

Project Description

ALGI originated in a Furniture and Product Design course at ELISAVA Barcelona School of Design and Engineering. The brief: For a brand of your choosing, design a product which does not currently exist in their current inventory. I decided to partner with Token, a small knitwear brand. I was not only excited for the opportunity to learn knitting, I also wanted to experiment with a new material I had been seeing floating around online - a bioplastic yarn derived from algae. As Token is an apparel brand, I decided to explore other applications for textiles, and settled on creating a pendant lighting piece.

Over the course of 6 weeks, I tested 10 different recipes, tweaking the ingredients and their quantities in order to achieve a yarn with the desired strength, flexibility, recovery, and durability. I was also simultaneously learning to knit, as well as testing different plant based dyes for the yarn. Finally, I decided on the final form of my first prototype.

It's no secret the textile industry produces an immense amount of pollution and waste, particularly in terms of the chemicals and micro plastics that end up in what should be clean drinking water. Bioplastics derived from natural ingredients present an exciting solution to these issues, due to their inherent recyclability and biodegradability.

One of the biggest challenges with the bioplastic yarn is its irregularity when extruding. This irregularity prevents it from being used in traditional knitting and weaving machines, which are an essential component of the commercial textile industry. Perhaps with guidance from the Hemp, Wool, and Mohair Councils of American, new methods for extrusion could be conceived and tested.