

Grown your own fabric with bacteria

Concept inspired by BioCouture, and shared by Open BioFabrics.

With this tutorial you can grow your own fabrics with ingredients from your kitchen and Scoby! Scoby? It's Symbiotic Colony Of Bacteria and Yeast. We use the one that comes from the tea kombucha. So, you can find easily in organic store or from kombucha tea drinker.

Do you want to see the tutorial video? It's this way!


Tu veux la version française de ce tuto?

C'est par ici!

 Difficulty **Medium**

 Duration **20 day(s)**

 Categories **Clothing & Accessories, Science & Biology**

 Cost **15 USD (\$)**

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Introduction

FAQ, we have the answers!

- Which tea should I use? Green, black, red, white, rainbow, flavoured or not, any tea you like.
- What is "The Starter"? It's the liquid of culture in which you grow your Scoby. When you start a new culture you can add some starter in your new liquid of culture to grow your Scoby faster.
- The Scoby produces gas? It's a sign of a good fermentation! If you leave the bubbles your Baby Scoby will be deformed when growing. Don't forget to gently spread the baby.
- What is the best temperature to cultivate? The ideal temperature is 25°C. Under this temperature the growth will be a bit slower. Avoid a temperature under 17°C, it will take too long.
- What is the best drying temperature? The ideal temperature is 25°C. Under this temperature, drying will be slower. A good ventilation is the second condition to an effective drying.
- Should we grow under sterile conditions? Not necessarily, but you should wash your hands and all tools before you start.
- What size should the culture tank be? A container sized 17x20x6 minimum depth for a 220 cl preparation....Suzanne Lee said it! Under bed plastic trays (56 x 77 x 17 cm) are ideal for 8 to 10 liter preparations.
- Is culture feels? This is a fermentation process. A faint smell of vinegar emerges, after all depends on the sensitivity of each!

Find more informations about Open BioFabrics and the biotextiles, on Facebook Instagram Twitter Github

To see clothes from SCOBY: type "scoby clothing" in image search engine.

Ingredients to produce your fabric from a Scoby

Preparation for	Water	Tea	Sugar	Cider vinegar	Starter*	Scoby
~ 265 cl	200 cl	3 gr ≈ 2 teabags	200 gr	20 cl	45 cl	1 Scoby
~ 1055 cl	800 cl	12 gr ≈ 8 teabags	800 gr	80 cl	175 cl	1 Scoby
~ 1320 cl	1 000 cl	15 gr ≈ 10 teabags	1 000 gr	100 cl	220 cl	1 Scoby

liquid of culture

You have a smaller or a bigger container? Adapt the recipe, it's proportional!

Materials

For approximately 4300 cm² of fabric, we use a container of 56x77x17cm

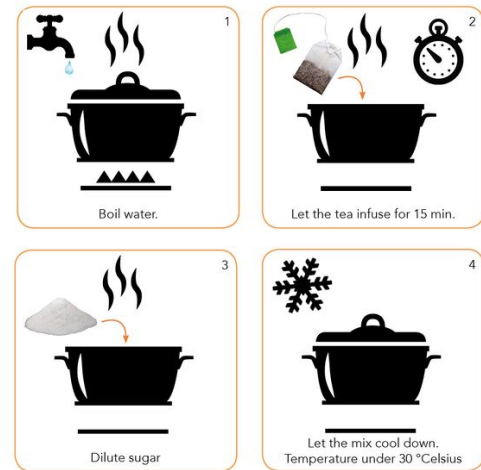
- Water: 1000 cL
- Tea : 15 g (about 10 teabags, but prefer bulk tea for ecological reasons)
- Sugar: 1000 g
- Cider vinegar: 100cL
- Starter: 100cL
- SCOBY: 1

Tools

- 1 scales kitchen: to measure ingredients
- 1 saucepan with lid: to boil water
- 1 hot plate: to boil water
- 1 tea ball: to brew tea
- 1 clock: to measure 15 min
- 1 whisk: to dilute the sugar
- 1 container: plastic or glass but not meta, it would kill the bacteria. To grow your fabrics
- 1cloth: to protect the culture culture tank

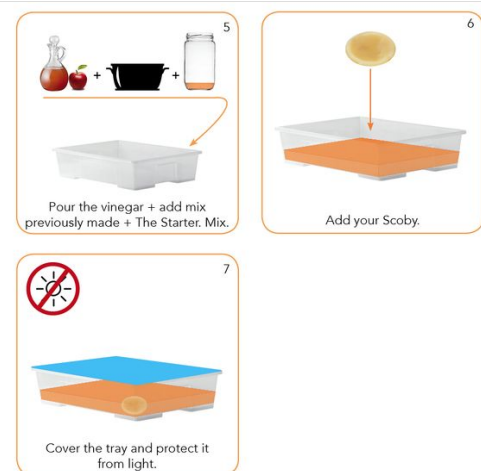
Step 1 - Preparation of the culture liquid

This first step lasts about 1h.



Step 2 - Setting up the SCOBY

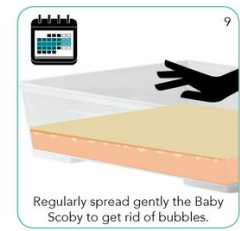
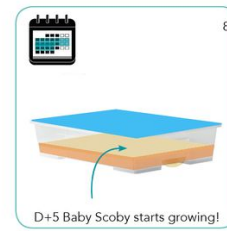
This step lasts about 5 minutes. It is very important that the liquid is below 30°Celsius, before adding the other ingredients: - to prevent odor vinegar emission - not to kill the starter and SCOBY



Step 3 - Fermentation step

This stage lasts about 15 days. If you want a thin sheet, a Baby SCOBY 5 min thick enough. If you want a fabric like leather, wait your baby SCOBY do about 2cm.

To see a time lapse of growing a SCOBY: [Link to YouTube](#)



Step 4 - End of culture and start drying

You can dry your SCOBY on a board of wood or plastic, glass,
According to the media, the end result will be different!



Step 5 - Congratulations!

You can also dye, sew, cut, print on your SCOBY! This is only the beginning :-)



Notes and references

Open BioFabrics design a production kit for everyone to easily cultivate SCOBY at home. More information on hackpad of OSCEDay's Rennes-2016: <https://hackpad.com/collection/qDzscYMBolF>