



THE NEED

Plastic waste may soon outweigh fish in the ocean.

At the same time, we are increasingly reliant on plastic materials in the maritime sector. Most so-called "biodegradable" plastics do not actually degrade in the cold, dark ocean environment, limiting the options for scientists, instrument manufacturers, and fishermen to align their practices and their principles. The Blue Economy requires innovative solutions for its material needs.

OUR TECHNOLOGY

Our biomaterials are polyhydroxybutyrate (PHB)-based with additives to speed complete degradation, and rigorous data on materials properties and in-ocean degradation. Because PHB is a compound naturally made by bacteria and plants, many marine bacteria have also evolved to fully degrade PHB, without the creation of microplastics or other harmful byproducts. Like any polymer, PHB requires blending with additives before it can be used in end applications and Nereid Bio formulations enhance degradation. Our technology also incorporates innovative "living materials" embedded with naturally-occurring PHB-degrading bacteria that will begin to degrade the material on triggered contact with seawater. We design solutions with a range of degradation rates and shelf lives suitable for a wide range of ocean applications - and beyond.

OUR TEAM

We are a team of material scientists, microbiologists, and oceanographers working across industry, academia, and government to develop truly biodegradable materials for the ocean.

Nereid Biomaterials is a tech transfer project currently in R&D and supported by the National Science Foundation's Convergence Accelerator, a program that accelerates basic research towards societal impact and commercialization.

Nereid Bio is seeking partners for prototype testing, and customers looking for verified and complete material degradation on their timeline.

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