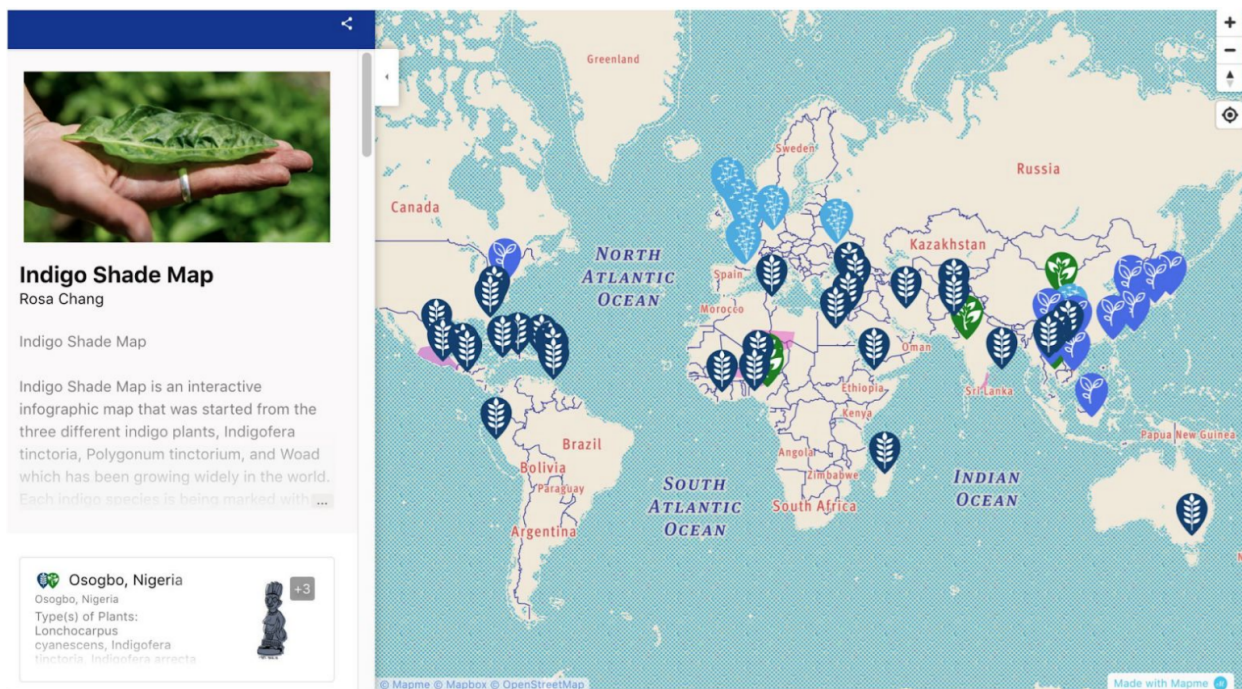




About Indigo Shade Map



Indigo Shade Map is a research-based educational visual storytelling map and creative studio project that was founded by Rosa Sung Ji Chang. She started the project as a way to map the use of three different kinds of indigo grown around the world, and then added one more, now featuring four different types: *Indigofera tinctoria*, *Polygonum tinctorium*, Woad, and Assam Indigo. Each indigo plant is marked with a corresponding shade of blue on the map. The main purpose of developing the Indigo Shade Map is to compile a reference of indigo art and share how one particular natural dye is still widely and continuously practiced today around the world. Indigo plays a significant role in connecting people, understanding different cultures, and inspiring curiosity and cultural unity. ISM started as a visual map first and then

developed as an online interactive map and storytelling platform to connect with people who love indigo, natural dyes, and sustainability all over the world during the pandemic. As an artist, a grower, and a researcher, Rosa aims to provide both online and in-person spaces for people who want to experience, learn, and engage with the beauty of indigo and natural dyes. Additionally, traditional natural indigo dye is one of the most eco-friendly dye practices and directly connects to sustainability. Indigo Shade Map will launch an inaugural online magazine and is currently accepting submissions via email: rosa@indigoshademap.org.

Rosa Sung Ji Chang



Rosa Sung Ji Chang 장성지 is a Korean-born multi-disciplinary artist focusing on visual/fiber art and visual storytelling, both of which convey a sustainable balance between humans and the natural world. Rosa believes that farming/planting is a fundamental activity for connecting humans and nature to be in a coexisting relationship, and is the true value of practicing both art and social justice within community. Rosa is one of the core members of the Baltimore Natural Dye Initiative. Currently Rosa cultivates Asian indigo (*Polygonum tinctorium*) and other plants for natural dyes mainly at Hidden Harvest Community Farm & Blue Light Junction and with friends and community members in Baltimore, Maryland. Rosa is teaching Korean indigo, natural dyes and textiles in the Fiber department at the Maryland Institute College of Art in Fall 2022.

Rosa provides the following professional & artistic services:

Consultation

- Cultivating/farming indigo (*Persicaria tinctoria*, known as Japanese indigo plant)
- Indigo/natural dye production and product development
- Curatorial Studies

Artistic services

- Commission-based art (Both small scales & site-specific installations)
- Educational workshops

Making an Indigo Vat in Your Home Studio



The sugar indigo vat (also known as the Fructose vat) has been widely used by many natural dyers, artists, and hobbyists around the world. Not like the traditional fermented indigo vat processes, this sugar reduction indigo vat process takes less time and is easy to use at home. Another name for this indigo vat is the 1-2-3 indigo vat because of the ratio of ingredients in the recipe. Here is a recipe for

building a mini-size (a 5 gallon bucket) indigo vat at home.

Required ingredients/supplies for the mini-sized indigo vat at home

- 1) Natural indigo (Both powder and paste forms work) 50g (1 part)
- 2) Lime powder (Pickling lime, hydrated lime, and calcium hydroxide work) 100g (2 parts)
- 3) Fructose sugar 150g (3 parts)
- 4) 2.5 gallons of near boiling hot water (190F)
- 5) A 5-gallon plastic bucket with a lid
- 6) A mixing bowl (non-reactive stainless steel, plastic, ceramic works)
- 7) A tablespoon or a spatula to mix ingredients with hot water
- 8) A long stick to mix the 5-gallon size indigo vat

How to Make the Fructose Indigo Vat

- 1) Pour the lime powder (100g) into the mixing bowl and dissolve thoroughly with hot water
- 2) Pour the dissolved lime liquid into the 5-gallon bucket
- 3) Dissolve the fructose powder and indigo by following the process in steps 1) and 2) again, then add them into the same 5-gallon bucket
- 4) Pour more hot water into the bucket and fill up to $\frac{2}{3}$ of the total bucket volume
- 5) Stir the indigo vat with a stick by using a centrifugal motion. You'll see indigo bubbles appear on the top of the liquid as well as a coppery film
- 6) Leave it for at least an hour (Any pigment or residues need to sink)
- 7) Enjoy the indigo dye! Make sure fabrics don't touch the bottom of the liquid

How to Dye Fabrics with Indigo Vat

- 1) Wet the fabric by leaving it in the water for 20-30 minutes at least, and wring it out before dipping into the indigo vat
- 2) Wear plastic/rubber gloves (this is optional: Lime powder creates high alkaline solution may irritate or dry out your skin)
- 3) Dip the fabric for 2 minutes to longer as you wish to create blue shades
- 4) Take the fabric out of the indigo vat and aerate it for another 2 minutes to longer (A tip: "Oxidation" is an important part of the process of making fabrics blue with indigo)
- 5) Repeat the process in steps 3) and 4) to make richer indigo shade on fabrics

How to Maintain the Indigo Vat?

Temperature:

Try to maintain a warm temperature (85F) in the indigo vat when you dye fabrics. If your indigo vat is a stainless steel pot, you can reheat it with a stove. If your vat is a plastic bucket, you can bundle it with an electric blanket or any other warm fabric materials.

pH levels and colors:

The pH level of the indigo vat needs to be at least 10-11. The indigo color will weaken as time passes. This means that the pH level of the indigo is lowering. You can add more lime powder into the vat to boost the pH level and the color.

***Tips: Fabric preparation before indigo dyeing**

For cellulose fibers (Plant-based materials such as cotton and linen): Boil fabrics for 30 mins to an hour to remove any chemical treatments from manufacturer factories such as dirt, oils, and sizing. Rinse those boiled fabrics thoroughly with clean water multiple times. Use a small amount of neutral soap/castile soap to wash fabrics.

For protein fibers (Animal-based materials such as silk and wool): Soak the fabrics in warm water and leave for 15-30 minutes. Rinse those soaked fabrics thoroughly with clean water multiple times.

After dyeing fabrics (Finishing):

Soak indigo-dyed fabrics in vinegar water to neutralize the indigo pigment dyed on fabrics. Indigo liquid in the vat is a high alkaline solution, and vinegar helps the color to set on the fabrics. You can add ½ cup amount of white vinegar to 5 gallons of water. Leave the fabrics in the vinegar water for about 30 minutes. Rinse them thoroughly with clean cold water multiple times.

Indigo Workshop with Rosa: Soy Flour Paste Resist Pattern Making



Soy flour paste resist pattern making knowledge has been passed down since ancient times in China and is still commonly practiced in Korea and other regions. The soy paste resist technique requires less prepping and less complicated steps to make. It is easy to apply on fabrics to draw and create patterns. This eco-friendly method is very fun to do at a home studio with kids!

Required supplies for the paste making process

- 1) Soy flour
- 2) Lime powder

Tips: Both food grade pickling lime and hydrated lime powder for gardening work for this process. Also, a 1:1 ratio of each ingredient is important for the process. 20g of each ingredient will be enough to begin.

- 3) A mixing bowl/container to mix the ingredients
- 4) A spatula/tablespoon
- 5) A cup of water

Required supplies for the pattern/mark making on fabrics

- 1) Stencils (Polyester films to make stencils or any regular pre-cut stencils)
- 2) Small brushes

How to make soy flour paste

- 1) Add soy flour and lime powder (1:1 ratio) to a mixing bowl/container
- 2) Add a little amount of tap water to the mixing bowl from 1
- 3) Mix all ingredients together with a spatula/spoon. Our goal is making a texture of the perfect pancake batter!
- 4) Art making time! Apply the soy flour paste to the surface of fabrics. Use stencils or brushes to make patterns and mark makings.
- 5) Dry the soy paste completely applied on the fabrics before dipping into the indigo vat

Examples of soy paste resist & indigo dyed fiber arts by Rosa





A large scale site-specific indigo-dyed installation at [Oak Spring Garden Foundation](https://www.oak-spring-garden-foundation.org/). Upperville, VA

Resources & Directory

There are so many great indigo growers, dyers, and suppliers in the U.S as well as across the world! I hope this resource section provides you lots of creative possibilities with indigo!

Indigo & Natural Dye Supplies in North America

Botanical Colors / <https://botanicalcolors.com>
Stony Creek Colors / <https://www.stonycreekcolors.com>
Maiwa / <https://maiwa.com>
Yamato Indigo / <https://yamatoindigo.com>
Better than Jam / <https://betterthanjamnyc.com>

Indigo Seeds & farms (By State)

Graham Keegan (CA) / <https://www.grahamkeegan.com>
The Dogwood Dyer (CA) / <https://www.thedogwooddyer.com>
Ricketts Indigo (IN) / <https://rickettsindigo.square.site>
Blue Light Junction (MD) / <https://www.bluelightjunction.com>

Madame Magar (NC) / <http://madamemagar.com>
Grand Prismatic Seed (UT) / <https://www.grandprismaticseed.com/dye-plants>
The Yarn Tree USA (VA) / <https://www.theyarntree.com>
Liberation Seed Farm (VA) / <https://www.melanatedmedicinals.com/liberationseed>
Two Looms Textiles (WA) / <https://www.twolooms.com>
Sheeps and Peeps Farm (WV) / <https://sheepsandpeepsfarm.com>

Indigo Communities & Inspirations

National

Baltimore Natural Dye Initiative / <https://www.mica.edu/annual-events-series/natural-dye-initiative>
MidAtlantic Fiber Association / <https://mafafiber.org>
Fibershed / <https://fibershed.org>
Chesapeake Fibershed / <https://chesapeakefibershed.com>
Indigofest (Britt Boles & Iris Sullivan) / <https://www.indigofest.org>
Dreambird Studio / <https://www.dreambirdstudio.com>
Handweavers Guild of America / <https://weavespindye.org>
Textile Society of America / <https://textilesocietyofamerica.org>
Arrowmont / <https://www.arrowmont.org>
Penland School of Craft / <https://penland.org>
Gasali Adeyemo / <https://www.yorubaindigo.com>
Indigo Garden Arts (Bernadette Puleo) / facebook.com/Indigo-Garden-Arts-111613364726611
Circle of Life Studio (Debra Ketchum Jircik) / <https://circleoflifestudio.com>
Strata Ink / <https://www.strataink.com>
Mallorey Caron / <https://www.malloreycaron.com>
Traveling Miles Studio (Kenya Miles) / <http://mail.travelingmilesstudio.com>
An made / www.anmadethis.com

International

African Craft / <http://africancraft.com>
Natural Dyeing Culture Center (Korea) / <http://www.naturaldyeing.or.kr/en>
Kindigo Studio (Korea) / <https://kindigoglobal.imweb.me>
Jimin Kim (Korea) / <https://www.instagram.com/not2rue>
Chang Yeon Studio (Korea) / <https://www.instagram.com/cy180625>
Isae (Korea) / <https://isae.co.kr>
Dyelicious (Hong Kong) / <https://www.dyelicious.hk>
Sandhu Farm (Kinny Sandhu) / <https://indigodesign.in>
Studio Chiangdao Blue (Thailand) / <https://lit.link/en/studiochiangdaoblue>

Aibatake (Japan) / <https://aibatake.jp>
 Buaisou (Japan) / <https://www.buaisou-i.com>
 Kenta Watanabe (Japan) / <https://watanabezu.com>
 Kokoro Indigo Culture & Crafts (Spain) / <https://kokoroindigoculture.com/en>
 La Tintorista (Spain) <https://ninenuts.com>
 Wild Colours (U.K) / <http://www.wildcolours.co.uk>
 Cordwainers Natural Dye Studio (U.K) / <https://www.cordwainersgrow.org.uk>
 Selvedge Magazine / <https://www.selvedge.org>
 Valentin Bakardjiev (The Netherlands) / <https://artbakard.com>

Books & References

[Indigo: Egyptian Mummies to Blue Jeans](#) by Jenny Balfour Paul
[Singing the Blues](#) by John Marshall
[Red, White, and Black Make Blue: Indigo in the Fabric of Colonial South Carolina Life](#) by Andrea Feeser
[Indigo: The Color that Changed the World](#) by Catherine LeGrand
[Blue Alchemy: Stories of Indigo](#) by Mary Lance, New Deal Films
[Indigo Shade Map](#) by Rosa Sung ji Chang

SUBMISSIONS:

INDIGO SHADE MAP IS A GROWING STORYTELLING MAP AND EXPANDING INTO AN ONLINE MAGAZINE TO SHARE THE LOVE OF INDIGO! YOUR PARTICIPATION IS SO IMPORTANT! WE AIM TO SHARE STORIES ABOUT INDIGO FARMERS, GROWERS, DYERS, SUPPLIERS, ANYONE WHO IS IN LOVE WITH INDIGO, NATURAL DYE, AND SUSTAINABLE PRACTICES



Share Your Three Stories with

**Indigo
Shade
Map**

#1 LOCATION & ENVIRONMENT
 #2 PLANTS & PRACTICES
 #3 CULTURE & LANGUAGE

On the Map is accepting
 submissions for 2022!

**EMAIL US YOUR STORY AT
ROSA@INDIGOSHADEMAP.ORG**