

MARGARITA TALEP, CHILE

Desintegra.me

This biomaterials project intends to replace single-use plastics with a new substance extracted from algae. The Spanish term “Desintegra me” implies that it will ‘disappear’ after use. Pigments are extracted from the skin of discarded fruit and vegetables.

The material can have different degrees of flexibility – it can be rigid and brittle to flexible and elastic. It degrades naturally over a period of two to four months depending on the atmospheric conditions.

BRONZE AWARD WINNER
Margarita Talep,
Industrial Designer, Chile



Coffee Talk with Margarita

Tell us in a few words: Who are you? What do you do?

I'm Margarita Talep, a designer based in Santiago, Chile. I develop projects related to sustainability, nature, and new materials.

What motivated you to get into sustainability? Was it a particular moment or a gradual process?

It was a gradual process. Before studying design there were topics that were discussed in my social life or family circle. They are subjects that I'm passionate about and that interest me enormously. During my studies, the design academy gave me the tools to work around my interests in an innovative, creative way and with great freedom. Since I can see the world from the designer's point of view, social, political, cultural, and environmental issues take on greater importance in the way we develop projects - of whatever type - and I think that's what sustainability is all about.

How did you come up with your idea?

Everything started with milk. In a workshop at university, the topic of the semester was "biopolymers". We were required to work in pairs, so my colleague and I arrived at our first class with several polymer test tubes of things that had interested us. Inside them was casein, the protein in milk. We ended up developing a milk-based bioplastic that had incredible results. This project was the starting point that motivated me to continue developing a series of experiments with natural polymers over time. When it was time to start the annual project, I questioned whether using milk was a viable way to develop what I had in mind, so I looked for polymer alternatives that were not of animal origin. I wanted a raw material that was found locally in abundance and one where the extraction was not harmful to ecosystems. So that summer I started an experiment with algae. I already knew a lot about it in theory, so I was able to quickly create an interesting test tube with potential for further development.

What are your future plans for your project?

The project was in the stage of productive viability and the long and extensive research that this entails. Due to COVID-19, this has been paused. I hope the future of this project will show that this material can be produced and be used on smaller scales whilst taking care of the extraction of the raw material and the method in which this is done. For example, in Chile, it is expected that seaweed cultivation in sandbanks will increase in the coming years. This would allow the natural ocean grasslands to be regenerated and not cause damage to the ecosystem. We must be careful with all the variables. The most important thing is that the material can coexist in harmony with its ecosystem.

What are the biggest obstacles you face?

There are a few obstacles. For example, in Chile, it is difficult to obtain the finances to continue developing these materials. So overall it is a difficult path and a lot of effort but I believe eventually it can have great results.

What do you think we can do to solve the plastic pollution problem?

I believe that we can stop the plastic pollution problem with a universe of diverse solutions and initiatives, be they social, cultural, economic, innovative, educational. No matter how small our changes in habits or customs, all together they will help to solve plastic pollution.



87

