

DATASHEET

ELECTRODE, CARBON DIOXIDE

DATE OF ISSUE: 04182005



660318 BI

Use: This electrode cartridge is for *in vitro* use only. It is used for the quantitative determination of Carbon Dioxide on Beckman Coulter, LX, CX, ALX, and E4 chemistry analyzers.

Type: Silicone Membrane over a modified PH Electrode (rate)
Life Span: 8000 tests or 4 months from installation date.

Storage: Store a room temperature in provided packaging. 60 C
Shelf Life: 10 months maximum shelf life. 1 C

PERFORMANCE CHARACTERISTICS (TYPICAL):

INTERFERENCES:

CLEANING/MAINTENANCE

Span: Slope = -15 to -160 mv/mmol
Within-run SD: 0.2
Within-run CV: 0.9%
Total SD: .4
Total CV: 2.0%
Analytical Range: 5-50 mmol/L (Serum)
Notes: The above values are based on a Beckman CX analyzer w/mid range target(s).

Please refer to references listed below for a thorough discussion on interferences of modified PH glass electrodes.

Follow OEM recommended procedure(s) in instrument operators manual. Procedure will vary depending on the specific analyzer model.

PRECAUTIONS:

This electrode has been tested for control recoveries using Beckman Decision, BioRad Lypochek serum/urine, Roche Precinorm/Precipath, N.I.S.T. SRM 909b and Hi Chem Align linearity standards/controls. PVI recommends that an independent correlation study be performed to confirm the appropriate operational parameters for your laboratory before utilizing this product in compliance with good laboratory practices.

THEORY:

When the sample in acid mixture contacts the silicone membrane face, liberated gas diffuses through the membrane. Consequently it lowers the PH of the bicarbonate reagent located between the glass face of the PH electrode and the silicone membrane. The rate of change of the PH is sensed by the glass PH electrodes internal silver/silver chloride wire. The rate of change is directly proportional to the carbon dioxide in the sample.

REFERENCES:

Friedman, Clin. Chem. 1980, **26**, 4
Young, Clin. Chem. 1975, **21**, 5
Synchron CX chemistry information man. 1996, Carbon Dioxide (CO₂) Interferences