



## HORIZONTAL GEL ELECTROPHORESIS

GEL20-500



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# 1. Introduction

GEL20-500 Horizontal Gel Electrophoresis is a one-body electrophoresis Unit, which has compact design, stable performance, easy operation and good reproducibility and cost performance. On one hand, unique design, it assure the uniformity of electric field in unit. On the other hand, as the bubble produced by platinum electrode is separated, buffer PH has good stability. It is widely used in chemical field, ideal for teaching, scientific research, food and medical treatment. Horizontal gel electrophoresis unit is mainly used for separation and test of nucleic acid.

## 2. Operation Instruction

### 2.1 Structure

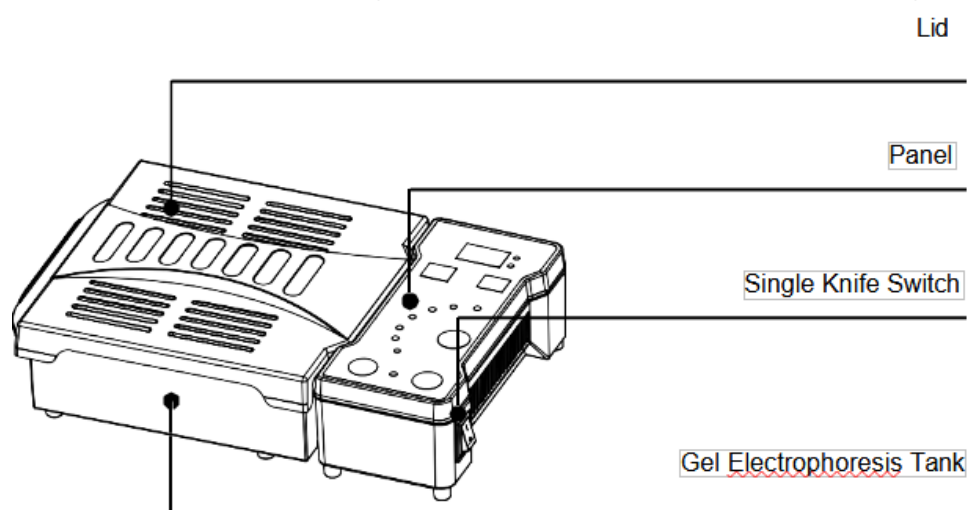


Figure 1

### 2.2 Instrument Installation

1. When input voltage is AC 220V, please connect the transformer input wire to the electricity grid, connect the output wire to the instrument.
2. When input voltage is AC 110V, connect the instrument to the electricity grid directly.

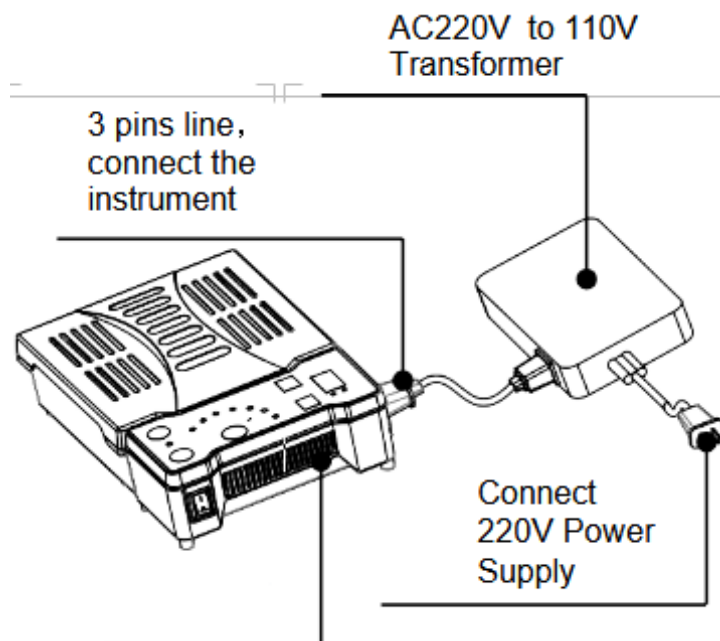


Figure 2

## 2.3 Operation Panel and Display Screen



Figure 3

## 2.4 Key Function

+/- The key to increase or decrease the setting value of time. Continuously pressing can increase or decrease it quickly. Maximum setting time is 99 minutes and 59 seconds.

Start/Stop -Start/Stop button. After desired speed and time are set, press to start operation. During operation, press it to stop operation.

Pause - Short press the key into suspended state, instrument stops working, countdown also stops.

VOLTAGE SELECTOR - Short press the key, it enters into switch status of 7 kinds of output voltages.

## 2.5 Operation Guide

### 1. Programme Set

- a) Open the power switch, with the sound of "di", the display screen will display the value set for last time, the instrument goes into the initial state.
- b) Press + or - of time to set the unit value, also increase or decrease from tens digit to hundreds digit. If pressing the key for 2 seconds, it can quickly adjust the value.
- c) VOLTAGE SELECTOR Key, to switch the voltages, the voltage can switch to 18, 25, 35, 50, 70, 100, 135, the relevant light will be on when one voltage is chosen.
- d) When the screen shows "OFF", it means working time is infinite.
- e) "Lid" light is on, it means lid is closed correctly. If the light is off, it means the lid is not closed correctly and needs to be adjusted.

### 2. Instrument operation

- a) Make sure the lid is closed correctly before the instrument starts to work.
- b) When press the key "start", the light is on. When press the key "Pause", its light is flickering.

#### Warning:

1. Don't move the instrument when it is working.
2. Don't open the lid when it is working.

## 3. Maintenance

Use dry cloth and non-corrosive ( $\text{PH}=7\pm 1$ ) to clean the instrument surface.

Make sure all the elements are completely dry before the instrument starts. Don't put the instrument into the liquid or get wet with liquid (The instrument must be power off when it is being cleaned).

## 4. Parameter

External Size: 260X170X68 (mm)	Power: $\leq 60\text{W}$
Input Power: AC110/220V, 50/60Hz	Fuse: 1.0A
Output Voltage Range: 18-135V	Timing Range: 1S-99m:59S
Small Size Plate: 124X59	Big Size Plate: 124X121.5

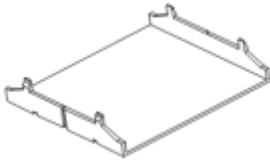
Table 1

## 5. Accessories

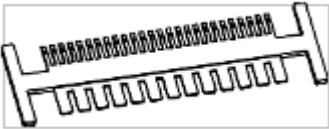
a) Small Size Plate: To produce small gel



b) Big Size Plate: To produce big gel



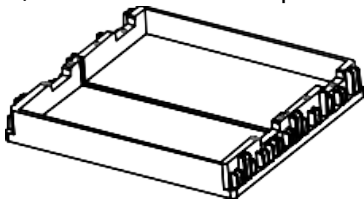
c) Comb: to make the marks when the gel is running



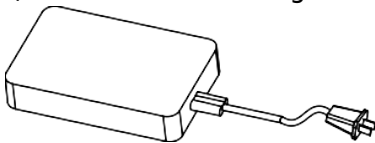
d) Division Plate: make the gel room to two parts



e) Gel Room: it can put one big size plate or two small size plates.



f) Transformer: change AC220 to be AC110



## 6. Failure Analysis and Troubleshooting

Phenomenon	Possible Causes	Processing Procedure
No voltage output after pressing the START Key	1. The lid is not covered well.	Cover the lid correctly.
	2. No Power	Contact the seller.
No Display	1. Power line is not connected well.	Plug the power line.
	2. Power strip has no power.	Make sure power strip is working well .
	3. Power switch is off.	Open the power switch.
	4. Fuse is broken.	Replace a new one or Contact the seller.

Table 2  
Performance Test Statement

Name		Horizontal Electrophoresis		Type		GEL20-500	
Test Date				Production No.			
No.	Test Content		Method		Standard		Result
1	Voltage(V)		Multimeter		18/25/35/50/70/100/135		<input type="checkbox"/> Qualified
2	Basic Function		Visual Inspection		Valid		<input type="checkbox"/> Qualified
3	Appearance Demand		Visual Inspection		Valid		<input type="checkbox"/> Qualified
4	Appearance Sign		Visual Inspection		Valid		<input type="checkbox"/> Qualified
5	Continuous Experiment		Operation		30 minutes trouble - free		<input type="checkbox"/> Qualified
Test Result							
Remarks:							
Tester:			Confirmer:				

Table 3

## Packing List

No .	Name	Type	QT Y	Uni t	Remarks
1	Horizontal Gel Electrophoresis	GEL20-500	1	EA	
2	Big Size Plate		1	EA	
3	Medium Size Plate		1	EA	
4	Small Size Plate		2	EA	
5	Gel Room		1	EA	
6	Division Plate		1	EA	
7	Comb		7	EA	
8	Transformer	220 to110	1	EA	No need if Voltage is 110V
9	Power Line	220V/110V 1A	1	EA	
10	Performance Test Statement		1	EA	
11	Operation Manual		1	EA	
12	Warranty Card		1	EA	
Charger: (Sign/Stamp)		Packing Date:			

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