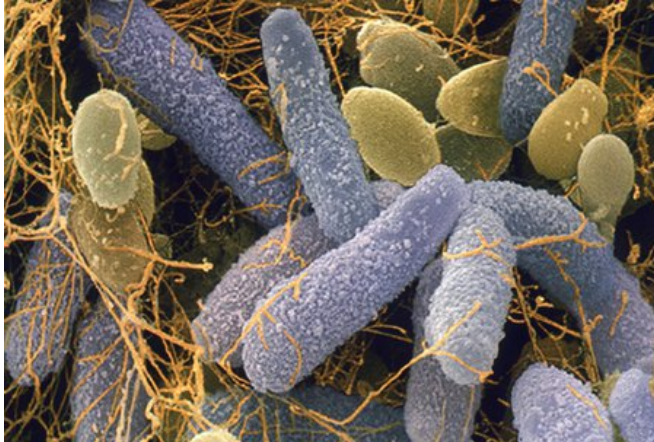


Keywords:

microbiology; biochemics; biotechnology
biofabrics; microbial cellulose; vegan leather

Kombucha mushroom:

Medusomyces gisevii



Broth or growth medium: green tea and sugar + starter portion

Aerob fermentatieproces door aerobe micro-organismen (acetobacter & gist).
Thee en suiker: thee= resultaat van fermentatieproces, suiker wordt omgezet naar
azijnzuur en alcohol.

The yeast component generally includes *Saccharomyces* and other species, and the bacterial component almost always includes *Gluconacetobacter xylinus* to oxidize yeast-produced alcohols to acetic and other acids.

The microbes eat the sugar and spin cellulose into a dense nano-scale mesh.
The leather-like textile is known as a microbial cellulose.
The material is 100% biodegradable.

The resulting liquid is not drinkable due to acidity of overfermentation.

Dried skins: tests revealed that one of the biggest problems is moisture absorption from the air. The moisture softens the material and makes it less durable. Researchers also discovered that cold conditions make the skins brittle.

It takes up to 3 to 4 weeks to grow, dry, and treat the material within specific conditions.
The skins can be waxed to increase water resistance,
Laminated to increase overall strength and wearability,
Painted with acrylics to dramatically change its appearance and improve longevity.

Rubbing in natural essential oils or beeswax as a sealant can address both scent and water resistance. Full water resistance can be achieved if using acrylic or oil based sealers (ossevoet olie).

Dyeing is best done after washing, and before oiling.

Rubbing coconut oil into the pellicle before it dries will produce a more supple and leather-like product. Spread the wet pellicle on a flat surface, and rub all over (both sides) with fingers dipped in coconut oil. Lightly grease the drying board with Vaseline to prevent the pellicle from sticking as it dries.

Imagine the Intelligent Beehive having a layer of living cells that feed off your dead ones to clean and repair itself.

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