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Evaluation of the Efficacy of CIMR[®] verses Ecoquest's low ozone System in Reducing Murine Norovirus Titers Performed by Dr. Lela Riley, RADIL LLC, Columbia MO November 18, 2008

Introduction

Members of the genus *Norovirus* are nonenveloped viruses with a linear, positive-sense, single-stranded RNA genome. Noroviruses are in the family *Caliciviridae*, which also includes the genera *Sapovirus*, *Lagovirus*, and *Vesivirus*. Formerly known as "Norwalk-like viruses" or "small round structured viruses," noroviruses cause acute gastroenteritis in humans, typically lasting 24 to 48 h, and infect people of all ages.

Recently, the first murine norovirus, was isolated from mice. This newly described pathogen of mice can be grown in cell culture, providing the first example of a norovirus that can be cultured in vitro. In these studies, the efficacy of CIMR[®] verses Ecoquest's low ozone platform has been evaluated against Murine norovirus (MNV), as a representative of the *Caliciviridae* family, using an in vitro culture system.

Experimental Design

Virus stock and culture

MNV-4 used in this study was maintained in RAW267.4 cells, a murine macrophage cell line. Cells were grown in Dulbecco's modified Eagle's medium (DMEM) supplemented with 10% fetal bovine serum. The virus was propagated, concentrated, and purified. Purified viral stocks were titered via plaque titration. Viral stocks were stored in a -80°C freezer.

Preparation of surfaces

To assess efficacy of the CIMR[®] and EcoQuest's Low Oxidation (ozone) decontamination systems for