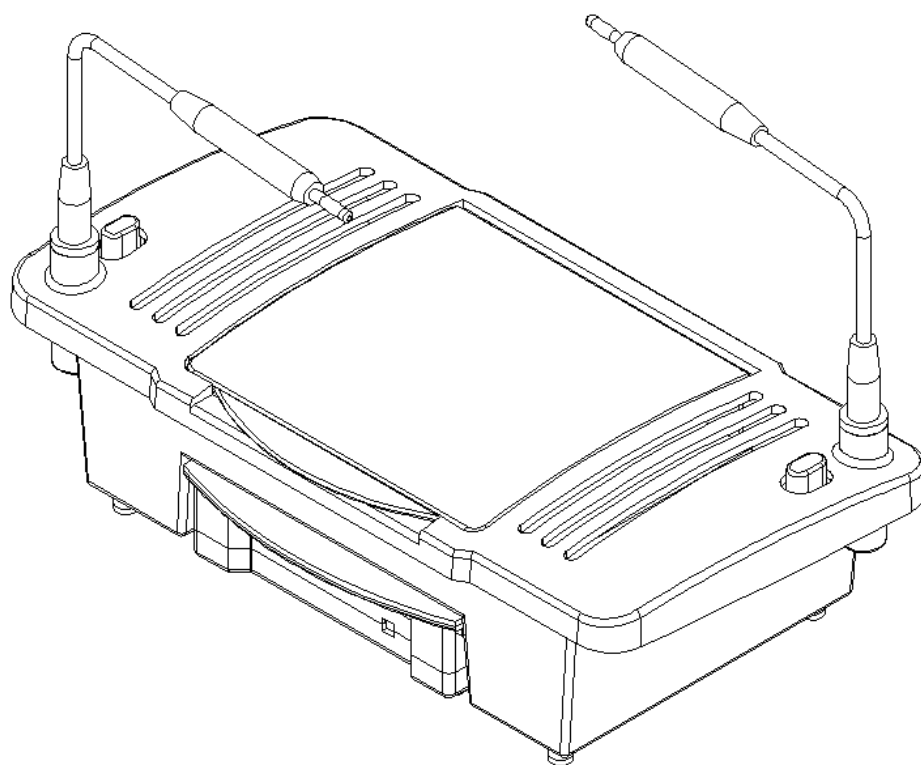


HORIZONTAL ELECTROPHORESIS  
SYSTEM

# Instruction



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# HES-2 Integrated Horizontal Electrophoresis System

## Warning

1. Don't operate the products when power is on, (after sample loading, electrophoresis power supply shall be connected after the lid is covered.). Do not touch the electrophoresis tank during the electrophoresis to avoid the risk of shock.
2. All parts of this product can be cleaned by clean water, only need to dry naturally or wipe with absorbent paper, do not bake through high temperature to avoid damage and deformation of the product.

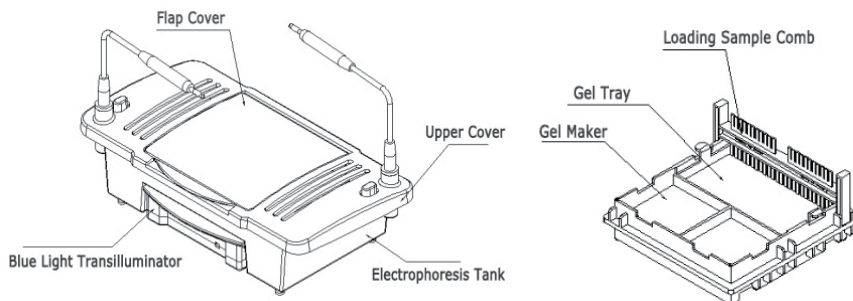
## I. Product Overview

HES-2 Integrated horizontal electrophoresis, mainly applied to rapid agarose electrophoresis separation experiment of a small amount of DNA and RNA samples.

## II. Product Feature

1. Integrated gel maker mold, four different sizes of gel blocks can be made.
2. Equipped with a blue light transilluminator ,work with PPS-6S electrophoresis power supply, which can observe the gel bands clearly during electrophoresis.
3. The transparent upper cover is designed with holes, which is convenient for heat dissipation and observation.
4. Clip slot limit function, guaranteeing accurate operation.
5. The electrode holder and electrode head can be disassembled for easy cleaning and maintenance

## III. Product Instructure



## IV. Product Specification

1	Product Model	HES-2
2	Dimensions (L×W×H)	310×150×120mm
3	Gel tray dimensions (L×W)	Large gel 120mm×120mm Wide gel 60mm×120mm Long gel 120mm×60mm Small gel 60mm×60mm
4	Comb specifications	1.0mm 25/11 t6 teeth 1.5mm 13/6 teeth 2.0mm 3/2 teeth
5	Blue light wavelength	470nm
6	Buffer volume	260ml
7	Weight	1kg

## V. Operation Steps

Please keep the horizontal electrophoresis tank, gel tray, sample comb, gel maker and other parts clean and dry before making gel.

### Gel Preparation

Weigh an appropriate amount of agarose and put it into a conical flask, add an appropriate amount of buffer, place it in a water bath, a magnetic stirrer or a microwave oven, heat it until it is completely melted, and shake it well to make an agarose gel solution.

### Gel Making

Place the gel maker horizontally on the test bench, select the appropriate gel tray (Select different sizes of gel tray according to different experimental needs. The gel trays specifications are 120mm×120mm, 120mm×60mm, 60mm×120mm, 60mm×60mm), place the gel tray in the gel maker (2 pieces of 60mm×60mm gel can be made at the same time, and only 1 piece can be made in other specifications) and place the sample comb at the fixed position. Add 5ul GelRed (or other nucleic acid dyes) solution to the agarose gel cooled to about 55 °C, mix it well, and then carefully pour it into the gel tray, so that the gel solution can be slowly expanded until a uniform gel layer is formed on the surface of the whole gel tray. Keep in room temperature until the gel is completely solidified, and pull out the sample comb vertically to complete the preparation of the gel.

### Sample Loading

Take the prepared gel and gel tray out of the gel maker, place them in the electrophoresis tank, and the sampling hole is close to the negative electrode (black is the negative electrode). Add electrophoretic buffer until the gel is submerged.

Use a 10ul micropipette to load the samples into the small sample tank of the gel. After each sample is added, replace a new pipette tip to prevent contamination. Do not damage the gel surface around the sample hole when (Pay attention to the loading sampling sequence).

### Electrophoresis

Cover the upper cover according to the correct position of the positive and negative poles (red is the positive pole, black is the negative pole), insert the electrophoresis wire into the electrophoresis power supply according to the correct color, select the appropriate voltage to start electrophoresis (the specific electrophoresis parameters according to the actual experimental parameters).

The sample moves from the negative pole (black) to the positive pole (red). The effective separation range of agarose gel decreased with the increase of voltage. The electrophoresis was stopped when bromophenol blue moved about 1cm away from the lower edge of the gel.

### Observation

The integrated horizontal electrophoresis system equipped with a blue light transilluminator,work with PPS-6S electrophoresis power supply,which can observe electrophoresis.

## PRODUCT ACCESSORIES LIST

NO.	Name	Quantity
1	Horizontal electrophoresis system	1 set
2	Gel maker	1 pcs
3	1.0mm 25 teeth/11 teeth comb	4 pcs
4	1.5mm 13 teeth/6 teeth comb	1 pcs
5	2.0mm 3 teeth/2 teeth comb	1 pcs
6	60mm×60mm Gel tray	2 pcs
7	60mm×120mm Gel tray	1 pcs
8	120mm×60mm Gel tray	1 pcs
9	120mm×120mm Gel tray	1 pcs
10	Blue light transilluminator	1 set

# WARRANTY CARD

User name		Contact number	
Equipment model		Manufacturing No.	

# MAINTENANCE RECORD

Warranty date	Failure maintenance records	Maintenance date	Maintenance engineer