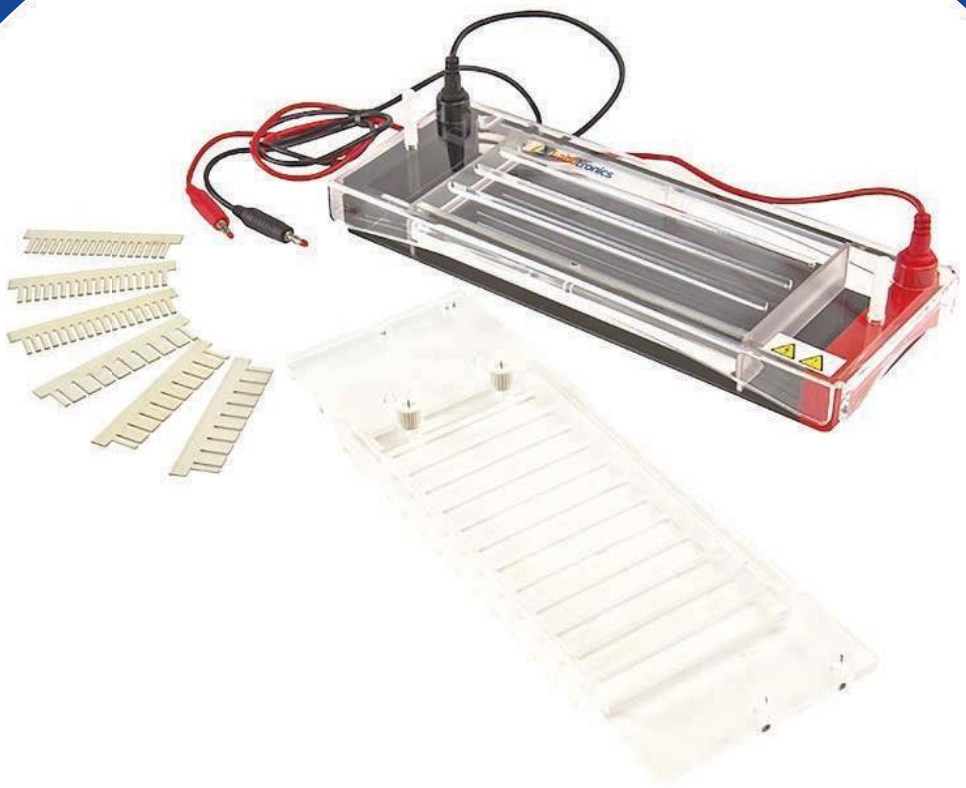
Labotronics



Rapid Electrophoresis Unit

LB-10REU

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1. Introduction

Rapid electrophoresis unit LB-10REU is a compact horizontal electrophoresis system with a capacity of detecting 96 samples simultaneously. Low buffer and gel volume with the parallel electrode arrangement enables processes to be completed within 15 minutes. It includes a black bottom for clearer observation while sample loading and during the experimental process.

2. Features

1. Run up to 96 samples
2. High-resolution unit
3. Auto power off when the lid is removed
4. Easy to open lid buttons
5. Multichannel pipette compatible (quick sample loading)

3. Specifications

Model No.	LB-10REU
Gel tray (W × L)	85 × 200 mm
Buffer volume	50 ml
No of samples	10 to 216
Rows of combs	1 ~ 12
Distance between electrodes	270 mm
Gel making mode	Baffle
Dimension (L×W×H)	300 × 150 × 61 mm
Weight	0.5 kgs

4. Applications

Used in molecular biology, life science, research and diagnostic labs and education institutes for PCR amplification, cloning and high throughput screening of DNA, RNA and proteins for quick checking of samples.

5. Operations

5.1 Gel preparation

1) For a standard 0.7% agarose gel, add 0.7grammes of agarose to 100 ml of 1xTAE or TBE solution.
2) The same 1x solution should be used in the tank buffersolution.
3) Add the agarose powder to a conical flask.
4) Add the appropriate amount of 1Xtae or TBE solution from the table above.
5) The conical flask should be covered with parafilm to prevent evaporation during the dissolving steps below.
6) Dissolve the agarose power by heating the agarose either on a magnetic hotplate with a stirring bar or in a microwave oven.
7) If using the microwavemethod, the microwave should be set around a 400-watt or medium setting and the flask should be swirled every minute.
8) The solution should be heated until all crystals are dissolved. This is best viewed against a light background.
9) Crystals appear as translucent crystals. These will interfere with sample migration if not completely dissolved.
10) The gel must be cooled to between 50℃ and 60℃ degrees before pouring

5.2 Setting up the horizontal gel tanks

1) Loosen the Fasting Knob (5) on the Combination stander (7) and set down theingots.
2) Choose 3~12combs to install based on the samples and the length of electrophoresis.
3) Tightened by ingots and Fasting Knobs.
4) Put the Gel tray (9) in the bottom tank (14) and insert the baffle (8) in the Seal groove.
5) Pour in the agarose carefully so as not to generate bubbles.
6) Put the Combination stander (7) on the gel through the hole.
7) Allow the agarose to set, ensuring that the gel remains undisturbed.
8) Carefully remove the Combination Stander (7) and the baffle (8).

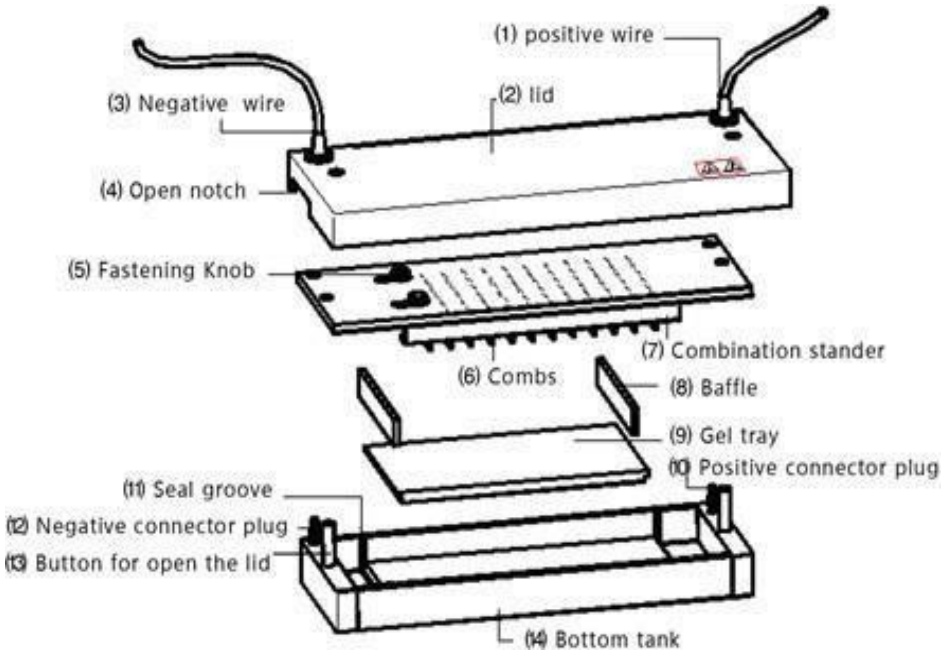

Figure.1

5.3 Running the Gel

1) Mix the sample to be loaded with sample buffer- see solutions for common sample buffers.
2) Usually, 3ul of sample buffer is adequate but less may be usedwith sample volumes of less than 10ul.
3) Fill the unit with buffer until the gel is just flooded with buffer.
4) This will give the fastest resolution times. For the enhanced quality of resolution of the sample, fill the unit to 5mm above the gel
5) Load the samples into the wells using pipettes.
6) Multi-channel pipettes can be usedfor loading samples with MC-compatible combs, see listing in accessories for identification and carefully place the lid on the tank and connect it to a power supply.
7) Typically gels run at between 90 and 150 volts. However, the maximum. Voltages are indicated on the serial badge of each unit.
8) It should be noted that higher voltagesgenerally give faster but poorer-quality sample resolution.

5.4 Gel staining and viewing

1) Transfer the gel to a vessel containing the appropriate volume of 0.5ug/ml ethidium bromide stain for 15 to 30 minutes, see solutions for stock stain concentration and adjust to the volume used accordingly.
2) The entire gel shouldbe covered.
3) De-stain the gel for 10~30 minutes in distilled water again ensuring the gel is completely immersed.
4) Rinse the gel twice for a couple of seconds with distilled water.
5) Transfer the gel to a UV Transilluminator.
6) When photographed or viewed using a gel documentation system, The samples will often appear as brighter, clearer bands.
7) However, if the gel bands are too faint then the staining procedure should be adjusted so that there is less de-staining.
8) If there is too much background, then the staining procedure should be adjusted so that there is more de-staining.

6. Maintenance

1. Units are best cleaned using warm water and a mild detergent.
2. Water at temperatures above 60°C can cause damage to the unit and components.
3. The tank should be thoroughly rinsed with warm water or distilled water to prevent the build-up of salts, but care should be taken not to damage the enclosed electrode, and vigorous cleaning is not necessary or advised.
4. Air drying is preferable before use.