The Effects of Food-Grade Oil on the Cardiovascular System of *Glycera dibranchiata*

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Abstract:

There are several chemicals that are used industrially to keep industries running and essential for their processing machinery to continue to stay in order. Some of these chemicals may encounter the food that is being processed, which is then being sold to the public for consumption. This study examines the toxicity and impact of CRC Food-Grade Chain Oil, a common industrial lubricant, on the cardiovascular system of *Glycera dibranchiata*. Eight petri dishes, containing five bloodworms, 30 milliliters (mL) of distilled water, and different amounts of CRC Food-Grade Chain Oil was constructed. The heart rate of each bloodworm was measured before exposure to the food-grade chain oil and then measured after a 24-hour exposure period. The average heart rate for a petri dish of bloodworms was about 12 beats her minute (bpm). After the 24-hour exposure time, the average heart rate for a petri dish increased to about 22.4 beats per minute (bpm). Although, the average heart rate differed for each petri dish the trend was seen throughout. Only the petri dishes with the lowest holding amount of food-grade chain oil survived while the higher amount of food-grade chain oil died within the 24-hour exposure period. The data helps to provide evidence that food-grade chain oil causes an environmental stress response to organisms but stabilization occurs to the body for survival.