

Universal Negative Pressure Unit

Product Number: NP96098

Shipping and Storage

The negative pressure device needs to be stored under cool and dry conditions.

Components

Component	NP96098	NP96098-3	NP96098-4	NP96098-5	NP96098-6
Base	1	1	1	1	1
Waste tray	1	1	1	1	1
Top plate with aperture	1	1	2	-	-
6 mm Pad	1	1	1+	-	-
12 mm Pad	-	-	-	-	1
15 mm Pad	1	1	1	-	-
26 mm Pad	1	1	-	-	-
12-Position spin column lid	-	-	-	1	-
12-Position collection tube rack	-	-	-	1	-
Connectors	-	-	-	12	-
Sealing plugs	-	-	-	12	-
The screw	-	-	-	-	2
Vacuum gauge	1	1	1	1	1
Pipe 1	1	1	1	1	1
Pipe 2	1	1	1	1	1
Handbook	1	1	1	1	1

Description

The negative pressure device is designed specifically for applications such as high-throughput nucleic acid extraction and purification, solid-phase extraction, protein precipitation, and Oligo synthesis. It can be adapted to 48/96/384 well plates and Ruhr interface adsorption columns, avoiding the repeated suction, centrifugation, and liquid transfer operations in traditional methods, thereby simplifying the steps of nucleic acid extraction and other applications.

The device is made of integral corrosion-resistant materials, and its compact and sturdy design ensures uniform negative pressure extraction flow rate, excellent stability, and good reproducibility.

1. Oligo synthesis dedicated negative pressure device: suitable for deprotection, ammonolysis and other processes of Oligo synthesis;
2. Universal negative pressure device: suitable for nucleic acid extraction and purification, solid-phase extraction, protein precipitation, phospholipid and other matrix removal QuEChERS and other applications;
3. Double room negative pressure device: achieving synchronous filtration/extraction, suitable for applications such as nucleic acid extraction and purification, solid-phase extraction, protein precipitation, phospholipid matrix removal, etc;
4. Ruhr interface negative pressure device: suitable for nucleic acid extraction and purification of large volume samples.

Application

The negative pressure device is only used for laboratory research and should not be used for pharmaceutical, clinical diagnosis, food, cosmetics, and other purposes.

Note

1. It is recommended to wear personal protective equipment such as safety goggles and gloves when using this device;
2. Ensure that the negative pressure device is placed in a safe area to prevent damage to the negative pressure device.

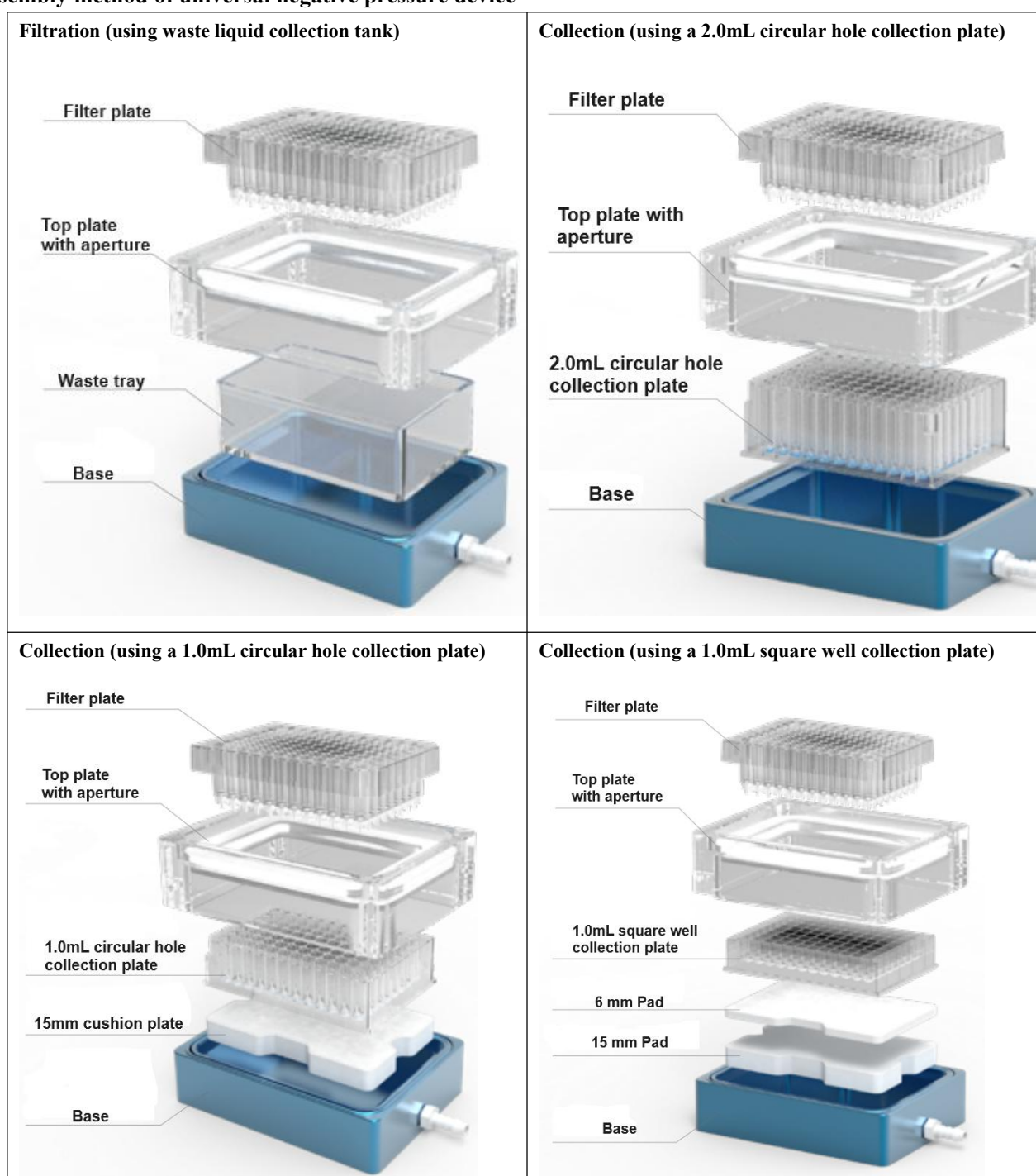
Quality assurance

The warranty period for negative pressure devices is one year.

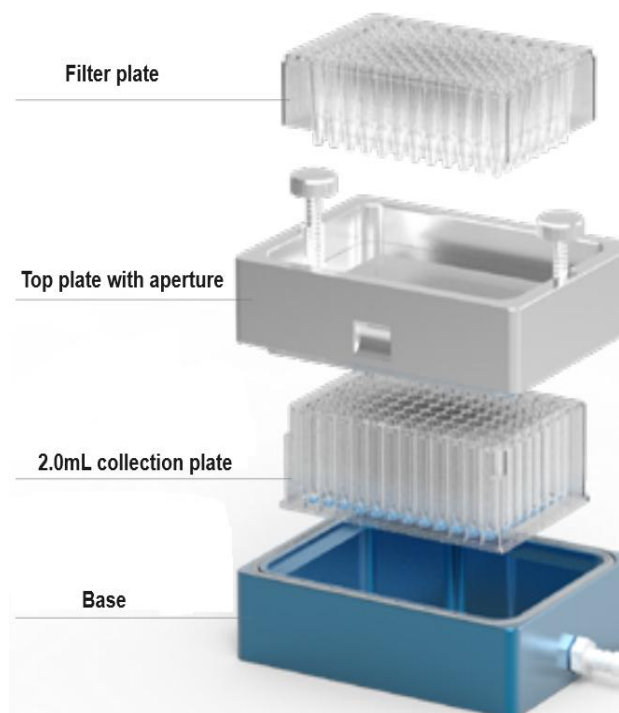
During the warranty period, if the following situations occur, Doudou Biological will replace the damaged parts for you free of charge:

1. Defects caused by product design and production;
2. Wear of components caused by non-human factors during normal use.

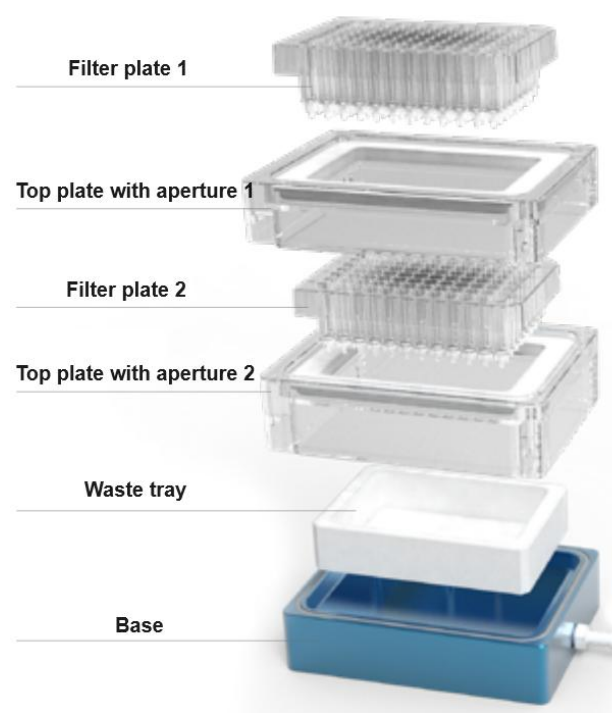
Assembly method of universal negative pressure device



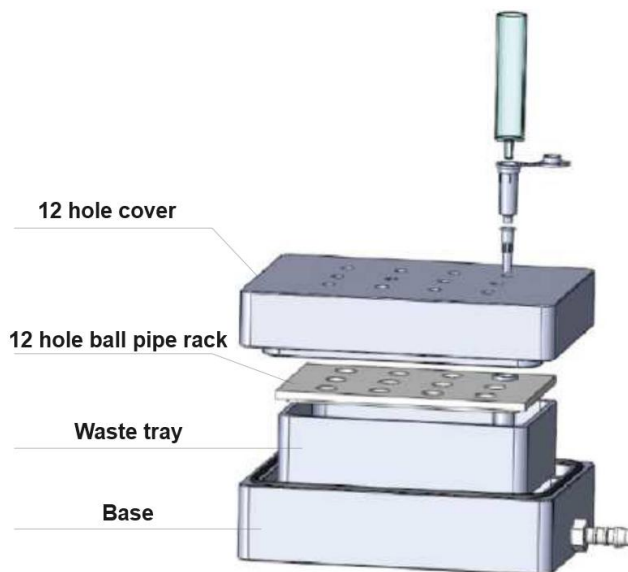
Synthetic negative pressure device



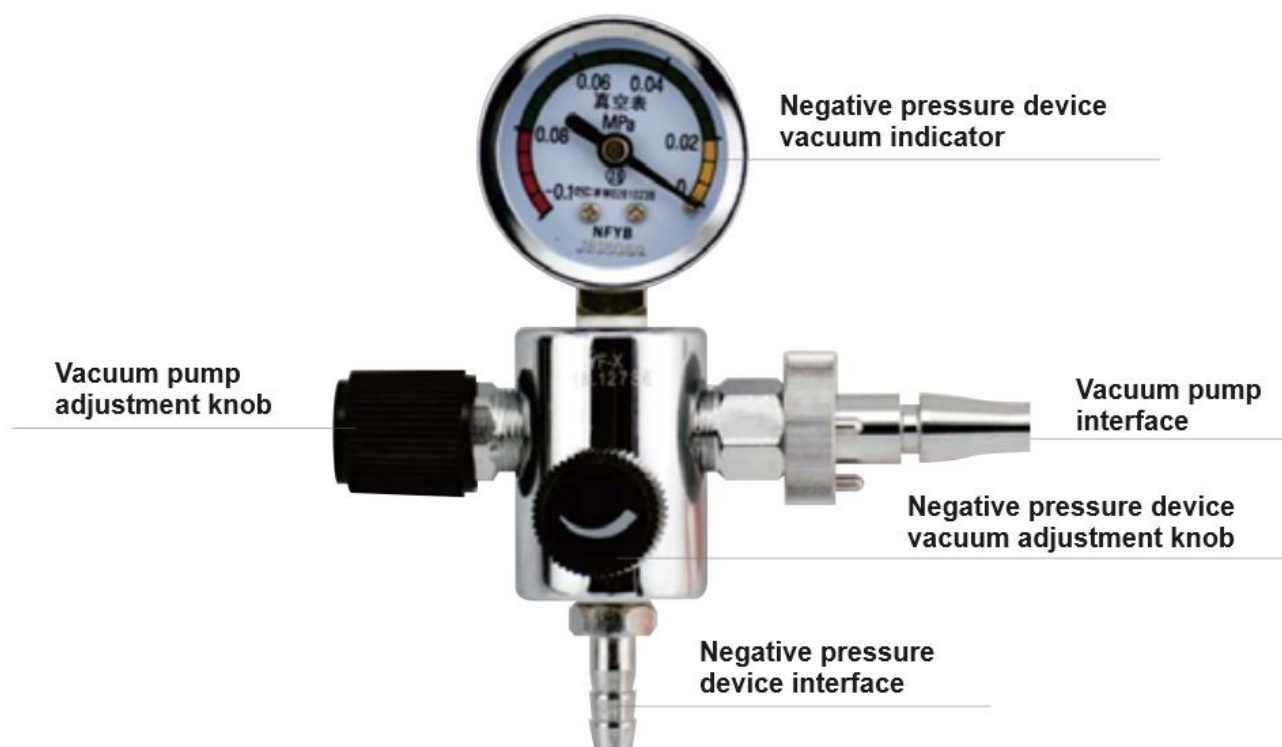
Double layer negative pressure device



Ruhr interface negative pressure device



Vacuum pressure gauge



Protocol

1. Connecting the negative pressure device

There are two ways to connect vacuum to negative pressure devices:

- 1.1. Connect the negative pressure device directly to the circulating water vacuum pump or oil-free vacuum pump (or other vacuum pumps) through connecting pipe 1/2.
- 1.2. Connect vacuum pump interface 1 to circulating water vacuum pump or oil-free vacuum pump (or other vacuum pumps) through connecting pipe 1, and at the same time connect negative pressure device interface 3 to negative pressure device through connecting pipe 2; The pressure inside the negative pressure device can be adjusted by adjusting knob 2, and the pressure relief valve 4 is used to discharge the pressure.

Note:The vacuum pressure gauge can monitor the pressure inside the negative pressure device. By adjusting the vacuum pressure gauge, the negative pressure extraction process can be better controlled to achieve the best effect.

2. 96 well plate filtration

96 well plate filtration is mainly used for the rinsing step of nucleic acid extraction.

- 2.1. Connect the negative pressure device, place a waste liquid tank in the base, and place the bracket horizontally on the base.
- 2.2. Place the 96 well extraction plate on the bracket to ensure a stable connection between the 96 well plate and the negative pressure device.
- 2.3. Add the rinsing solution to the 96 well extraction plate, turn on and adjust the negative pressure, and suck out the solution from the 96 well plate; After the solution is completely absorbed, turn off the negative pressure switch, remove and retain the 96 well plate for subsequent operations.
- 2.4. Discard the waste liquid, clean all components with water, and dry them with a dry tissue (or air dry) for later use.

Note: The 96 well plate filtration can use a universal/double-layer negative pressure device.

3. 96 well plate filtration+combination

96 well plate filtration+binding is mainly used for the filtration and binding steps of nucleic acid extraction.

- 3.1. Connect the negative pressure device, place a tray in the base, and place the 96 well extraction plate (on bracket 1; then place bracket 1 horizontally above it and place the 96 well filter plate on bracket 2 to ensure a stable connection between the 96 well plate and the negative pressure device.
- 3.2. Add the pre-treatment cracking solution to the 96 well filter plate, turn on and adjust the negative pressure, transfer the

supernatant solution from the 96 well filter plate to the 96 well extraction plate, wait for the solution to transfer completely, and turn off the negative pressure switch; Remove the 96 well filter plate and keep the 96 well extraction plate for subsequent operations.

3.3. Clean all components with water and wipe dry with a dry tissue (or air dry) for later use.

Note: Double layer negative pressure device can be used for 96 well plate filtration and combination.

4. 96 well plate elution

96 well plate elution is mainly used for the elution step of nucleic acid extraction.

4.1. Connect the negative pressure device, place a collection plate in the base (6mm or 15mm pads can be selected as needed), and place the bracket horizontally on the base.

4.2. Place the 96 well extraction plate on the bracket to ensure a stable connection between the 96 well plate and the negative pressure device.

4.3. Add the eluent to the 96 well extraction plate, turn on and adjust the negative pressure, and suck out the solution in the 96 well plate. At this time, transfer the eluent to the collection plate and turn off the negative pressure switch; Remove the 96 well extraction plate and keep the collection plate for subsequent operations.

4.4. Clean all components with water and wipe dry with a dry tissue (or air dry) for later use.

5. Single column filtration

Single column filtration is mainly used for the rinsing step of nucleic acid extraction.

5.1. Connect the negative pressure device, place the waste liquid tank in the base, and place the 12 hole cover horizontally on the base.

5.2. Connect the adsorption column to the connector to avoid cross contamination between samples.

5.3. Add the rinsing solution to the adsorption column, turn on and adjust the negative pressure, and suck out the solution in the adsorption column; After the solution is completely absorbed, turn off the negative pressure switch, remove and retain the adsorption column for subsequent operations.

5.4. Discard the waste liquid, clean all components with water, and dry them with a dry tissue (or air dry) for later use.

6. Cleaning and maintenance

6.1. Ensure that the negative pressure device is dry and clean. All components can be cleaned with water and wiped dry with a dry tissue.

6.2. The negative pressure device is not tolerant of ethanol, methanol, and other alcohol reagents. Do not place acrylic components in the negative pressure device (such as brackets, brackets, waste liquid tanks, etc.) in ethanol for a long time to avoid corrosion and cracking. The base of the negative pressure device is not resistant to phenol and chloroform. If any reagents are spilled, immediately clean with water.

6.3. To ensure the performance of the negative pressure device, do not use silicone resin or vacuum grease in any part of the negative pressure device.

Application	Vacuum pressure	
	Mbar	mm Hg
Ruhr interface negative pressure device		
Plasmid extraction	-800~-900	-600~-675
Ruhr interface negative pressure device		
Ultra pure plasmid extraction	-200~-300	-150~-225
High purity plasmid extraction	-40~-200	-30~-150
Conventional plasmid extraction	-200~-300	-150~-225
Purification of PCR products	-100~-600	-75~-450
RNA extraction	-800~-900	-600~-675



MEBEP TECH(HK) Co., Limited

Email: sales@mebep.com Website: www.mebep.com

Tel: +86-755-86134126 WhatsApp/Facebook/Twitter: +86-189-22896756

Name	Solvent compatibility
Chlorine bleach (12%)	✓
Hydrochloric acid	
Sodium chloride	
Sodium hydroxide	
Urea	
Acetic acid	X
Acetone	
Chromic acid	
Phenol	
Concentrated alcohols	
Benzene	
Chloroform	
Ethers	
Toluene	

Related products

Product number	Description
NP96098-3	Universal negative pressure device, corrosion-resistant
NP96098-4	Double layer negative pressure device
NP96098-5	Ruhr interface negative pressure device
NP96098-6	Oligo synthesis specific negative pressure device
PFVP001	Portable oil-free vacuum pump