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# DATASHEET

## ELECTRODE, CHLORIDE

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# 441930 BI

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

**Type:** Solid State - Silver/Silver Chloride matrix  
**Life Span:** 12000 tests or 8 months from installation date\*\*.

**Storage:** Store a room temperature in provided packaging. **Shelf Life:** 3 year minimum shelf life. 60 C

### PERFORMANCE CHARACTERISTICS (TYPICAL):

### INTERFERENCES:

### CLEANING/MAINTENANCE

**Span:**  $\geq 290$  (new) or Slope =  $- 50 \pm 15$  mV per decade  
**Within-run SD:** 2.0 (serum/plasma/csf)  
**Within-run CV:** 2.0% (serum/plasma/csf)  
**Total SD:** 3.0 (serum/plasma/csf)  
**Total CV:** 3.0% (serum/plasma/csf)  
**Analytical Range:** 15-300 mM (Serum/Urine)  
**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 solid state silver/silver chloride 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 Lypocheck serum/urine, Roche Precinorm/Precipath, N.I.S.T. SRM 909b and Hi Chem Align linearity standards/controls. *Some control shifts should be expected!* 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. Our studies indicate that you can expect a more consistent adherence to literature linearity values.

### THEORY:

A potential is developed at the surface of the  $Ag/AgCl$  solid state electrode. The potential is proportional to chloride ions present in the sample plus reagent solution. The potential is sensed by a silver wire interfaced to the  $Ag/AgCl$  pellet. 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, Chloride (CL) Interferences

\*\* Life Span is dependent on proper maintenance and can definitely be shortened by too much abrasion, improper or lack of maintenance. With very good maintenance habits silver/silver chloride electrodes can last up to 2 years.