




**MU9194 OL**

**DATASHEET**  
**ELECTRODE, NA<sup>+</sup>**

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**Use:** This electrode cartridge is for *in vitro* use only. It is used for the quantitative determination of sodium on Olympus AU series chemistry analyzers..

**Type:** Neutral carrier (Crown Ether) in PVC matrix w/gel  
**Life Span:** 6 months or 40,000 samples from installation date.

**Storage:** Store a room temperature in provided packaging.  
**Shelf Life:** 12 months from manufacture date (see Note 2) <sup>-6 C</sup>  60 C

**PERFORMANCE CHARACTERISTICS (TYPICAL WHEN NEW):**

**Slope:** 56 ± 4 mv per decade (serum-typical)  
**Within-run SD:** <1.0  
**Within-run CV:** <.85%  
**Total SD:** <1.5  
**Total CV:** <1.20%  
**Linearity:** 50-200 mEq/L (serum) 10-400 mEq/L (urine)  
**Selectivity Coef:** -2.0 (NA over K)

**INTERFERENCES:**

**Substance Effect**  
Please refer to the references listed at bottom of this sheet for a thorough discussion of interferences seen by neutral carrier based ion-selective 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 Synchron Controls, BioRad Lypochek serum/urine, N.I.S.T. SRM 909b and Vital Scientific Align linearity standards/controls. *Minor control shifts may occur!* PVI recommends that an independent correlation study be condered to confirm the appropriate operational parameters for your laboratory before utilizing this product in compliance with good laboratory practices. Our studies indicate that in cases studied recovered values were equivalent to recoveries generated by an OEM sodium electrode. Pearson Correlation equal to or better than 0.999. (See note 1 for further information.)

**THEORY:**

A Crown Ether impregnated pvc membrane selectively transports sodium ions to and from the diluted sample. The sodium ions that cross the membrane develop a Nernstian potential that is sensed by a silver/silver chloride wire.

**REFERENCES:**

Friedman, Clin. Chem. 1980, **26**, 4  
Young, Clin. Chem. 1975, **21**, 5

Note 1 - A comparison of Olympus and Perphormax Brand Ion-selective Electrode Response; D. Nagahara, *Internal White Paper*, January, 2008; Peripheral Visions, Inc.

Note 2 - If electrode is installed or used after 12 months from Manufacture date, Life Span duration shall be considered beginning 365 days from date of manufacture. Expiration date of electrode is 18 months from date of manufacture after which **NO WARRANTY APPLIES.** For Electrode Warranty Term, the number of months or the number of tests shall be used, whichever comes first.