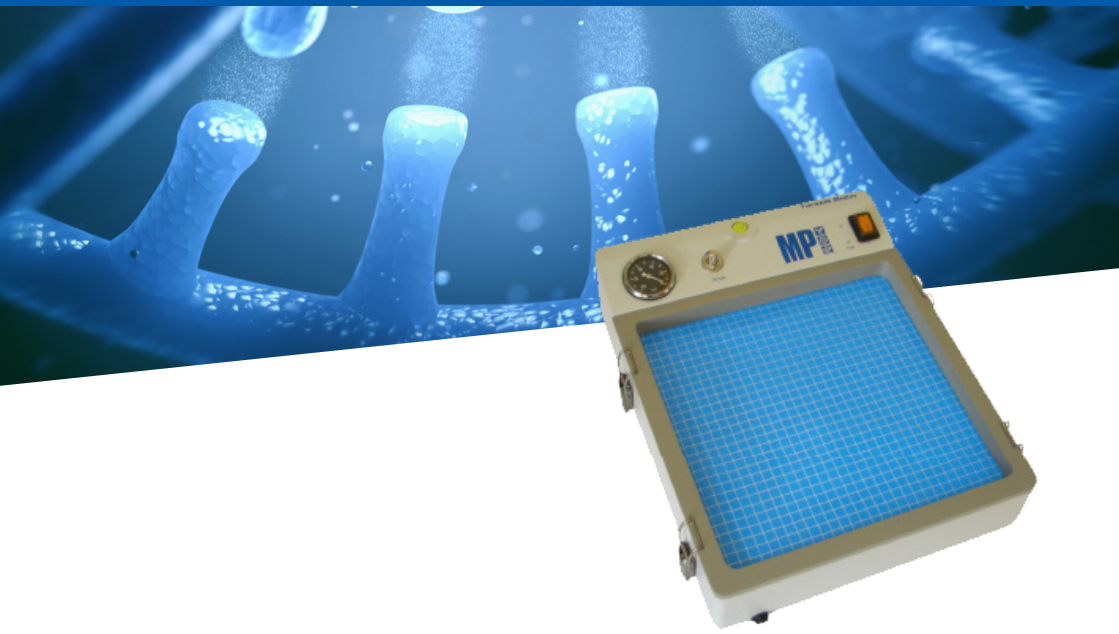


Vacuum Blotter

TranDNA Express

The Vacuum Blotter is built to quickly and efficiently transfer DNA or RNA onto suitable membrane such as Positive Nylon membrane. Vacuum blotting gives excellent results provided vacuum pressure is precise and stable during the blotting procedure. Guarantee perfect transfer in less than one hour without any additional handling. Transfer efficiency is close to 100%.

Cat. No. 11INSB8100

Tech Support: techsup@mpbio.com

DESCRIPTION

The Vacuum Blotter consists of (see illustration on the back cover):

- **Compact buffer collection reservoir with one seal and four catches for adjusting the sealing frame.**
- **Porous plastic divider.**
- **Built-in regulated vacuum pump.**
- **Command panel with (from left to right) manometer, vacuum control knob, spirit level and on/off power switch.**
- **Three adjustable feets.**
- **Safety fuse and interchangeable power supply connecting wire (on the rear).**
- **Brainsick (on the front).**
- **Adjustable frame.**
- **Special sealing plastic sheet.**

The system is made airtight by adjusting the plastic sheet between the adjustable frame and the seal placed on the body of the device. The apparatus is delivered with two special plastic sheets to serve as masks and to guarantee an airtight seal.

INSTALLATION

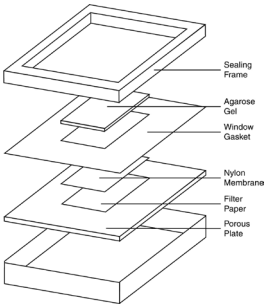
Set the instrument on a horizontal work bench with the brainsick in front of you. Make sure the ***Vacuum Blotter*** is horizontal using the spirit level and the adjustable feet. Connect the apparatus to the power supply (220V, 50 Hz or 110V, 60 Hz depending on the model delivered). The instrument is delivered assembled and ready for use. Please proceed as follows when using the ***Vacuum Blotter*** for the first time.

1) **Unlock the 4 catches fixing the adjustable frame.**

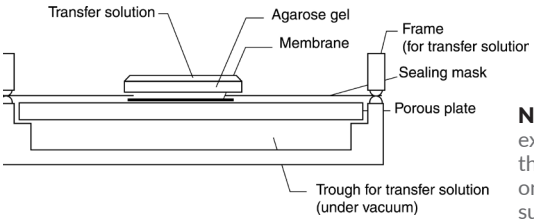
2) **Remove the adjustable frame and the plastic sealing sheets.**

3) **Cut out a window in a sealing sheet with dimensions matching those of the gel containing the material to be transferred.**

The side of the window should be about 5 mm smaller than the corresponding dimensions of the gel. This 5 mm overlap is sufficient to guarantee an airtight seal. The window may be cut out using a scalpel. It is important to avoid going too far when cutting the corners of the window as nicks may create leaks at these points.



4) **Successively place on the porous plate :**



Note : If the gel splits in the course of the experiment, put the gel pieces together and glue them together by pouring some molten agarose on the splits. After cooling and gelification, a successful transfer then be performed.

- **A Whatman (Type 3MM) paper sheet to protect the membrane.**
- **The transfer membrane (such as MP Biomedicals Positive, Neutral or HCD).**
- **The sealing mask taking care that it is correctly positioned on the seal (no folds).**
- **The gel containing the material to be transferred.**

5) Set the adjustable frame in its place and place the catches on the sides to seal the unit.

6) Cover the gel with the transfer solution of your choice (e.g. alkaline transfer or 20XSSC).

IMPORTANT NOTE

It is not necessary to fill the whole surface within the frame with the transfer solution. It is sufficient to cover the gel surface with a few milliliters of the solution (due to the surface tension, the liquid will remain on the gel). These conditions ensure optimal transfer of the nucleic acids contained in the gel. Such procedure allows you to save solutions and to monitor the good permeation of the solution through the gel. Make sure the gel is not dried out by periodically adding transfer solution (3 - 4 times). However, it is possible to fill the whole surface within the frame cleaning will be easier if small amounts of transfer solution have been periodically added.

7) Start up the vacuum pump and allow the vacuum to establish. Adjust the vacuum according to the type of transfer to be carried out. The knob controls the strength of the vacuum. The knob is turned clockwise to increase the vacuum and counterclockwise to decrease the vacuum. To prevent locking of the manometer's needle do not allow the needle to come down too low (no vacuum higher than 90 mbar).

During the transfer period, it is important that the gel is permanently covered with the transfer solution. Add transfer solution periodically with a pipette.

8) End of transfer. No special precautions are needed. Switch the pump off using the On/Off switch. Unlock the catches of the frame when the instrument is not in use to avoid compressing the seal.

9) Cleaning. After use, discard the Whatmann paper sheet, remove the sealing mask and the porous plate and rinse them in running water. They can be re-used.

Draining and maintenance

Pull the apparatus forward until its front foot is no longer resting on the bench. In this position, the reservoir is tipped forward. Place a vessel under the brainsick and unscrew its cap. Recover the transfer solutions and rinse the inside of the reservoir using a wash bottle. Rinse regularly to avoid crystallization of saline solution inside the buffer collection tank. If crystals form, they are difficult to remove later.

The reservoir must be regularly drained and rinsed. About 3 liters of the the buffer solution can be collected in the trough before the vacuum pump could be affected.

ADVICE TO USERS

Conditions usually recommended for a transfer according to Southern :

- **Agarose : 0.8 to 1%.**
- **Gel size : 20 cm x 20 cm.**
- **Gel thickness : 4 to 5 mm.**
- **Size of fragment to transfer : up to 50 kb.**
- **Vacuum : 40 to 50 mbar.**
- **Time required for transfer : 45 to 60 minutes.**

If the vacuum is too high, the gel may be compressed, thus impeding the transfer. We recommend that **the vacuum should not exceed 55 - 60 mbar**. If the vacuum is too low, the transfer time may be unnecessarily extended. In extreme cases, only partial transfer may be achieved. We advise that **the vacuum should not drop below 40 mbar**.

IN CASE OF PROBLEMS

If no vacuum can be created, please check the following sources of problems:

- **The sealing mask is incorrectly positioned.**
- **If the plastic sheet is creased above the seal or torn even slightly, air leaks are likely to occur. Remove the frame and mask and check its positioning, particularly at the corners of the reservoir.**
- **Bad positioning of the seal in its channel.**
- **Insufficient overlapping of the sealing mask and gel.**
- **The brainsick is not tight. Fasten its cap slightly.**

TECHNICAL INFORMATION

Dimensions:	330 x 100 x 410 mm
Weight:	4.5 kg
Porous transfer area:	280 x 280 mm
Power consumption:	25 W
Vacuometer:	0 to -100 mbar
Powar Requirement:	110 VAC/60 Hz or 220 VAC/50 Hz
Accuracy of the vacuometer:	Class 1.5

ORDERING INFORMATION

Cat. No.	Description
11INSB8100	Vacuum Blotter Delivered with 2 plastic masks
11INSB8302	Plastic masks 28x28cm (one set of two)
1121008401	Porous Plate
1121008402	Sealing Frame

CONTACTS

Customer Support

Product ordering, order status, invoices and quotes

Technical Support

Technical questions, product selection, and troubleshooting

EUROPE: custserv.eur@mpbio.com techsup.eur@mpbio.com
AMERICAS: custserv.na@mpbio.com biotech@mpbio.com

NOTE :

MP Biomedicals™

Need more information for your Vacuum Blotter?

Visit our Vacuum Blotter webpage

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