



3902 W. Valley Hwy. N. Bldg 502,  
Auburn, Wa. 98001 USA  
253.735.3910



CE Partner4U, Esdoomlaan 13,  
3951DB Maam, The Netherlands

# DATASHEET

DATE OF ISSUE: 04182005



## Rechargeable **GLUCOSE OXYGEN SENSOR**

## 467432 BI

**Use:** This electrode cartridge is for *in vitro* use only. It is used for the quantitative determination of Glucose on Beckman Coulter LX chemistry analyzers.

**Type:** Polarographic oxygen electrode  
**Life Span:** Rechargeable at 4 months from installation date

**Storage:** Store a room temperature in SEALED packaging.  
**Shelf Life:** 1 year or it may be recharged at installation 1 C 55 C

**Span:** >or=820 \*  
**Within-run SD:** 0.1 mmol/L (serum/plasma/urine/csf)  
**Within-run CV:** 2.0% (serum/plasma/urine/csf)  
**Total SD:** 0.2 mmol/L (serum/plasma/urine/csf)  
**Total CV:** 3.0% (serum/plasma/urine/csf)  
**Analytical Range:** 0-450 mg/dL (Serum/plasma)  
**Notes:** The above values are based on a Beckman LX analyzer w/mid range target(s).

Please refer to references listed below for a thorough discussion on interferences of polarographic oxygen sensors used to determine glucose.

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. Do not allow electrode to be exposed to extreme temperature changes which could stress the mechanical seal between the glass tip and rhodium wire.

### THEORY:

Sample is injected into a glucose oxidase solution. A proportional amount of oxygen is released which permeates through a PTFE membrane and changes the conductivity of the glucose gel. The polarographic electrode senses this change thru a rodium wire embedded in glass. The rate of change is directly proportional to the concentration of glucose in the sample.

### REFERENCES:

Friedman, Clin. Chem. 1980, **26**, 4  
Young, Clin. Chem. 1975, **21**, 5  
Synchron CX chemistry information man. 1996, Glucose Interferences  
\* Span is dependent on gain set by electronics on the CX or by operator on the Benchtop models. It is also determined by operator recharging techniques and cleanliness of the rhodium wire and silver anode.  
\*\* With proper maintenance and recharging this electrode can last indefinitely.