



Purpose

To further continue our research about the 2015 junk science testing solubilizing Oxybenzone into DMSO to make claim kills coral larvae.

Materials

Sample of 99.9% pure DMSO
Sample of 100% Oxybenzone
Sea Water
Lab beakers (4)
Weigh scale Accurate +/- 0.001 grams

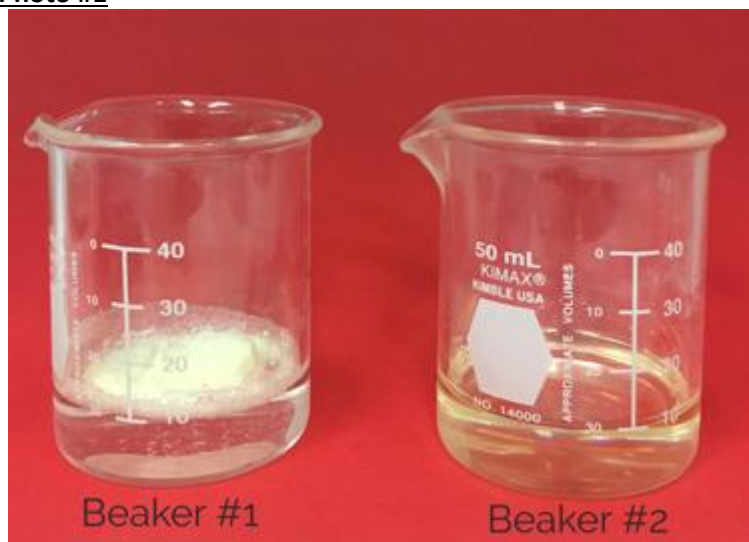
Procedure Step #1:

Calibrate scale, place each beaker on scale and tare
Place 9 grams sea water into Beaker #1, then add 1 gram Oxybenzone. No mixing.
Place 9 grams DMSO 99.9% into Beaker #2, then add 1 gram Oxybenzone. No mixing required.

Observations

1. DMSO has a very rank odor. Significantly bad enough to see why it would never be used in any type of sunscreen product.
2. As you can see from the picture below, Photo #1, Beaker #2, the DMSO had no problem with immediately solubilizing 100% of the Oxybenzone.
 - a. This was no surprise as DMSO is probably the best known solubilizer in the world.
3. However as you can see the Oxybenzone when added to sea water just laid on top. Please see Photo #1, Beaker #1.

Photo #1



Step #2 Purpose

To see the reaction of the addition of sea water to the DMSO/Oxybenzone solution in Step #1.

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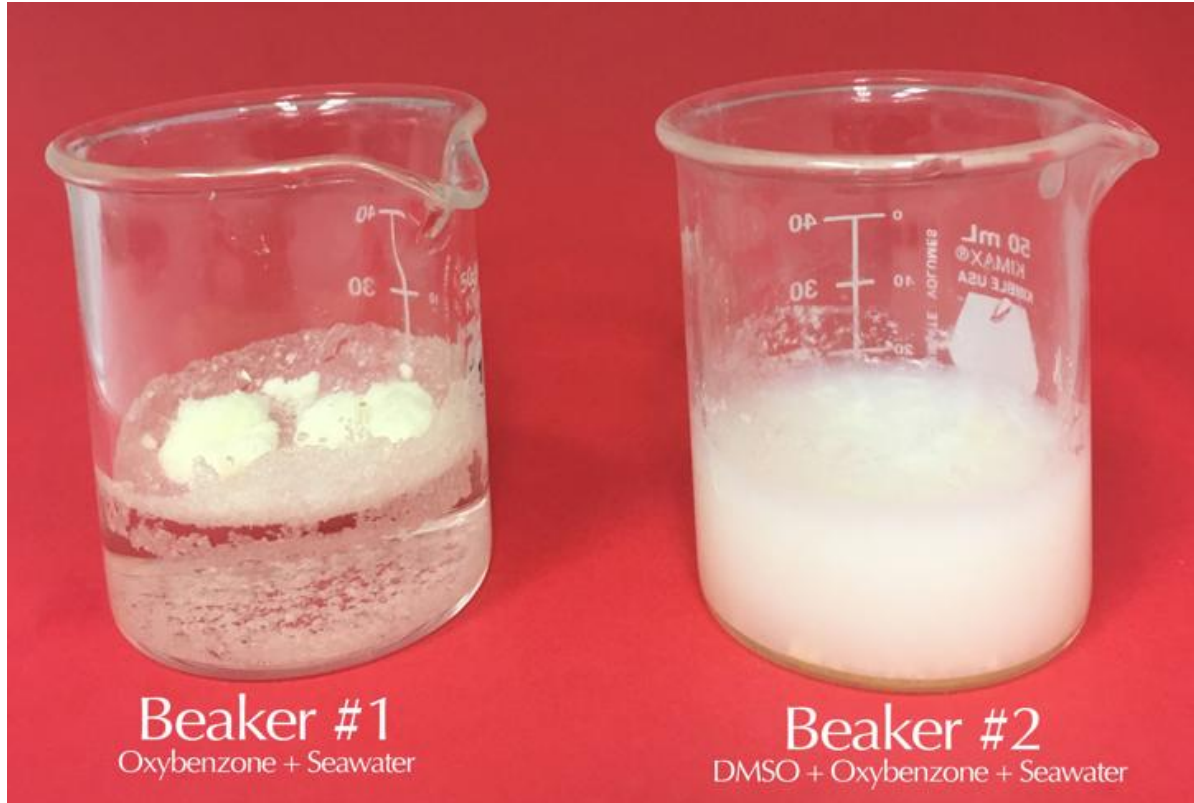
Step #2 Procedure

Weigh out 5 grams of sea water into clean beaker, then add the solution in Beaker #2 above containing 9 grams DMSO and 1 gram Oxybenzone to the 5 grams of sea water.

Step#2 Observation

The DMSO/Oxybenzone solution immediately had an adverse reaction to the sea water. The solution immediately kicked out some type of white particulate which adhered to sides of the beaker and throughout the solution, and significantly clouded up the solution. See Photo #2 Beaker # 2 below.

Photo #2



Experiment Summary

Imagine coral larvae, adult coral, sea-life or even marine micro-organisms trying to breathe in the solution when added to the sea water.

Science is not real when you force the outcome by creating unrealistic protocols. The above experiment was just as corrupt as the one in 2008 which was equivalent to tossing coral frags into a plastic zip bag of sea water and adding copious amounts of sunscreen chemicals, sitting on a shelf and stating OMG the coral frags died.

By artificially solubilizing the Oxybenzone into another chemical, DMSO, that is neither FDA approved, nor utilized in sunscreens created a vehicle to carry the Oxybenzone into and suffocate the coral larvae.

Further, the siltation and cloudiness that occurred in the water with the DMSO/Oxybenzone solution is not a realistic scenario for introduction of sunscreens containing oxybenzone into our ocean environment.

In its natural state the oxybenzone would just stay on the outside of the coral larvae. Unless a shipment of oxybenzone fell off a ship and exploded in the ocean we cannot see the relevance. The same scenario would apply to zinc oxide and titanium dioxide with even worse results as they are listed as ocean pollutants whereas oxybenzone is not.

It's not just about the ingredients – It's about how the ingredients are formulated!

For more information about Reef Safe Real Science please visit www.tropicalseas.com about us.