Exciton Clean Overview

RAS – N Workshop

October 8, 2020

Exciton Clean
WATER TREATMENT

How eAOP® Works

/ HOME / THE TECHNOLOGY / HOW IT WORKS

The Exciton Advanced Oxidation Process® reactor is designed to destroy a myriad of harmful microorganisms and chemicals present in water.

At the core of our technology is a conductive metal electrode coated with an ultra-thin layer of titanium dioxide nanotubes produced by our proprietary process. When illuminated by UV light with sufficient energy, highly reactive electron holes are generated that oxidize molecules on the electrode surface.

UV has potent germicidal action that breaks the DNA strands of algae, bacteria, viruses, bryozoans, protozoans and other microorganisms. The UV also breaks down chlorine into chlorine radicals and hydroxyl radicals.

The reactor device is a highly efficient chlorine generator converting chloride ions (Cl-) into hypochlorous acid (HOCL).

(can be controlled as necessary if fish are present)

The reactor produces high concentrations of numerous chemical species with powerful oxidizing (destructive) effects on microbials and chemical contaminants in the water. These oxidizing chemicals include hydroxyl radicals, hydrogen peroxide, and Superoxide.

Altogether, the eAOP® process combines to make one of the most effective and powerful water purification products on the market.

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The eAOP® MARK XXX Reactor Assembly

Deployed at Superior Fresh

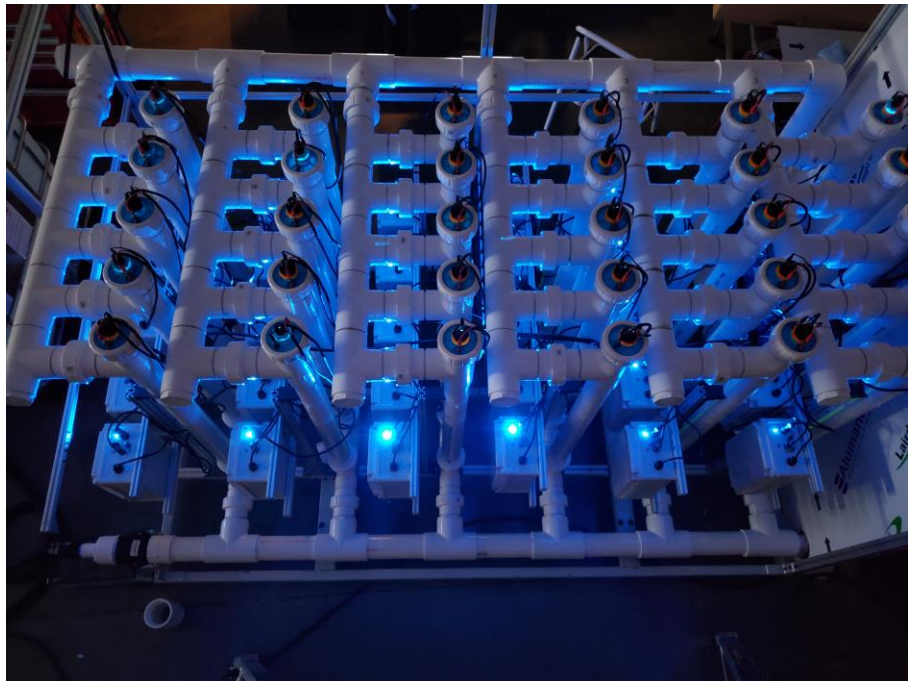

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Figure One

Operation of depuration system without fish before and after eAOP® turned on

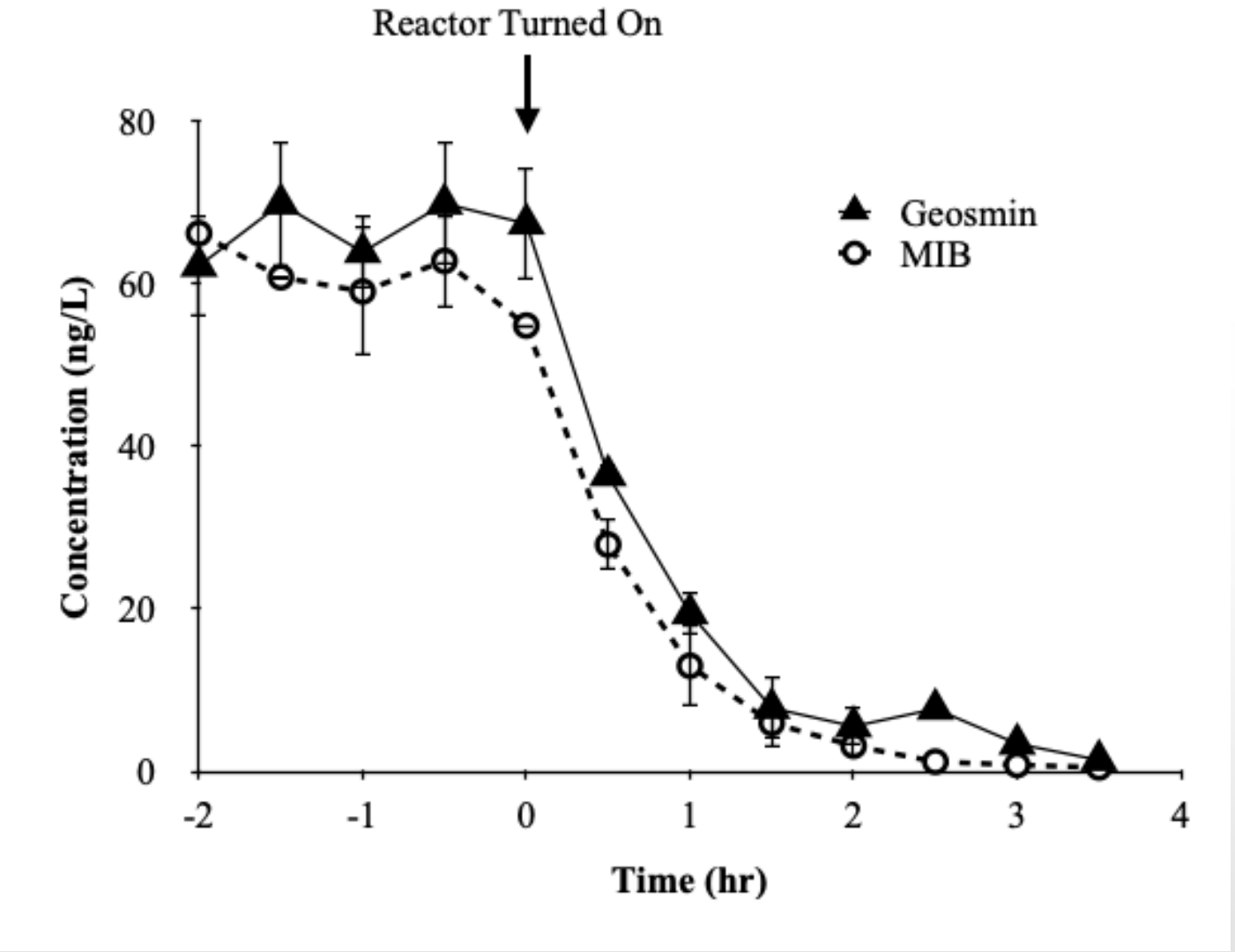

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Figure Two

Depuration system operated with Atlantic salmon and flushing flow (control) versus with Atlantic salmon, flushing flow, and eAOP® treatment

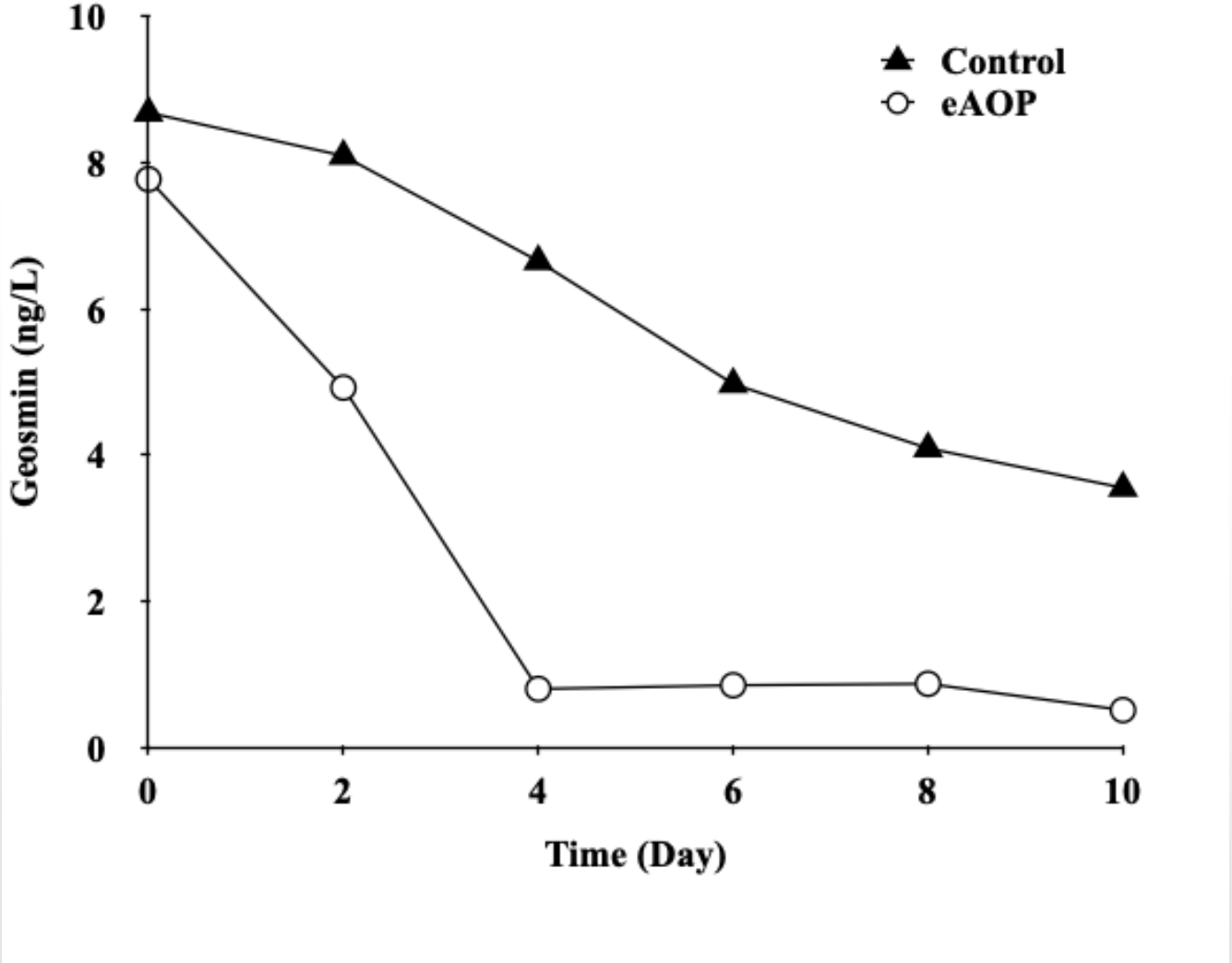

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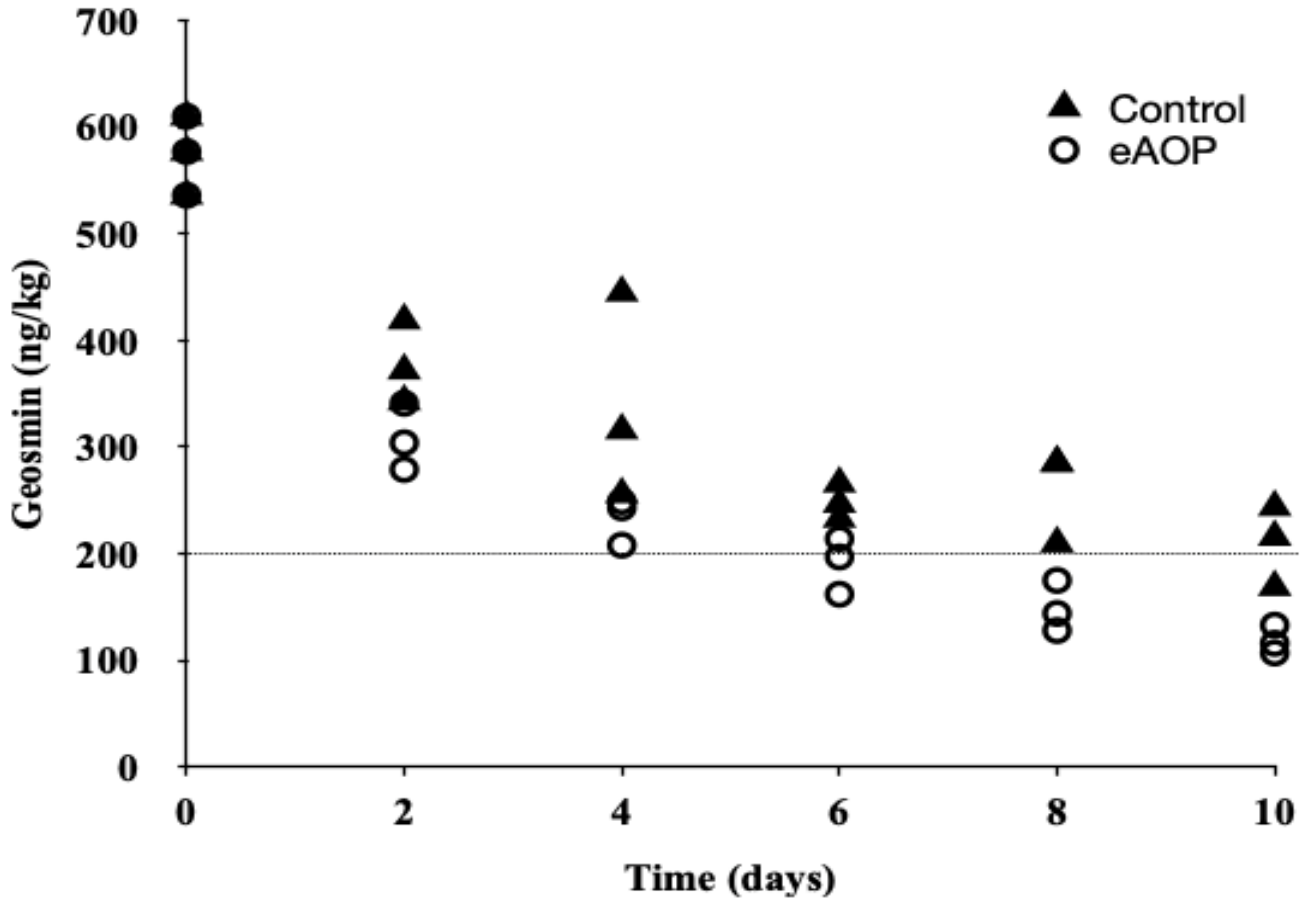
Figure Three

Depuration system operated with Atlantic salmon and flushing flow (control) versus with Atlantic salmon, flushing flow, and eAOP treatment.



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Thank You

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