Using Micrococcus luteus, Lactococcus lactis, and Bacillus cereus Bacteria and the Breaking Down of Microplastics

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Due to human neglect, wastefulness, and laziness, microplastics within our waters are a rising concern for the environment and its inhabitants. Certain enzymes like MHETase and PETase are viable solutions to handle microplastics but are very costly. There are theories within the scientific world that bacteria may also be a counter to microplastics due to certain enzymes produced from them. To test these theories, the three types of bacteria that would be used are Bacillus Cereus, Micrococcus Luteus, and Lactococcus Luteus. These bacteria and their effects on microplastics within the water were researched and experimented upon to find another viable way to handle microplastics using less money. Differing temperatures would be used to find the best possible climate for these bacteria to properly work. Water would be obtained from a local stream, analyzed for microplastics, put into nine jars. One of each kind of bacteria would be put into three jars, all with varying temperatures for a month. After a month each jar would be examined again under a microscope to note the number of microplastics. Micrococcus Luteus would bring out the best results by destroying more microplastics than the other bacteria. My tests have proven that some bacteria can destroy microplastics.

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