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| GLOBAL RECIPE**Fish Skin Leather**Image(s) of final product (max 3) Add  Add  Add Fabrication time Preparation time: 1 hour  Processing time: 3 days tanning, 3 days drying (minimum)  Need attention: every few hours to shake the tanning solution Ingredients  * Uncooked [fish skins](http://www.linktoingredientpage.org/)[[1]](#footnote-1) * 1 part [glycerin](http://www.linktoingredientpage.org/) * 1 part [denatured alcohol 96%](http://www.linktoingredientpage.org/) (or a mix of alcohol and natural alcohol-based ink) * Organic [dishwashing soap](http://www.linktoingredientpage.org/)  Tools  * Glass jar or ziplock bag that can easily fit the skin(s) and liquid * Gloves * A wooden board * Nails and a hammer * A sink or tub for rinsing  Ingredients abundant in: Any regions close to water (lakes, rivers, sea) with a healthy fishing industry Amount of final product (volume) Equal to amount of skins used Drying/curing/growth process Apply some glycerine to both sides of the fish skin for softer leather. Dry skins for at least 3 days by nailing or stapling them to a wooden board after tanning. Scales facing down gives a smoother finish, scales up will be rougher. Process pictures (max 5, include image of mold/drying setup) Insert Origins and references Traditional tanning techniques are centuries old and have been practiced by peoples in most of the Nordic countries (Denmark, Finland, Iceland, Norway), the Joepik in Alaska, the Nanai in Siberia, the Inuit in Canada and Greenland. It is practiced all around the world (e.g. along the Nile in Kenya, in Mexico and in Australia). Originally, the involved tanning acids from e.g. oak and chestnut bark, urine, or alternatively with egg yolk and vegetable oil and then cold-smoked over fire to make it water-proof (also prevents mold and bacteria growth). Alutiiq artist June Simeonoff Pardue has been credited for this *non-traditional* tanning process with alcohol and glycerine. Fish skin can also be cleaned and dried without tanning.  <https://www.hunebednieuwscafe.nl/2017/10/making-leather-from-fish-skin/>  <https://docplayer.net/159759790-Clothing-fish-skin-tanning-gr-6-12-7-8-classes-elder-quote-belief.html> Concerns and contestations Process is smelly, but the finished product is odorless if done well  Animal based (but significantly eco-friendlier process than tanning cow leather)  Denat. alcohol is harsh on skin but not dangerous, don’t use on open skin however Sustainability tags[[2]](#footnote-2) Biodegradable  ~~Vegan~~  Made of by-products or waste from: the fishing industry Comparative qualities *What could this material be compared to?*  Cow or lamb leather  *How is it different or similar?*  Stronger, more water resistant, harder (unless treated with softeners or movement) Technical properties Strength  Hardness  UV resistance  Acoustic absorption  Anti-bacterial  Non-allergenic  Electrical Sensory qualities[[3]](#footnote-3) - score from 1-5 Cold - Warm 1 2 **3** 4 5  Soft – Hard 1 2 3 **4** 5  Rough - smooth 1 2 3 **4** 5  Sliding - braking 1 2 3 **4** 5  Rigid - flexible 1 2 3 **4** 5  Stickiness: low-high **1** 2 3 4 5  Shape memory: low-high 1 2 3 **4** 5  Odor: none-present **1** 2 3 4 5 Tactility & sound impression *Provide a video where you move the material, bend it, knock it, stretch it, squeeze it*  <https://youtu.be/5iq3RTH91T4> Physical form of sample Sheet Variations  * Add different natural inks to create other hues * Instead of stretching and drying it: move the material for softer finish * Try out different softeners to treat the leather after drying  Maker of this sample Name: Loes Bogers  Affiliation: Fabricademy Student at Waag Amsterdam, 2020  Location: Amsterdam  Date: 24 Feb – 2 March 2020  Environmental conditions: low humidity, 6 degrees Celcius outside, 22 degrees Celcius room temperature  Credit recipe to: June Simeonoff Pardue and others (unknown) Image credits for this sample Name: Loes Bogers  Year: 2020 Recipe validated by Name: Cecilia Raspanti  Textilelab Waag, Amsterdam  2 March 2020 | LOCAL RECIPE**Fish Skin Leather** **Identical, plus:** Estimated price (consumables) € 15 for 2L of tanning liquid (incl use of gloves and soap), tans about 4 large salmon 50x15cm skins or more small ones. Local suppliers Local fishmonger (some give it for free), Online drug stores:  *Chempropack* is a common brand that sells 1L bottles of glycerine at €6  *Orphi* is a common brand that sells 1L bottles of denatured 96% alcohol with 5% methanol at €6 |

1. This is considered fish waste that you can often get for free from the fishmonger. Ask for a local, non-endangered species, from sustainable fishing companies) [↑](#footnote-ref-1)
2. All recipes in this archive are always: *open-source, biocompostable and renewable* [↑](#footnote-ref-2)
3. Lerma, Beatrice (2010). Materials ecoefficiency and perception. *Proceedings: CESB 2010 Prague - Central Europe towards Sustainable Building 'From Theory to Practice'*: pp. 1-8. [↑](#footnote-ref-3)