

## PONTO BIODESIGN, BRAZIL

# Unpack Less, Peel More

Following circular design guidelines, Ponto Biodesign aims to create a packaging that enables the materials to flow in integrated and regenerative loops. The packaging system was created for handmade personal care products, manufactured locally with natural ingredients. The project consists of a collection of five different packages. Each of them has three layers: the internal layer is the creamy personal care product – such as face cream, deodorant, facial clay, etc. The second layer is made of solid natural soap and it serves as a container for the previous layer. Finally, the external layer – as well as the tags and strings – is made out of bacterial cellulose, that can simply be glued together with water, protects the soap, and contains the information of the product. The packaging system reproduces the structure of a fruit, juice – pulp – peel. The material for the external layer was developed using experimental processes of biofabrication with residual SCOBYs from local Kombucha producers. It is fully compostable, made from renewable sources, and has a fast growth rate. Being local, it eliminates the need to transport raw materials from long distances and increases the integration of local initiatives.

Natural pigments like spirulina, hibiscus, saffron, and charcoal were added to the blending process, giving different colors and properties to the samples. The manufacturing process has a low level of energy consumption and is a low-tech process. It can be made regionally generating local jobs and facilitates the control of a fair and safe working environment in the production line.



### GOLD AWARD WINNER

Elena Amato, Caroline Pagnan,  
Designer, Ponto Biodesign,  
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## Coffee Talk with Elena

**Please tell us who you are and what you do.** My name is Elena Amato. I am a product designer from Guatemala, but right now I live in Brazil, studying for my master's degree in Design Materials and Sustainability. I'm the founder of Ponto Biodesign, a biomaterial experimental lab, where I develop materials from bacterial cellulose and food waste.

First, I made packaging for cosmetics as part of my graduation project with the aim to design a more sustainable packaging system for handmade cosmetics with natural ingredients. I researched about edible packaging designs and I thought that if there's food packaging made out of food, we could have cosmetic packaging made out of soap, too. After that, I decided to research bacterial cellulose in order to develop a protective layer for it.

I've started to collaborate with companies to develop materials from their waste. Because I don't have a manufacturing process ready to scale, we experiment and make concepts that we could make for the future.

**What are the biggest challenges you face?** One of the biggest obstacles I find is that people compare these new materials with existing ones, especially when we talk about their costs. We are so used to having and buying a lot of things and paying almost nothing for them. It's a big obstacle to get people to understand that we are paying so little, probably because someone in the production chain didn't get a fair payment or because our environment was harmed in some way. At some point, we're going to have to financially, socially, and environmentally pay for the damage that we have caused with our unsustainable consumption.

**What do you think we all can do to solve the plastic pollution problem in general?** We should start by consciously analyzing the consequences of our actions on a daily basis with small things, like trying to be thoughtful when choosing what we buy and just thinking about the wider context. We should always be asking ourselves; who, how, and where the objects that surround us were made? Where does our waste go? Is there an alternative that avoids waste? What are the objects made of? Are those materials good for us and the environment? What are the impacts of the choices we've made regarding what we eat or how that food is prepared? The more we ask ourselves those

kinds of questions, the more it will become natural to make better choices.

For me, we have to start by talking about it. In order to get people to care about it, they have to know they have to do something.



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