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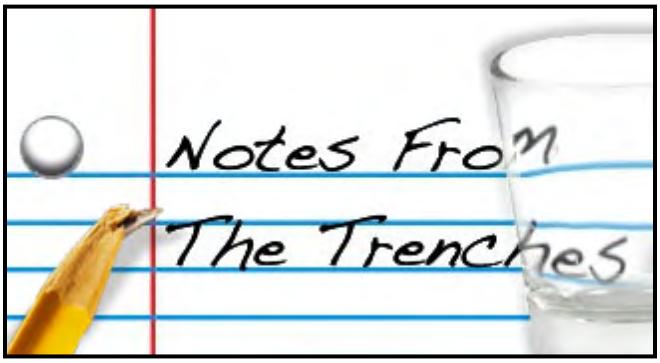

Vodka Dosing...Distilled!

A Powerful Method for the Reduction of
Nitrates and Phosphates within the Reef Aquaria

by Nathaniel A. Walton (Genetics) and Matt Bjornson (Stony_Corals)

The following information is provided for your consideration in regard to a topic that has been questioned by some of the best minds in the hobby. The goal of this column is to compact

many threads interested in a particular discussion to a user friendly layout. The information contained in these articles is here to help educate and hopefully enhance the hobby, while helping you to make informed decisions on aquaria upkeep. The author(s) assumes no responsibility for any consequences that may arise from the use of this information.

Introduction

While the concept of using an organic carbon source to reduce nutrients is not new to the hobby, it has recently gained considerable popularity. The number of carbon-source dosing threads on Reef Central (RC) currently reinforces this statement. These threads range in dosing of a single carbon source: vodka, sugar, or vinegar, to the combination of these three. Notably, the first major thread on RC for this subject was quite lengthy starting a couple of years ago ("Dosing vodka to bring down N and P"). This thread highlights the results of many aquarists that were achieved through careful vodka additions to their aquariums. Users note a dramatic decrease in nitrate and phosphate molecules, while others note increased coral coloration and clearer water. In this article we will discuss these potential benefits and give instruction on vodka additions while condensing the many threads on this subject into a more easily readable format.

Before starting, as with any project, there is a great deal of information that needs to be taken in and understood. While reading this if there is any question that is left unanswered please ask either someone on RC or in your local reef club. We ask that you read and ask questions until you have a firm understanding of the concepts behind vodka dosing. There are no dumb questions! And remember as with all good things it takes time, effort, and understanding to do a task properly.

What is an Organic Carbon-Source?

Carbon is the fourth most common element in the universe. It is unusual in nature as it has the ability to self-polymerize forming long chains. Carbon s abundance combined with its ability to form a wide range of polymeric structures allows this molecule to form essential molecules found within all organisms. Carbon is found within your reef aquarium in abundance as inorganic bicarbonate. When these carbon molecules are incorporated into more complex forms within cells they are termed organic.

It has been reported that addition of certain organics can help enhance the appearance of the reef aquarium by reducing nitrates and phosphates. To do this, people have experimented with sugar, vinegar, and vodka. All of which are organic. Our discussion is focused on vodka addition. The reason vodka is used in comparison to other spirits such as whiskey, gin, or brandy is that vodka is more pure in composition than most other spirits because of its process of distillation. Other spirits are brewed with additives that enhance flavor. Vodka is not. Because it lacks additives it consists of mostly water and the organic compound ethanol. For this reason many feel vodka is a safer addition than other spirits by eliminating the possibility of adding other organic molecules that may act negatively within the reef environment.

Why dose Organic Carbon?
