appropriate number of **tip combs 8** in the extraction device.

6. Run the protocol on your device.

7. After the program is over, remove the combs and then remove the rack from the extraction device and transfer the plasmid DNA located in well **6** (first from the right) on the **XS-P** strip into sterile tubes (not included).

Note. Store extracted material at 4 °C for DNA.

Additional information

LySee color system

The LySee color system enables an easy and convenient visual control of alkaline lysis. The visual control system prevents common handling errors of incomplete cell resuspension, inefficient cell lysis and incomplete precipitation of unwanted cell components.

Resuspension and lysis

The addition of the transparent purple **L1** color cell suspension solution to the bacterial cell pellet makes the bacterial cell pellet easy to localize (fig 1). During the suspension of the bacterial cell pellet, the solution turns opaque light pink (fig 2). The suspension is completed with the complete disappearance of the pellet at the bottom of the tube. After the addition of **L2** lysis solution and incubation, the lysate turns transparent raspberry. Cell lysis is completed when the solution turns homogeneously transparent raspberry (fig 3).

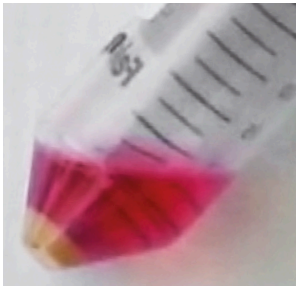


fig. 1

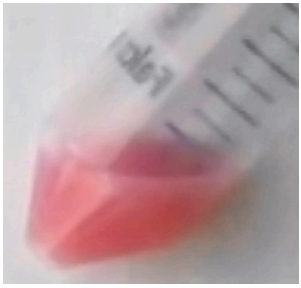


fig. 2

fig. 3

Neutralization and precipitation

The addition of the **L3** neutralizing solution causes rapid precipitation of potassium salts SDS, chromosomal DNA and some proteins (fig 4). After mixing, the solution turns yellowish (fig 5). No traces of raspberry color indicates complete neutralization and successful ending of alkaline lysis (fig 6).

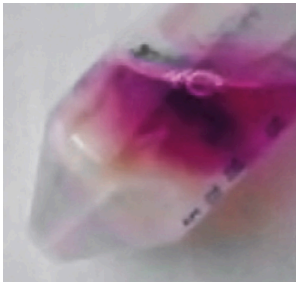


fig. 4

fig. 5

fig. 6

Safety information

WARNING

L2 lysis solution

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
P261 Avoid breathing dust.
P305+P351+P338 If in eyes: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P342+P311 If experiencing respiratory symptoms call a Poison Center or doctor/physician.

DANGER

XS-P - extraction strip

H225 Highly flammable liquid and vapor
H336 May cause drowsiness or dizziness.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261 Avoid breathing vapors.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical advice/care if necessary.

A&A BIOTECHNOLOGY

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A&A Biotechnology, Strzelca 40, 80-299 Gdańsk
tel. 883 323 761, 600 776 268
info@aabiot.com, www.aabiot.com

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