

**Hansen Ophthalmic Development Lab
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Cleaning the Burian-Allen ERG Electrode

Prior to disinfection it is imperative that proper cleaning methods are followed with emphasis on proper and thorough rinsing techniques using critical water only (not utility):

- Do not allow any foreign substance (tears, methylcellulose, etc.) to become dried on to any portion of the electrode surface
- If proper cleaning methods cannot be done immediately following a procedure, pre-soak the speculum in distilled or sterile DI water only for 1-2 hours maximum to prevent drying out
- Do not pre-soak the electrode in cleaning solution and do not exceed cleaning time recommendations listed in the manufacturer's directions for use
- Rinse thoroughly in distilled or sterile DI water only multiple times in multiple containers following cleaning procedures

For routine cleaning use a non-enzymatic multi-purpose premium detergent (ProWash manufactured by Certol) or a single enzymatic detergent if warranted (ProEZ1 manufactured by Certol). **Follow manufacturer's directions for use** www.certol.com/medicalhome

FYI - Note the following article dated April 2018 by the AAO concerning enzymatic detergents and TASS www.aao.org/clinical-statement/guidelines-cleaning-sterilization-intraocular

For lead wire cleaning use Certol ProSpray wipes followed by 2 x 2 gauze pad wipes dampened with distilled or sterile DI water only. To remove any tape glue from lead wire, use an orange solvent sparingly prior to lead wire cleaning procedures (We do not recommend submersing the entire lead wire and ends during cleaning and disinfection procedures).

Disinfecting the Burian-Allen ERG Electrode

Cidex OPA (classified as a high-level disinfectant) is recommended because most if not all sterilization methods will damage or destroy parts that make up the majority of the Burian-Allen ERG electrode:

- Steam (autoclaving) and dry heat methods will damage the plastic speculum
- Ethylene Oxide gas (EtO) will damage the plastic speculum over time and is generally only used for single use medical devices
- Hydrogen peroxide gas plasma will damage the silver conductive coating
- Ionizing radiation sterilization (gamma rays or high energy electrons) will affect the physical and chemical properties of plastic
- 1:10 bleach method (10% bleach, 90% distilled or sterile DI water only for 5 minutes) will damage the silver conductive coating and all soldered points on the electrode if time or dilution rates are exceeded (rinse immediately and thoroughly with distilled or sterile DI water only after 5 minutes)

Cidex OPA is highly recommended and will decrease degradation of the silver conductive coating and all soldered points on the electrode in comparison to the 1:10 bleach method. **Follow manufacturer's directions for use** www.emea.aspi.com/products/endoclen/cidex-opa

Warning

- **Never** exceed temperatures of 110F(43C)
- **Never** use any type of alcohol - it can remove the silver conductive coating and will damage non-metallic portions of the electrode
- **Never** use ammonia - it will damage non-metallic portions of the electrode
- **Never** use hydrogen peroxide - it will damage the silver conductive coating
- **Never** use bleach in ultrasonic systems - it will damage the silver conductive coating and all soldered points on the electrode (we do not recommend the use of ultrasonic equipment)
- **FRAGILE LEAD WIRE - Never pull directly on lead wires when unplugging the electrode. Always grasp the plastic ends firmly when disconnecting lead wires**

Inspect the electrode prior to each use for any damage that may have occurred during the previous use or during cleaning and disinfecting procedures

- Inspect the ring/lens assembly and support wire for correct positioning and freedom of movement (compared to condition when new)
- Inspect the part of the ring and lens assembly that makes contact with the eye for damage or buildup of foreign material that would cause surface not to be smooth to the touch
- Inspect the part of the interior and exterior surfaces of the speculum that make contact with the eye for damage or buildup of foreign material that would cause surface not to be smooth to the touch
- Inspect the part of the inner and outer edges of the speculum that make contact with the eye for damage or buildup of foreign material that would cause surface not to be smooth to the touch

Remember

Accidents happen and some deterioration will occur over time with normal use. The Burian-Allen ERG electrode is repairable and can be reconditioned throughout the life of the electrode.

Please do not attempt to repair any part of the electrode yourself as this usually makes things worse for me and can cause irreparable damage to the electrode itself.

Let me know if you have any questions or visit our website at www.hansenlab.com.

Regards,

Jeff