

# DATASHEET

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## ELECTRODE, SODIUM



## 668295 BI

**Use:** This electrode cartridge is for *in vitro* use only. It is used for the quantitative determination of Sodium on Beckman Coulter, LX, CX, ALX, E4, and E2 chemistry analyzers.

**Type:** Solid Membrane - LAS, Lithium Aluminum Silicate  
**Life Span:** 16000 tests minimum from installation date.

**Storage:** Store a room temperature in provided packaging. 60 C  
**Shelf Life:** 2 year minimum shelf life. 1 C

### PERFORMANCE CHARACTERISTICS (TYPICAL):

**Span:**  $\geq 500$  (new) or Slope =  $50 \pm 15$  mv per decade  
**Within-run SD:** 0.80  
**Within-run CV:** 0.50%  
**Total SD:** 1.10  
**Total CV:** 0.70%  
**Analytical Range:** 10-300 mM (Serum/Urine)  
**Notes:** The above values are based on a Beckman CX analyzer w/mid range target(s).

### INTERFERENCES:

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

### CLEANING/MAINTENANCE

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 Lypocheck 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 buffer mixture contacts the LAS electrode face, sodium ions begin to undergo an ion exchange on the outer layer of the LAS glass electrode. As this ion exchange takes place, a potential is developed at the face of the electrode. This potential is measured by a silver/silver chloride wire. The potential follows the Nernst equation.

### REFERENCES:

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