

Gas Tight Conical Cell

KEC03

Gas tight conical cell (100mL)

This electrochemical cell is designed to characterize an electrode material in an inert atmosphere. It provides an air-tight seal on all four neck joints (three B-14 and one B-19) using the compatible Kanopy electrodes or for other compatible accessories or measurements.



Product details

This conical-shaped cell is composed of borosilicate glass and can withstand aggressive conditions at ambient as well as elevated temperature (up to 100°C). The volume of the cell is 100mL with three B-14 neck joints and one B-19 neck joints. A glass stopper is included for B-19 neck joint. It is recommended to use a little silicone grease to ensure an air-tight seal.

Application note

This four-port cell is mainly used for electrode assembly inside a glovebox, followed by electrochemical measurements outside the glovebox.

- The three-electrode cell set-up for half-cell configuration consists of either the cathode or an anode material of interest as a working electrode,

platinum metal as a counter electrode, along with a reference electrode. The fourth port can be used for attaching other accessories such as a gas-purging tube, temperature sensor.

- The two-electrode cell set-up uses one working electrode. The reference and counter electrode are connected together.
- The testing materials are typically mounted on Al or Cu-foil substrate etc. The foil/substrate is immersed inside the electrolyte solution with the help of the working electrode holder (KWEH01 or KWEH02B).



Application Image

Cleaning instruction

Cleanliness is vital for most electrochemical measurements as contaminants can lead to poorly reproducible results. Cleaning this gas-tight cell is quite easy because of its simple design. The electrolyte inside the cell should be rinsed off thoroughly using a suitable solvent and DI water with multiple washing. After cleaning, it should be dried and stored in a dry place.

Optional accessories:

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
- KRE02** Silver-Silver Chloride (Ag/AgCl) electrode
- KRE03** Mercury-Mercurous Chloride (Hg/Hg₂Cl₂, saturated KCl) or Saturated Calomel Electrode (SCE)
- KRE04** Mercury-Mercuric oxide (Hg/HgO)
- KRE06** Silver-Silver ion non-aqueous electrode

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



KA17 Cu Foil
Thickness: 0.1mm
Width: 300mm
Purity: >99.50%



KA19 Al Foil
Thickness: 16 μ m
Width: 200mm
Purity: >99.45%



KA28
Thermometer



Kanopy Techno Solutions

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Product Information Leaflet



Gas-tight conical cell (100mL)
Product ID: KEC03

Contact us



www.kanopytech.com



contact@kanopytech.com



+91-8604355668, +91-8004567307

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