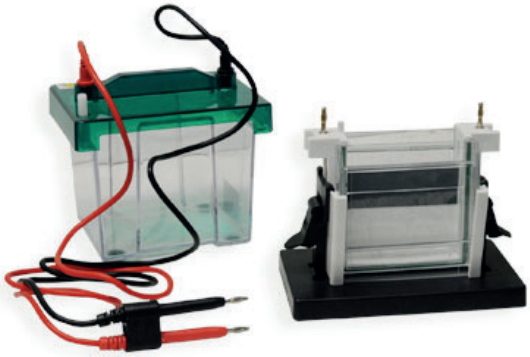
CUBETA DE ELECTROFORESIS VERTICAL
VERTICAL ELECTROPHORESIS CELL
CUVETTE D'ÉLECTROPHORÈSE VERTICALE

Referencias | Codes | Références ZFD024, ZFD025, ZFD026, ZFD027, ZFD028



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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SAFETY PRECAUTION

WHEN USED CORRECTLY, THESE UNITS POSE NO HEALTH RISK. HOWEVER, THESE UNITS CAN DELIVER DANGEROUS LEVELS OF ELECTRICITY AND ARE TO BE OPERATED ONLY BY QUALIFIED PERSONNEL FOLLOWING THE GUIDELINES LAID OUT IN THIS INSTRUCTION MANUAL.

ANYONE INTENDING TO USE THIS EQUIPMENT SHOULD READ THE COMPLETE MANUAL THOROUGHLY.

THE UNIT MUST NEVER BE USED WITHOUT THE SAFETY LID CORRECTLY IN POSITION.

THE UNIT SHOULD NOT BE USED IF THERE IS ANY SIGN OF DAMAGE TO THE EXTERNAL TANK OR LID.

MAINTENANCE

Cleaning vertical units

Units are best cleaned using warm water and a mild detergent. **Water at temperatures above 60ºC can cause damage to the unit and components.**
The tank should be thoroughly rinsed with warm water or distilled water to prevent buildup of salts, but care should be taken not to damage the enclosed electrode and vigorous cleaning is not necessary or advised.

Air drying is preferably before use.

The units should only be cleaned with the following:
Warm water with a mild concentration of soap or other mild detergent. Compatible detergents include dishwashing liquid, Hexane and Aliphatic hydrocarbons.
The units should not be left in detergents for more than 30 minutes.
The unit should never come into contact with the following cleaning agents, these will cause irreversible and accumulative damage: Acetone, Phenol, Chloroform, Carbon tetrachloride, Methanol, Ethanol, Isopropyl alcohol.

RNase decontamination

This can be performed using the following protocol:
Clean the units with a mild detergent as described above.
Wash with 3% hydrogen peroxide (H2O2) for 10 minutes.
Rinse with 0.1% DEPC (diethyl pyrocarbonate) treated distilled water.
Caution: DEPC is a suspected carcinogen. Always take the necessary precautions when using.
RNaseZAPTM (Ambion) can also be used. Please consult the instructions for use with acrylic gel tanks.

SETTING UP THE VERTICAL GEL TANKS

Instructions for fitting electrode cables

1. Note the position of the lid on the unit. This shows the correct polarity and the correct orientation of the cables, black is negative and red positive.
2. Remove the lid from the unit, note if the lid is not removed, fitting the cables may result in un-tightening of the gold plug and damage to the electrode.
3. Screw the cables into the tapped holes as fully as possible to that there is no gap between the lid and the leading edge of the cable fitting.
4. Refit the lid.

VERTICAL GEL CASTING

Using the gel casting frame (for code ZFD024):

1. Clean glass plates, flush with distilled water, let them dry in the air.
2. Overlap a spacer plate with a notched one, put the two glasses into the core, keep their bottoms contacting the table and insert a cuneal plate closely outside the two plates.
3. Use the same method to complete the other side.

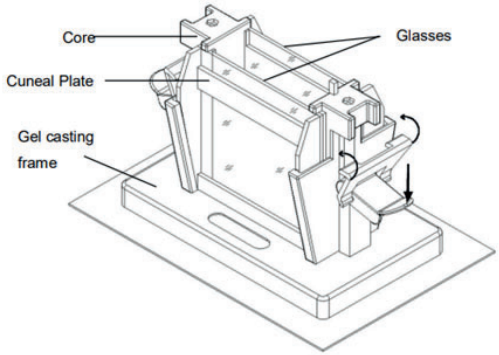
Notes:

·Spacer plate should be put outside and the notched one inside. Otherwise the experiment can't be carried on.

·The operation must be done on a level surface.

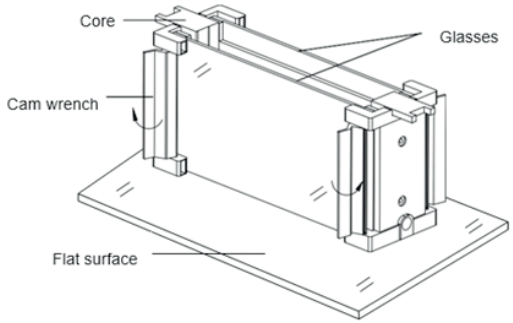
·The bottom ends of glass plates must be perfectly aligned.

4. Put the core with installed plates in the gel casting frame, hang over the hooks on both sides of the core, press down the wrenches to make the bottom of the glass plates be sealed by the rubber. See figure below:



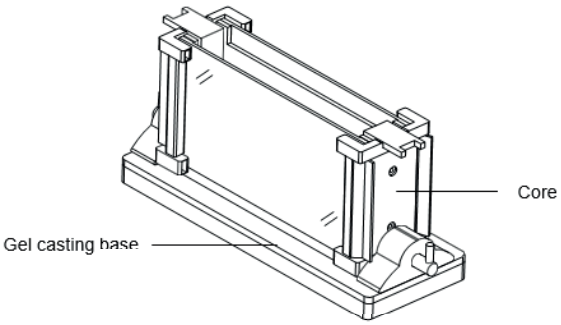
Using the gel casting base (for codes ZFD026 and ZFD028):

1. Clean glass plates, flush with distilled water, let them dry in the air.
2. Overlap a spacer plate with a notched one, put the two glasses into the core, keep their bottoms contacting the table, and rotate the cam wrench outwards to press the glasses.
3. Use the same method to complete the other side. See figure below:

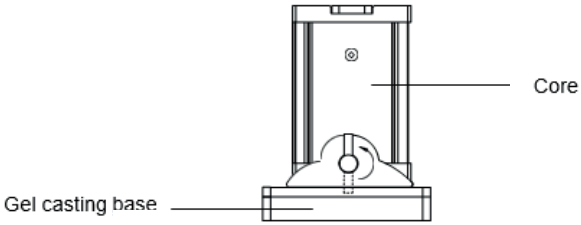


Notes:
·Spacer plate should be put outside and the notched one inside. Otherwise the experiment can't be carried on.
·The operation must be done on a level surface.
·The bottom ends of glass plates must be perfectly aligned.

4. Pull out the handle of the gel casting base, rotate the handle downwards and put the core in the gel casting base. See figure below:

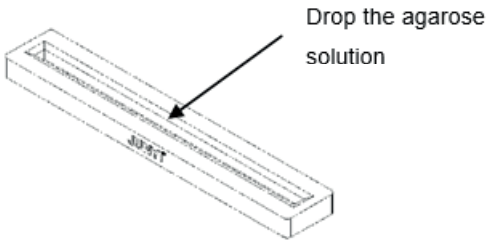


5. Put the handle into the hole and rotate upwards. See figure below:

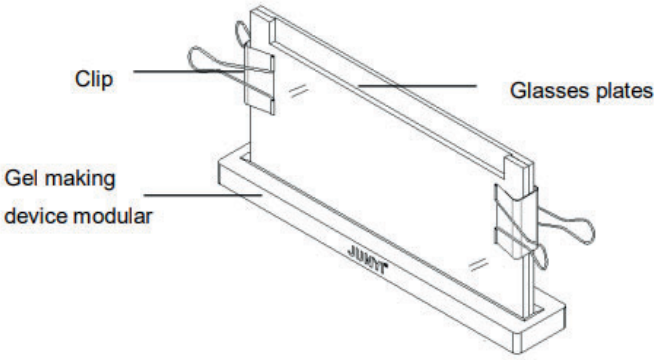


Using the gel making device modular (for codes ZFD025 and ZFD027):

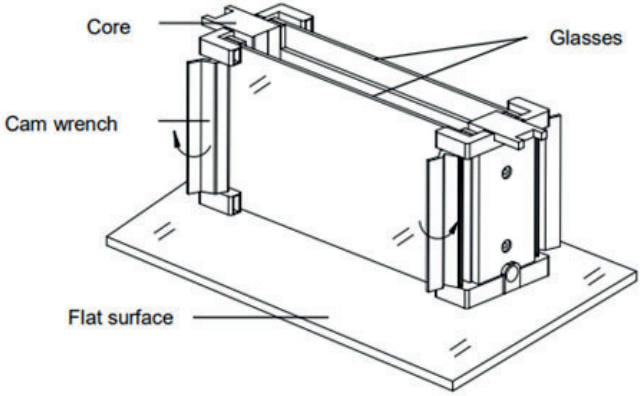
1. Clean glass plates, flush with distilled water, let them dry in the air.
2. Drop in the agarose solution into the sealing groove by the dropper. See figure below:



3. Overlap a spacer plate with a notched one, put a clip to each side, and put them into the gel making device modular. See figure below:



4. Pour the gel into the gel blocks carefully so as not to generate bubbles.
5. Carefully insert the comb, make sure there is no air bubbles under the ends of the comb teeth.
6. Leave the gel by itself and wait it to concrete.
7. Pull the comb out carefully.
8. Move the glasses with the gel to the core.



Gel pouring:

1. Pour the gel into the gel blocks carefully so as not to generate bubbles.
2. Insert the comb carefully and make sure there is no air bubbles under the ends of the comb teeth.
3. Leave the gel by itself and wait it to concrete.
4. Pull the comb(s) out carefully and move the core with the gel to the main tank.

Running the gel:

1. Put the core into the bottom tank.
2. Fill 1x buffer into the upper tank, as well as the bottom tank.
3. Load the samples into the wells with pipettes and take care not to damage the wells or induce bubbles.
4. Carefully cover the tank with lid and connect it with a power supply.
5. Typically gels run under 150V- 200V. Be noted that, generally higher voltage enables faster electrophoresis but poorer quality of sample resolution.
6. Run electrophoresis.