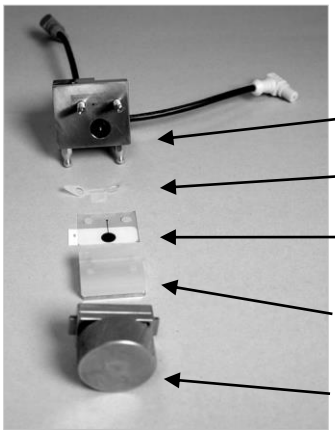
CARBON DISPOSABLE ELECTRODE INSTALLATION GUIDE

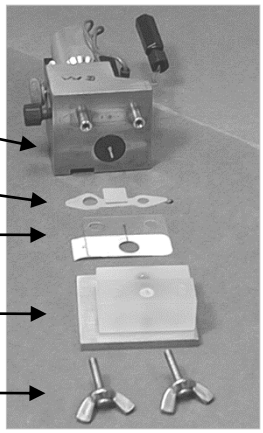
IMPORTANT

- Read all instructions and recommendations before beginning the installation of electrodes.
- Always wear gloves when handling electrodes. Never touch the electrode surface.

ED (ICS3000)

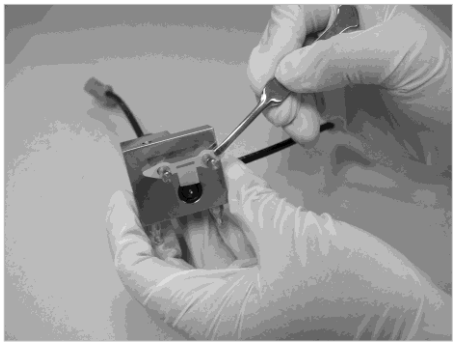


ED40 / ED50 / ED50A



STEP 1
Check availability of all parts

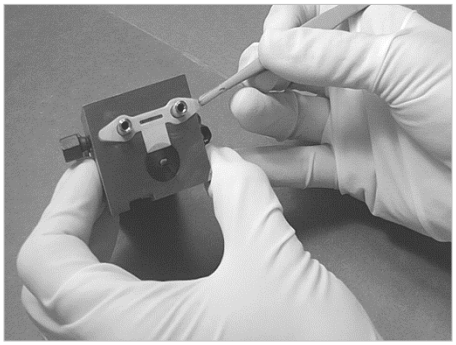
- Cell body with reference electrode installed
- PEI gasket for disposable carbon electrodes
- Disposable Electrode
- Spacer block (P/N 062158)
- Yoke-knob Assembly
- Spacer block (P/N 060297)
- Wing nuts

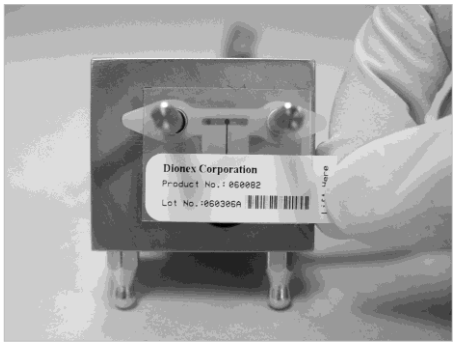


STEP 2
Install the gasket

Check for correct gasket orientation- tab towards “pogo” pin.

Avoid any wrinkles inside the sealing area of the gasket.

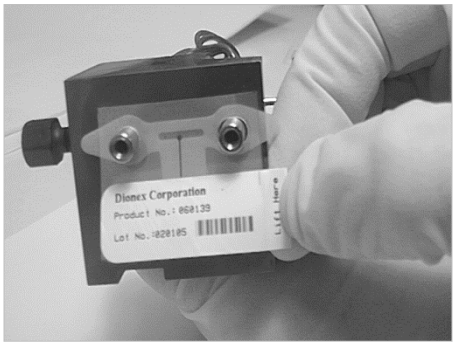


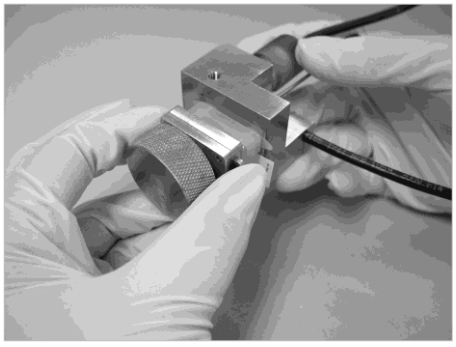


STEP 3
Install the disposable electrode

Make sure the disposable electrode is oriented correctly- the label should be oriented so you can read it and be over the tab

The electrode surface must face the ED cell body.





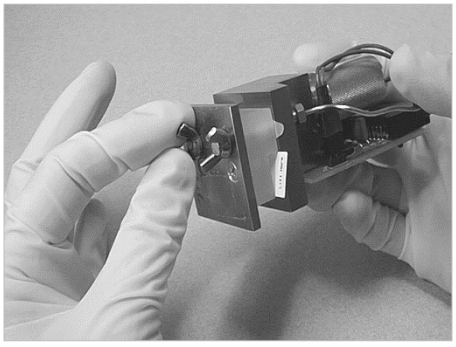
STEP 4
Place spacer block over the disposable electrode

Tighten the yoke-knob till it clicks.

Tighten the wing nuts evenly.

Finger Tight only.

Do not use tools such as pliers.



The specified lifetime of disposable carbon electrodes for most applications is two weeks. This specification is valid only under the analysis conditions specified in the Quality Assurance Report (QAR) for P/N 069336. A QAR is shipped with each electrode order. Lifetime specifications for disposable electrodes have been developed from long term experiments under carefully controlled conditions. Actual lifetime may vary depending on actual operating conditions.

Carbon electrodes are generally used in DC amperometric detection mode. All electrodes exhibit a steady decrease in signal output when used in the DC amperometric mode. Users may find that the rate of decrease will be lower with a disposable electrode than with a conventional working electrode. However, as with the conventional carbon electrodes (e.g., glassy carbon), the use of internal standards is recommended.

Recommended Detection Conditions for HPLC applications (All potentials vs. Ag/AgCl)

Catecholamines +0.80 V; Phenol, nitrophenols, aminophenols and chlorophenols +1.00 V; Fat-soluble vitamins and antioxidants +1.30 V and Benzidines +0.70 V

Recommended Detection Conditions for IC applications (All potentials vs. Ag/AgCl)

Sulfur-containing amino acids and selective detection of peroxides in alcohols +1.35 V; Electroactive DNA bases, derivatives of DNA bases and DNA analogue drugs such as acycloguanosine +1.40 V.

NOTE: ***We have found that 30 minutes activation at +1.55 V can help to improve the signal stability for the detection of S-containing amino acids.***

We recommend setting the data collection parameters in your Chromeleon program as follows for all chromatographic runs:

ED_1.Step = Auto
ED_1.Average = On
Data_Collection_Rate = 1 [Hz].

The recommendations above are general conditions only. For more specific applications information consult the "Product Manual for Disposable Electrodes" (Document #065040-07) and the user's manual for the particular analytical column you are using.

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
069336	Carbon Disposable Electrodes, Pack of 6 and six 0.001" PEI gaskets
069339	0.001" (1 mil) Disposable Electrode Gasket (PEI)