



EDIBLE MAKERSPACE

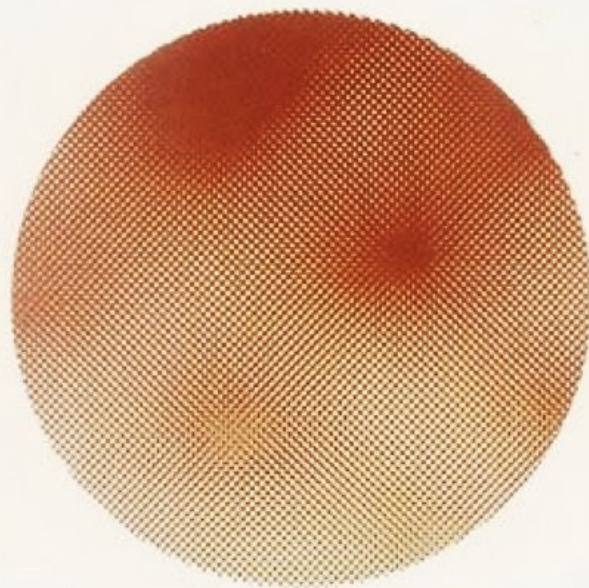
Ediblemakerspace.com

Singapore | Michelle Lai • Saad Chinoy

New York | Stella Elisa Tan

COFFEE + MILK EDIBLE BIOPLASTIC

Exploring the intersection of food, culture & sustainability,



EDIBLE
MAKERSPACE

SINGAPORE • NEW YORK

WHO ARE WE?

We are an edible materials-based makerspace (Not *that* kind of edible). We're a makerspace where everything we make is made from edible materials to explore issues and novel applications for industry and applied arts. It is a space for thinking critically via food prototypes, within the food - agricultural system in the Southeast Asian context.

This is carried out in the setting of two startup makerspaces based in Singapore and New York. We aim to work with local and regional grassroots communities engaged in agricultural and food livelihoods, sustainability issues around food waste, and we open our doors to curious individuals keen to explore alternative ideas via food as a medium.

The heart of the makerspace includes fabricators and tools to explore flavours, study environment, and deconstruct food sources.

EDIBLE MAKERSPACE • EDIBLE MAKERSPACE



COFFEE BIOPLASTIC

RECIPE

13.5g glycerin

9g Agar - Agar, Swallow Brand

Espresso grounds, about 150 - 200g

More recipes here: <https://materiom.org/recipe/12>

TOOLS

Cooker/stove/hotplate, Teaspoon, Measuring Cup,
Cooking pot, Mould, Measuring Scale



STEPS

1. Mix all the ingredients together in a pot in the amounts mentioned.
2. Bring mixture to boil using high heat. Lower the fire to allow the mixture to simmer for about 15 minutes.

3. Pour the mixture to any mold you like. Leave to set for about 4-5 hours.

Note: For countries with high humidity, leave it at least for 12 hours.

4. Remove from mold and leave it to harden. (Depending on thickness.)

What we learned:

The size of the grounds affect factors such as texture, sheet thickness. We found that espresso grounds was a decent substitute as a plant-based leather!

EDIBLE INSPO



*Vietnamese rice paper
business cards.*



*Coffee bioplastic
accessories*

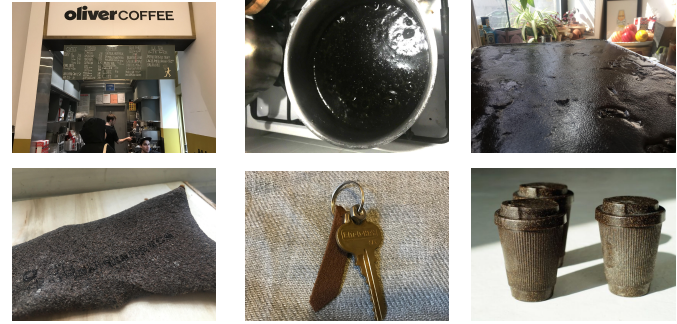


Coffee bioplastic jewelry



*Bioplastic cups made out of
coffee by Kaffeeform*

COFFEE + MILK



An exploration of a circular economy - and waste generated in the context of a coffee shop in New York City..

We got coffee grounds from a nearby cafe in Chinatown, about 2kg was collected. The cafe has waste milk. To turn these waste ingredients into bioplastics, we added an agar base with glycerin. All materials are food safe, and purchased from pastry shops at affordable prices.

The samples were prepared in a home kitchen, shaped using tin foil moulds. They were air dried and left to harden over the days. The recipe has been tried in Singapore (high humidity levels) and in New York City (low humidity levels)