

Recipe

Tapioca Starch Bioplastic

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Code:

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Collection

Process

Cooked, Air Dried, mix,

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Difficulty



Tools

Cooker/stove/hotplate, Scale, Spatula, pan,

Source

Myself Gwenyth Chao

Composition



Water

52 grams



Vinegar

10 grams



Tapioca starch (Cassava root skin)

28 Gram (g)



Vegetal Glycerin

10 grams

Method

Step one

Put all the ingredients into a pan and mix on a medium heat.

Step two

Keep stirring as the mixture heats up and until the liquid starts to gel. It will become sticky and have a slime like consistency. Note: Depending on the strength of your burner, turn the heat up to make the mixture more pliable or turn it down if you feel the bottom sticking or burning.

Step three

Once the gel becomes transparent and there's no more liquid, take the pan off the heat.

Step four

Use a stiff silicone spatula to spread an even layer of the gel over your plastic mold. The gel at this point will stick to almost everything except for silicone.

Step five

When you've coated the plastic mold entirely with the gel, let it dry upside down (or anyway where the bioplastic skin isn't directly touching a surface) so that it can set.

Step six

Wait 24-48 hours or until the bioplastic skin is not sticky when touched.

Step seven

To remove the cast, use an exacto knife to cut a seam big enough until you can peel the bioplastic skin off. (If your original plastic mold is thin and flexible, you may be able to slowly peel the plastic off the bioplastic skin without making a cut.)

Step eight

If you do have a seam, cook a small batch of the original bioplastic mixture to use as a glue and use a spatula to gently glue the seam back together.

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