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Nepa Gene Platinum Electrodes for Electroporation/Electrofusion Care and Cleaning Guide

INTRODUCTION:

Your new platinum electrode was carefully engineered by Nepa Gene Co., Ltd. to complement the high performance of their electro-kinetic transfection and cell fusion systems. It should yield superior experimental results for many years of work but will require periodic inspection and cleaning* to maintain optimal performance. Please review this document before first use to familiarize yourself with our recommended best practices and ensure that a copy is made available to all new equipment users.

PRIOR TO TRANSFECTION:

In order to avoid microbial contamination in downstream operations, the electrode assembly must be sterile and as clean as possible. We recommend carefully wiping or spraying with 70% ethanol, or a combination of ethanol and germicidal UV lamp exposure. The protocol used should be determined by the primary system operator as a function of the sterility level needed for the work being performed. All of the electrodes also are compatible with ethylene oxide (ETO) and hydrogen peroxide vapor (VHP) processing systems, so end users requiring a very high level of sterility assurance can use these methods using their established methods or within the system manufacturer's processing recommendations.

FOLLOWING EACH USE:

Depending on the application, it should be considered normal for some amount of cellular debris and/or media component residue to collect on the platinum electrodes and surfaces within the fluid path. As soon as possible following an experiment, gently clean all surfaces with a soft nylon bristle brush (such as a toothbrush) and a mild (non-abrasive, neutral pH) detergent. Some residues can also be removed by sonication for 1 minute in a 1% acetic acid solution. Rinse thoroughly- first with plenty of water, then with 70% ethanol- and let dry completely before storage.

Do not autoclave or use bleach! Such methods will damage components of the electrode.

PERIODIC MAINTENANCE:

Over time and depending on frequency of transfection experiments, some oxidation may form on the platinum electrode surfaces and adversely affect conductivity. Periodically inspect the electrodes and carefully polish them if necessary, with extra-fine (≥ 1000 grit) sandpaper.

**Please contact us before attempting any cleaning procedure other than those described in this document. Any method not fully validated or explicitly recommended by Nepa Gene Co., Ltd. and Bulldog Bio, Inc., may damage electrode components and/or void your warranty.*