A Geno Technology, Inc. (USA) brand name

Wet/ Tank Blotting System

Cat. No. BT301

1-800-628-7730 ♦ 1-314-991-6034 ♦ info@BTLabSystems.com

SPECIAL NOTE:

Thanks for choosing BT Lab Systems' BT301 Wet/ Tank Blotting System. To insure the best performance from our Wet/ Tank Blotting System, please become fully acquainted with these operating instructions before using the cell. We recommend that you should first read these instructions carefully. Then assemble and disassemble the cell completely without transferring a gel. After these preliminary steps, you should be ready to run and transfer a gel.

We recommend that all the components and accessories of the Wet/ Tank Blotting System be cleaned with a suitable laboratory cleaner, and rinsed thoroughly with distilled water before use.

BT301 Wet/ Tank Blotting Systems are for laboratory use only. Please don't use it for purposes other than those for which they are intended.

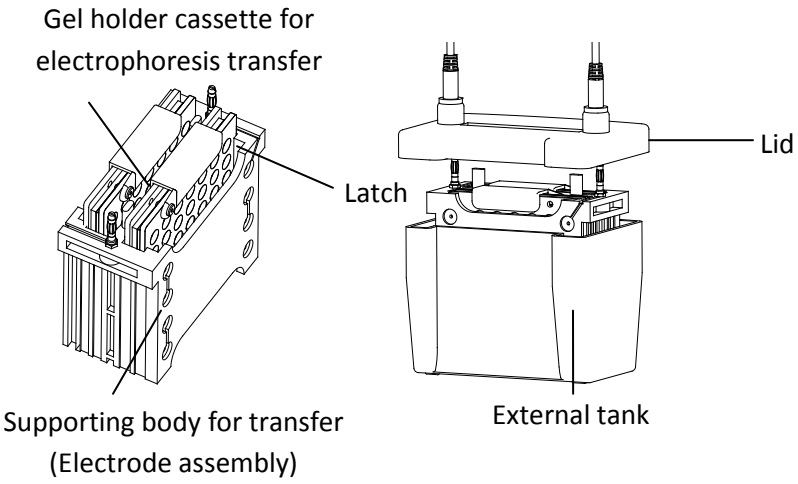
INTRODUCTION

The Wet/ Tank Blotting System is used together with electrophoresis power supply and BT201 Wet/ Tank Blotting System, it accommodates two gel holder cassettes for electrophoresis transfer of both gels generated by BT201. The instrument is useful for blotting either protein or nucleic acid samples from both agarose and acrylamide gels and can identify their homology.

The important part of the Wet/ Tank Blotting System is its main body, which has the capacity to hold two gel holder cassettes for electrophoresis transfer between the parallel electrodes that are only 4.5 cm apart. The driving force for blotting applications is the voltage applied over the distance between the electrodes. This short 4.5 cm electrode distance allows generation to produce efficient protein transfers. Other features of the instrument includes latches on the gel holder cassettes for easy handling and main body for transfer (electrode assembly) comprised of red and black color parts and red and black electrodes to ensure proper orientation of the gel during the transfer. It also includes an efficient design which simplifies insertion and removal of the gel holder cassettes from the supporting body for transfer (electrode assembly). When the lid is open the power is off. The result of these features is an electrophoresis transfer system which is easy to use and safe to the end user. It produces excellent blotting results. The main body for transfer (electrode assembly) together with gel holder cassettes for electrophoresis transfer is compatible with the lid and external tank (buffer tank) of BT201.

OVERVIEW

The Wet/ Tank Blotting System consists of main body for transfer (electrode assembly), gel holder cassettes for electrophoresis transfer, supporting fiber sheet, lid, leads and external tank (buffer tank). Please refer to the figure below for part identification.



TECHNICAL SPECIFICATIONS

Dimensions of gel holder cassettes: 95x87 (mm);
Max. voltage: 150 V;
Max. power: 40W;
Continuous working time: ≥ 24 hours;
Electrodes are pure platinum (the purity quotient of the noble metal ≥99.95
The main body (electrode assembly) is macromolecule engineered plastics
Gel holder cassette is polycarbonate
Ambient temperature: 0℃ ~ 40℃ (32 – 104°F);
Relative humidity ≤80%;
Size (L XWX H): 150 x 100 x 140 (mm);
Buffer volume: 400 ~ 450(ml);
Weight: about 1.0 kg.

OPERATION

Safety tips

Do not connect the Wet/ Tank Blotting System with electrophoresis power supply before starting the experiment. Electric current to the Wet/ Tank Blotting System, from the power supply, enters the unit through the lead and lid assembly, providing a safety interlock to the user. Electric current to the Wet/ Tank Blotting System is stopped when the lid is opened and removed. Please don't attempt to use the Wet/ Tank Blotting System without the lid. Always turn the electrophoresis power supply off before opening and removing the lid.

1. Cut six pieces of filter paper and one piece of membrane like PVDF membrane whose dimensions are the same as that of the gel. Please don't make the sizes of the filter paper and membrane bigger than that of the gel. Remember to wear gloves when you handle membranes to prevent contamination.

2. First, dip the PVDF membrane in 100% methanol for 10 seconds; Second, dip it in deionized water for 5 minutes; and then dip it in transferring buffer solution for 10 minutes.
3. Soak the filter paper in the transferring buffer solution for 10 minutes.
4. Assembling the gel holder cassettes: The order from cathode (black pore plate) to anode (white pore plate) is as follows: black pore plate, supporting fiber sheet (for gel), 3 X filter papers, gel (cut off concentrated gel), membrane, 3 X filter papers, supporting fiber sheet (for gel), white pore plate. (**Note:** Air bubbles are not conductive, and therefore, interfere with protein transfer, you can get rid of air bubbles by gently rolling it out with glass tube). Then close the gel holder cassette, please be more careful not to move the gel and filter papers, and then lock the gel holder cassette with the white latch. Repeat in the other gel holder cassette. Then put them into the main body for transfer. Please note that the direction of the cathode and anode should be corresponding with those of the main body for transfer. Put the main body into the external tank (buffer tank), and fill the external tank with the buffer solution, then cover the lid. Connect the Wet/ Tank Blotting System with the power supply, set the voltage, electric current and then start running.

Black pore plate (Cathode)	☐
Supporting fiber sheet (for gel)	☐
3 X filter papers	☐
Gel (cut off concentrated gel)	☐
PVDF membrane	☐
3 X filter papers	☐
Supporting fiber sheet (for gel)	☐
White pore plate (Anode)	☐

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5. The principle for determining electric current: If the dimension of the filter membrane is (7x6) cm, the constant electric current should be 7x6x2=84mA. Transferring period: within 2 hours.
6. After completing the experiment, disassemble the blotting system and remove the membrane for development. Clean the Wet/ Tank Blotting System, the supporting fiber sheets and the gel holder cassettes with laboratory detergent and rinse well with the deionized water.

MAINTENANCE

The product should be stored under the following conditions:

- Ambient temperature: - 40 degrees C ～ 55 degree C (-40 ~ 131 degrees F)
- Relative humidity: ≤93%
- No corrosive gas
- Not drafty

Clean the Wet/ Tank Blotting System after you finish an experiment. Use mild soap and warm water to clean the electrodes, gel holder cassettes and external tank. Be careful when you clean the main body. (electrode assembly). Avoid stretching or breaking the platinum wires. Avoid scratching or marring the platinum plates. Do not use abrasives or strong detergents to clean the Wet/ Tank Blotting System, and then wash the tank with deionized water. Air-dry it for the next use. Rinse the supporting fiber sheets with hot water and then in distilled or deionized water.

Note:

The main body of the Wet/ Tank Blotting System and some of its accessories are fragile. Do not drop or bump it. The platinum installed in the Wet/ Tank Blotting System is easy to break off. Please pay attention to this, especially when you clean the cell.

TECHNICAL SUPPORT

BT Lab Systems offers technical support for all of its products. If you have any questions about the product's use or, operation, please contact BT Lab Systems at the following:

E-Mail: info@BTLabSystems.com