INSTRUCTIONS &
OPERATING MANUAL
FOR

MAXI SUBMARINE GEL SYSTEM

GENECO-H-MAXI

LEVELING TABLE

Developing chamber:

Since ethidium bromide, used o stain nucleic acid bands is light-sensitive, the stain should be stored and used in dark conditions. The developing chamber can be used for storing and staining gels. Gel in the platform can be placed as such for staining DNA bands. The lid when closed allows no light inside the chamber.

Note:

- The developing chamber is made of black acrylic sheet. It cannot be used for stains prepared in organic solvents.
- For economy, use different developing chambers according to gel platform sizes.

Submarine Electrophoresis Systems in three different Models:

1. Large Model – for large scale preparation of nucleic acids

While designing this system, much emphasis has been devoted to:

- Minimize buffer capacity so as to allow only the required current flow.
- Cast gels easily with sharp wells.
- Controls the heat generated during electrophoresis by providing perforation to the spacious lid.
- Assure the maximum safety to platinum electrodes while cleaning the apparatus.
- Perform the experiment with ease and excellence

Specifications:

	MAXI
Dimensions(LWH)	300x210x70mm
Principal Materials	Acrylic
Max Gel Size	200x200mm
Gel Platforms	200x200mm (1 NO)
26 well 1.5mm	One
3 well 3mm	One
3 well 6mm	One
Platinum Electrodes	Positive & Negative
Gel Casting Tray	One
Connecting Cords	Red & Black
Buffer Required	800ml
Power Required	200V,150mA
CAT NO	**GENECO-H-MAXI**

Description and Assembly of the Parts:
The System Consists of:

- Basic unit with Lid
- Platinum Electrode Positive and Negative
- Gel running Tray 200mmx200mm – 1 No
- Combs 26 well 1.5mm (1 No), 3 well 3mm (1 No) and 3 well 6mm (1 No)
- Connecting Cord Red and Black
- Gel Casting unit

NOTE:

- Acrylic Combs are Heat liable and should not be autoclaved.
- Organic solvents like chloroform attack material, so they cannot be used to clean them, only distilled water with mild detergent is recommended for cleaning.
- Before pouring the gel solution, make sure that about 0.2 to 0.5mm gap is left between the floor surface of the gel platform and comb teeth. This is essential to get bottom closed wells in the gel. Otherwise samples leak through the gel. To get a uniform, loosen the screws so that the comb rests on the card freely, tighten the screws and remove the cord.
- Combs of requires size/thickness can be made on request.

OTHER ACCESSORIES:

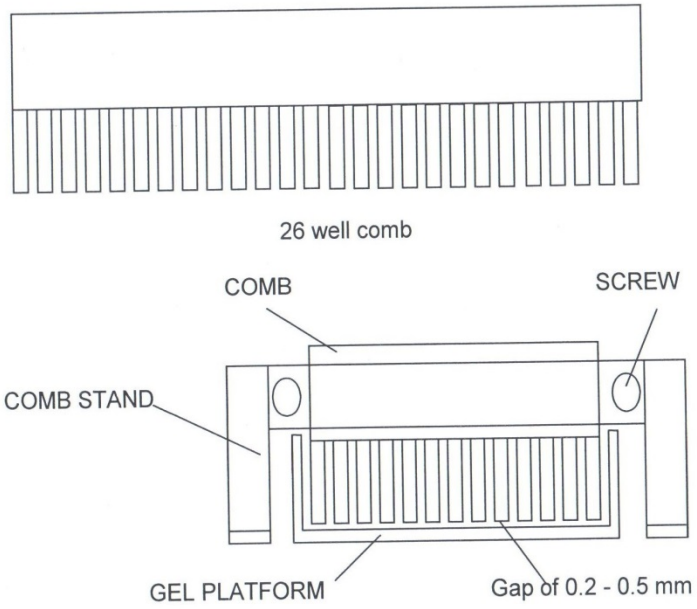
1. Leveling Table &
2. Developing chamber

Are the additional Accessories of Submarine gel Electrophoresis. They are not included in the standard components of the apparatus. So they should be ordered separately.

Leveling Table:
It is an essential accessory to cast uniform thickness of the gel in the gel platform, before placing the gel platform onto the leveling table, adjust the screws so that the spirit level bubble is centered.

Comb:

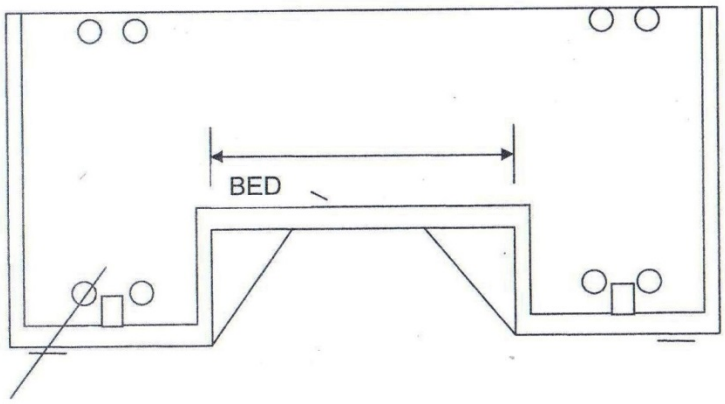
Combs are made of acrylic sheets and are used along with gel platforms to make rectangular wells in the gels. Combs are available in different thickness and size.



Comb, Comb stand and gel platform arrangement

Basic Unit:

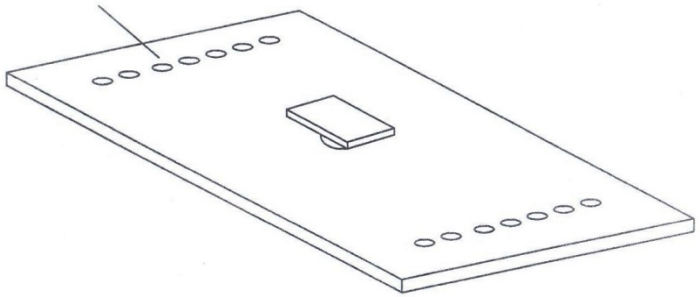
It is a rectangular chamber with the middle has been elevated to form a bed for placing gel platforms. The size of the bed varies with the model. It serves as buffer reservoir and also has provision for placing the platinum electrode assembly.



Basic unit sizes

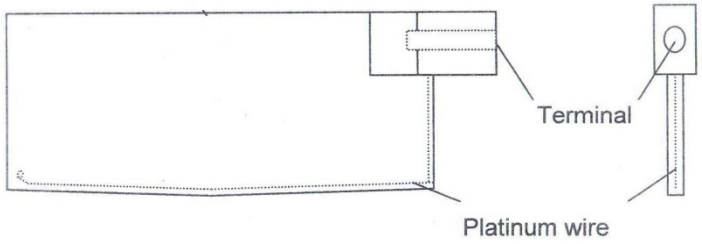
Bed Size(LxW) : MAXI MODEL 200X200mm

Lid: It covers the basic unit. It also has perforations for the escape of Gas/water vapour generated during electrophoresis.



Platinum Electrode assembly:

Pure Platinum Wire (99.95% of 0.2mm thick is used as electrode in the assembly. The Platinum Wire is recessed in a grove in 4.0mm thick acrylic sheet, Its one end is tied and the other end is connected to the terminal. Each Apparatus has been provided with two such electrode assemblies. This electrode sits in the notch provided in the basic unit on either side.



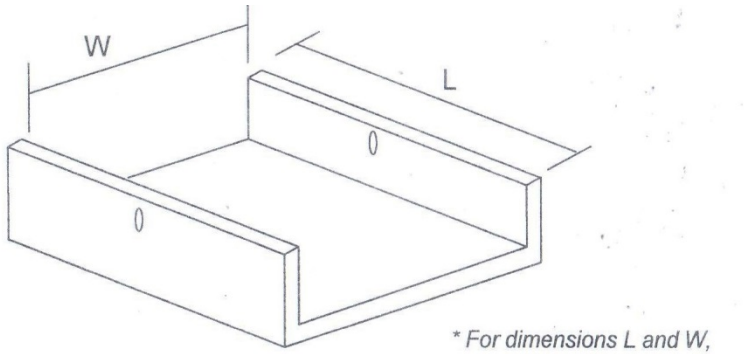
Platinum electrode assembly

Note:

- Air bubbles generated during the Electrophoresis should not stay on the wire. If they remain on the wire. they cause resistance to current flow, As a result movement of macromolecules slows down. To avoid this, One side of the grove is made as slope.
- Trace metal contamination in buffer causes deposition of metal on the platinum wire. So periodic leaning of electrode with distilled water immediately after every use is more essential.

Gel Platforms:

Gel Platforms are transparent acrylic trays with open at two sides. They are used in casting agarose gels. They are available in different Sizes for the use in different models.



** For dimensions L and W, refer Specifications table*

Note:

Acrylic sheets used in these platforms are not UV transparent. So gel should be removed from the platform and placed directly on the Trans illuminator for viewing bands.