

# High Throughput Horizontal Electrophoresis (96 samples)

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**Cat. No. BT106**

### **SPECIAL NOTE:**

Thanks for choosing BT Lab Systems' BT106 High Throughput Horizontal Electrophoresis (96 samples). To insure the best performance from our electrophoresis cell, 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 casting a gel. After these preliminary steps, you should be ready to cast and run a gel.

We recommend that all the components and accessories of the electrophoresis cell should be inspected for damage, cleaned with a suitable laboratory cleaner, and rinsed thoroughly with distilled water before use.

BT106 High Throughput Horizontal Electrophoresis (96 samples) are for laboratory use only. Please don't use it for purposes other than those for which they are intended.

### **INTRODUCTION**

The High Throughput Horizontal Electrophoresis (96 samples) should be used together with the electrophoresis power supply. It is designed for years of use and for separation of preparative and analytical quantities of nucleic acids using submerged agarose gels. Submerged agarose gels are easy to cast and readily dissipate the heat produced during operation. The instrument is especially suitable for fast identifying, and separating the DNA of many samples in PCR experiments. The electrophoresis cell has many features that make casting and running the gels simple and efficient. The baffle boards provide tape-free gel casting in the gel tray.

### **KEY FEATURES:**

- The lids and the main tank bodies (buffer tanks) are transparent, durable, have a good seal, are chemical-resistant and pressure-resistant.
- Red and black color can help you differentiate the anode (Red) and cathode(Black).
- Electrodes are made of pure platinum (the purity quotient of the noble metal  $\geq 99.95$ ).
- The lid pegs can help to open the lid and the combs device easily.
- The combs device have two screws, it can attach the combs firmly.
- The instrument can run 12 lines (96 samples) at the same time.
- The instrument is suitable for 8 channel Pipettors.

## OVERVIEW

The High Throughput Horizontal Electrophoresis (96 samples) consists of the main tank body / buffer tank, lid, comb device with combs, baffle plate and gel delivering plate. Please refer to the image below for part identification.



1. Lid
2. Lead
3. Main tank body/buffer tank
4. Comb device
5. Gel delivering plate
6. Baffle plate.

## TECHNICAL SPECIFICATIONS

Gel dimensions: 200×100 (mm)

Combs: (1+8 ) teeth x 12,1.5mm

Runs up to 96 samples

Max. input voltage: 100V

Max. current: 50mA

Continuous working time:  $\geq 24$  hours

Ambient temperature: 0 degrees C ~ 40 degrees C (32 – 104°F)

Relative humidity  $\leq 80\%$

Buffer volume: 200(ml)

Size (L X W X H): 260 x 110 x 70 (mm);

Weight: about 0.5 kg

## OPERATION

### ***Safety tips***

Do not connect the instrument with electrophoresis power supply before starting the experiment.

Before every use, check the buffer tank for cracks or chips. Cracks or chips will cause the buffer to leak from the buffer tank and cause a potential electrical hazard. Please also check the lead and electrode heads. Don't use any part that is cracked, charred or corroded

Please don't attempt to use the electrophoresis cell without the lid. Always turn the electrophoresis power supply off before opening and removing the lid.

1. Place the instrument on a flat, level surface.
2. Insert the baffle plates in the alignment slots of the buffer tank. Refer to Figure 2 below

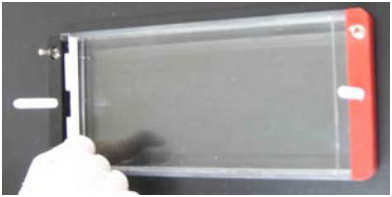


Figure 2



Figure 3

3. Seal the gaps between the baffle plates and the buffer tank with the agarose gel before pouring the gel (Refer to figure 3).
4. Pour the gel into the buffer tank (Refer to figure 4).



Figure 4

**Note:**

- The temperature of the gel should be about 50°C - 60°C
  - Air bubbles in the gel should be avoided.
5. Put the comb device onto the buffer tank (Refer to figure 5).



Figure 5

- After the polymerization of the gel, carefully pull the comb device from the buffer tank. (Refer to figure 6)



Figure 6

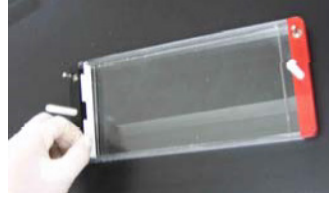


Figure 7

- Carefully remove the baffle plates from the buffer tank.
- Pour the buffer solution into the buffer tank.  
**Note:** Don't pour too much buffer solution into the buffer tank.
- Load sample into the wells with standard pipettor.



Figure 8

Note: Be sure to avoid air bubbles in the wells.

- Cover the lid and connect it with the electrophoresis power supply.

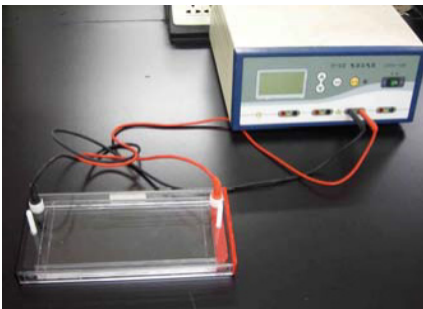


Figure 9

- Set the parameter (Voltage), and then start running.

**Note:**

- Don't move the apparatus while it is running
  - While it is running, very low quantities of gases are produced, in order to disperse the gases, make sure that the apparatus is running in a well ventilated area.
- When the operation is finished, turn off the power supply and disconnect the electrophoresis cell from the power supply. Open the lid and take out the gel with the help of delivering gel plate.
  - Remove the gel and observe bands under UV light.

## 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 electrophoresis tank after you finish an experiment. Clean it with a sponge. Rinse the main tank body (buffer tank) thoroughly with distilled water after every use. Wash the buffer tank and the combs with a lab. detergent, and then wash them with vaal water (deionized water). Air-dry them for the next use.

**Note:** Be careful not to snag or break the electrode wire when you clean the tank.

***Special Note:***

The main body of the instrument and some of its accessories are fragile. Do not drop or bump it. The platinum installed in the electrophoresis cell 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](mailto:info@BTLabSystems.com)