H-cell

KEC14

H-cell (with membrane holder)

This H-cell is mainly designed for electrochemically characterizing membrane or any kind of separator in a liquid medium. The typical characterizations include measurement of selectivity, cross-over, resistance, and conductivity.

Product details

The design of Kanopy H-cell is simple, robust, and suitable for a wide variety of experiments. The construction includes non-reactive materials: borosilicate glass and polytetrafluoroethylene (PTFE). The two compartments, each having ~50 mL of volume, are held together by two PTFE circular rings with a small cut. A membrane or separator is fitted in an airtight manner in the middle of the two half cells with the help of PTFE circular rings. A pair of PTFE airtight lids cover the glass-cells and contain bores to accommodate the electrodes and other accessories like the gas-purging tubes, temperature sensor etc. The size and numbers of these bores are customizable.

PTFE lids

Application note

This H-cells are ideal for a wide variety of electrochemical measurements such as redox-flow battery electrolytes, liquid fuel cells and battery, and electrochemical process chemistry.

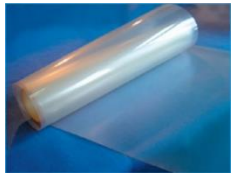
- The potentiometric studies are conducted using two-electrode cell setups, where the counter/reference electrode leads, connected together, are placed in one compartment, and the working electrode should be placed in the other compartment.
- Experiments that require controlled voltage or current study (*e.g.,* bulk electrolysis, electrochemical synthesis), three-electrode cell setups are generally used. Here, it is common to place the working and reference electrodes into the same compartment.
- The concentration of the electrolyte should be adequate in both the compartments.
- The height of the electrolyte solution inside the compartments should be high enough to immerse all the electrodes up to the required immersion length and also dip the membrane/separator completely to allow ion exchange.

Cleaning instruction

Cleaning this H-cell is easy because of its simple design. The electrolyte inside the cell should be cleaned thoroughly with repeated washing with a suitable solvent and DI water. After cleaning the H-cell, it should be dried and stored in a dry place.

Optional accessories

Nafion Membranes



KA07

Nafion™ 1110,
Nafion™ 115,
Nafion™ 117

Reference electrodes

Different kinds of Kanopy reference electrodes are available. One can choose any of these according to the reaction conditions such as acidic, basic, or neutral and operating temperature range.

KRE01 Silver-Silver Chloride (Ag/AgCl) electrode
KRE03 Mercury-Mercurious Chloride (Hg/Hg_2Cl_2, saturated KCl) or Saturated Calomel Electrode (SCE)
KRE04 Mercury-Mercuric oxide (Hg/HgO)

Platinum electrodes (working and auxiliary)

KWE01 Platinum wire electrode
KCE01 Platinum mesh electrode
KCE02 Platinum coil electrode
KWE03 Platinum foil electrode

Disc type electrodes (working)

KDE01, KDE02 Glassy carbon disc electrode
KDE03, KDE04 Gold disc electrode
KDE05, KDE06 Platinum disc electrode

Working electrode holder

KWEH01 Working electrode holder, screw type

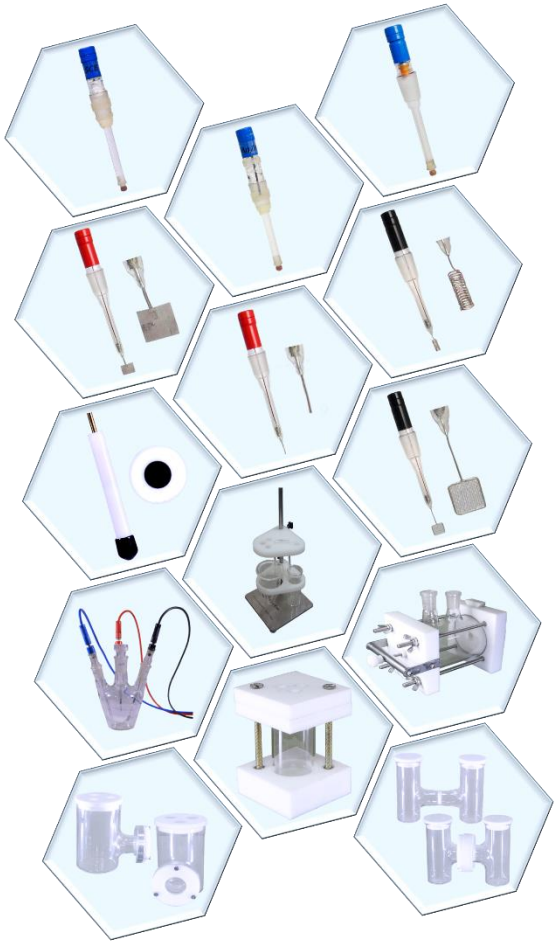
KWEH02B Working electrode holder, clip type

KEC10A
Banana Cable Set

KEC10B
Banana Connector Pin

KA01 (Red),**KA02** (Black)
Alligator Clip

KA28
Thermometer



Kanopy Techno Solutions

Crafting electrochemistry for lives…

Product Information Leaflet

H-cell with membrane holder
Product ID: KEC14

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A complete solution for your Electrochemistry research initiative…