Instruction Manual

Cellulose Acetate Tank
Catalogue Number
CSL-CELLAS

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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.

THESE UNITS COMPLY WITH THE STATUTORY CE SAFETY DIRECTIVES:
73/23/EEC: LOW VOLTAGE DIRECTIVE: IEC 1010-1:1990 plus AMENDMENT 1:1992
EN 61010-1:1993/BS EN 61010-1:1993

PACKING LISTS:

	Main Unit and Lid	Connecters	Strip Holders	Instruction Manual
CSL-CELLAS		CSL-CAB	CSL-STRPHO	

The packing lists should be referred to as soon as the units are received to ensure that all components have been included. The unit should be checked for damage when received.

Please contact your supplier if there are any problems or missing items.

Usage Guidance and Restrictions:

- Maximum altitude 2,000m.
- Temperature range between 4°C and 65°C.
- Maximum relative humidity 80% for temperatures up to 31^{O}C decreasing linearly to 50% relative humidity at 40^{O}C.
- Not for outdoor Use.

This apparatus is rated POLLUTION DEGREE 2 in accordance with IEC 664. POLLUTION DEGREE 2, states that: “Normally only non-conductive pollution occurs.
Occasionally, however, a temporary conductivity caused by condensation must be expected”.

Care and Maintenance:-

Cleaning Cellulose Acetate Units

Units are best cleaned using warm water and a mild detergent. **Water at temperatures above 60^0 C can cause damage to the unit and components.**

The tank should be thoroughly rinsed with warm water or distilled water to prevent build up 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 to in detergents for more than 30 minutes.

The units 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

Alkalis.

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.

Rinsed with 0.1% DEPC- (diethyl pyrocarbonate) treated distilled water,

Caution: DEPC is a suspected carcinogen. Always take the necessary precautions when using. RNaseZAP™ (Ambion) can also be used. Please consult the instructions for use with acrylic gel tanks.

Setting up the Cellulose Acetate 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 so that there is no gap between the lid and the leading edge of the cable fitting.
4. Refit the lid.

The unit is now ready to be used.

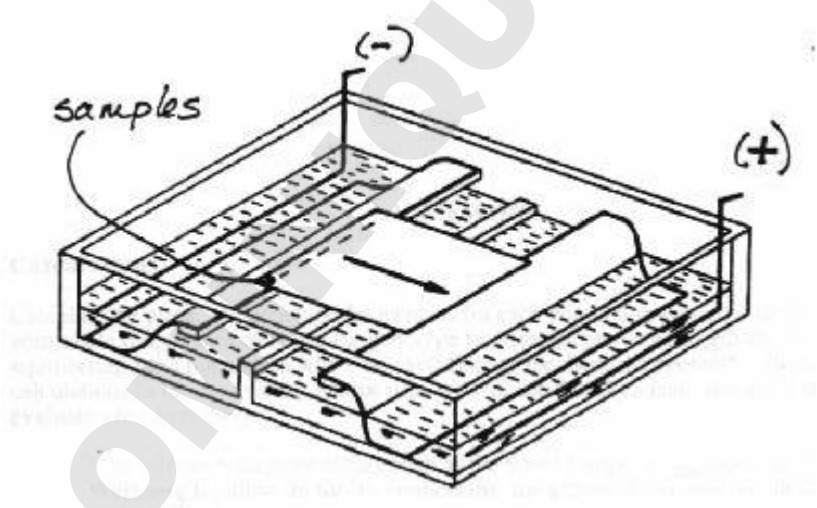
Protocol:

Preparation and Gel running:-

The following protocol is a guideline only.

Please follow the manufacturers recommend instructions with the types of Cellulose Acetate strip and samples being used.

1. Position the wick carrying bars in the tank such that the distance between them is just longer then the strip to be used when applied lengthways.
2. Cut to the appropriate size and position the electrode wicks in the tank so that they overhang the wick carrying bars with the base sitting in the buffer tanks, see diagram below. Filter paper or paper towels can be used as the wicks.



3. Equilibrate the strip in buffer with agitation for 10 – 15 minutes. Please see page 11 for details on commonly used buffers.

4. Fill the tank with 180ml of buffer per chamber side, 360ml in total.
5. Holding the strip by the edges only in gloved hands, blot the strip in between two pieces of filter paper.
6. Place the strip on top of the wicks and between the bars with the sample end at the negative electrode. Make sure there is good contact by pushing down on the ends of the strip. Glass slides can be placed over each end to further ensure a good contact.
7. Apply the samples at the negative end of the cellulose acetate plate. Usually a small amount of dye can also be loaded to indicate sample migration distance. The samples should be kept as cold as possible before application to prevent denaturation.
8. Place the safety lid onto the tank and connect the leads to a power supply.
9. Electrophorese at 200 volts for 15 – 30 minutes.
10. Once electrophoresis is complete, the strip can be stained.

Staining:-

Ponceau S

1. Immerse the strips in about 50 ml of Ponceau S staining solution for 5 to 10 min. (Amidoblack may be used if preferred) with agitation.
2. Remove Ponceau S and destain with 3 baths of 5% Acetic Acid (3 min. each).

Solutions:-

Running Buffer

Tris Hippurate 0.05 M, pH 8.8
Barbital Tris 0.05 M

Notes

Warranty

The Cleaver Scientific Ltd. (CSL) Cellulose Acetate units have a warranty against manufacturing and material faults of twelve months from date of customer receipt. If any defects occur during this warranty period, CSL will repair or replace the defective parts free of charge.

This warranty does not cover defects occurring by accident or misuse or defects caused by improper operation.

Units where repair or modification has been performed by anyone other than CSL or an appointed distributor or representative are no longer under warranty from the time the unit was modified.

Units which have accessories or repaired parts not supplied by CSL or it's associated distributors have invalidated warranty.

CSL cannot repair or replace free of charge units where improper solutions or chemicals have been used. For a list of these please see the Care and Maintenance subsection.

If a problem does occur then please contact your supplier or CSL on:-

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