Water Daphnia vs. Marine Pollutants

Hoyt, Karlee (School: Trenton High School)

Which marine pollutants are the most harmful to marine life? Seeing as water Daphnia are an imperative piece in the marine environment's food web, the goal of this experiment is to test the effects of common marine pollutants on Daphnia. It is hypothesized that the biggest killer out of the pollutants will be the crude oil from North Dakota because it is the harshest of the pollutant samples used in this experiment. The issue this experiment poses to solve is which area of pollution should we first focus on solving in the real world, depending on which causes the most harm. For this experiment, three tanks, tank lights, sponge air filters, tubing, dry yeast, droppers, and all necessary pollutants were required. The Daphnia were ordered after all of the necessary equipment was gathered. The Daphnia were all acclimated and then placed into regulated tanks. The Daphnia were fed upon entering their tank and were left to settle and eat for exactly one hour. After this hour, exactly two milliliters of each pollutant was exposed to each tank, these pollutants were crude oil, microplastics in water, and laundry detergent. After the release of this pollutants, the tanks were left completely alone, the only change being the lights being on for only twelve hours a day to simulate night and day for the Daphnia. After recording the results, behavior, and deaths of the Daphnia from this first round of exposure, the tanks and accessories were removed and cleaned. After the tanks were refilled, the exact same experiment was conducted with a new measurement of pollution, this time with the exposure level being four milliliters of pollutant per tank. After this, all results were recorded and checked.

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