



How to Make  
Natural  
Beeswax  
Crayons

**With Natural Dye Colors**



Chris  
Dalziel

# How to Make Natural Beeswax Crayons with Natural Dye Colors

Chris J. Dalziel

JOYBILEE MEDIA  
Greenwood, British Columbia

Copyright © 2023 by Christine J. Dalziel.

All rights reserved. Permission is granted to make a single personal use copy of this work. Other than that, no part of this publication may be reproduced, distributed or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written permission of the publisher, except in the case of brief quotations embodied in critical reviews and certain other noncommercial uses permitted by copyright law. For permission requests, write to the publisher, addressed “Attention: Permissions Coordinator,” at the address below.

Christine J. Dalziel / Joybilee Farm Media  
Box 667  
Greenwood, BC, V0H 1J0  
JoybileeFarm.com

**Note to Reader:** This book is offered for informational purposes only and should not be construed as medical advice. The information offered herein is meant to supplement and not take the place of professional advice. For medical problems always seek the help of a qualified health professional.

Ordering Information:

Quantity sales. Special discounts are available on quantity purchases by corporations, associations, and others. For details, contact the “Special Sales Department” at the address above.

How to Make Natural Beeswax Crayons with Natural Dye Colors

Christine J. Dalziel. —1st ed.



# Contents

Natural Dye Crayons.....	7
Make a double boiler .....	7
Color your crayons .....	8
How to Make Natural Dye Beeswax Crayons.....	8
Natural colors for natural art supplies .....	10
About titanium dioxide.....	11
How much pigment do I need? .....	11
How to Make a Lake Pigment .....	14
Beeswax Pastels Recipe.....	16
Trouble Shooting Guide.....	17
My pigment separated when the crayon cooled. ....	17
My crayon is sunken instead of being pointed.....	17
Where can I find earth colors and clay pigments?.....	17
Where can I find natural pigments to use for crayons and pastels?.....	17
Resources .....	18





## Natural Dye Crayons

(Adapted from *The Beeswax Workshop* by Chris Dalziel)

Every fall boxes of crayons come home with the school supplies. Most crayons are made with paraffin wax and stearic acid. Soy crayons are made with hydrogenated genetically modified soy bean oil. Some brands of crayons may contain lead and asbestos. So while technically crayons are “non-toxic” they are not necessarily benign.

You could make crayons by melting beeswax and adding a pigment, but the resulting crayons are softer than commercial crayons and don’t perform well. Adding carnauba wax and cocoa butter to this recipe, results in a harder crayon that performs well.

Working with beeswax can be messy. Use tin containers that you don’t mind having a permanent wax coat. You’ll need one container for each color. If you plan to make crayons again, you can reuse these containers as needed.

Make a double boiler

I use a large pot with canning jar rings in the bottom to keep the tins or glass jars suspended off the bottom of the pot. Place your wax con-

tainer(s) on the rings in the bottom of the pot. Fill the pot with 2 to 4 inches of water, so that the water comes half way up the sides of your tins or glass jars. Place the pot over medium heat.

#### Color your crayons

Wax crayons and oil pastels are colored with insoluble pigments. These pigments were traditionally earth pigments, made from clay or rocks, and natural vegetable pigments. Today we can also use gel food coloring or even broken crayons to achieve the right hues.

Many natural dye colors are water soluble. These colors must be changed to an insoluble dye pigment in order to color wax crayons. Making a lake pigment is how the artists of old achieved this. (The instructions for making a lake pigment follow.)

### How to Make Natural Dye Beeswax Crayons

While you could melt beeswax, add pigment, and call it a crayon, beeswax alone doesn't make a crayon that performs well. Commercial crayon manufacturers add stearic acid to increase the hardness of the crayon and allow the pigment to stick to the paper. Cocoa Butter is a good natural source of stearic acid.

Yield: 5 x 1 ounce crayons

#### **Equipment:**

- Silicone molds
- Food Grade Silicone mold release spray
- Large pot (one that you don't mind getting waxy)
- Canning jar rings or metal jar lids
- Upcycled can to melt the wax
- 5 containers to hold the melted wax
- Heat source



### **Ingredients:**

- $\frac{3}{4}$  cup of beeswax (about 5 ounces by weight)
- 2 tablespoons cocoa butter
- 6 tablespoons carnauba wax
- Generous amount of gel color for each crayon or 1 teaspoon of natural oil based pigments per color.

### **Directions:**

1. Make a double boiler in a large pot using an upcycled tin can. Place a canning jar ring in the bottom of the pot, to keep the can up off the bottom. Fill the pot with enough water, to come up to half way on the tin can.
2. Place beeswax, cocoa butter, and carnauba wax in the can. Simmer over low heat until the beeswax is melted.
3. Prepare five different pigments while the beeswax is melting. (See below) Remove the wax mixture from the heat. Divide the wax base into 5 portions of  $\frac{1}{4}$  cup each.
4. Working with one portion at a time, return the remaining portions to the hot water bath, to keep them melted. Stir the prepared pigment into one portion, being careful to suspend it fully in the wax. Use a clean spatula for each pigment.
5. Continue stirring while the mixture cools slightly, to prevent the pigment from settling to the bottom of the mixture. When the mixture begins to thicken, pour into your prepared crayon molds that have been sprayed with food grade silicone mold release spray.
6. Allow the crayons to harden for several hours, until the crayon is cool to the touch. Remove from the mold.
7. Repeat with the remaining portions of melted wax until you have 5 different colors of crayons. Pigments may be combined to create more colors.

Package the crayons in a delightful festive tin, for gifting.

## Natural colors for natural art supplies

While you can use gel food colorings or melted crayons for coloring your own art supplies, it's only a little extra effort to use natural colors, and earth pigments. Natural vegetable-based colors are unpredictable but that is part of their attraction. Mineral pigments, oxides, and ultra-marines are more predictable and uniform. Soil pigments can also be found where you live, although you won't know their chemical composition. You may even design your own local palette, as the artists of history did.

### **Natural dyes and mineral pigments:**

**Red** – red oxide mineral pigment, Australian red clay, carmine and alizarin lake pigments

**Pink** – beet root powder, rose hip extract (very pale shades), hibiscus powder, titanium dioxide plus red oxide pigment, cochineal bugs with titanium dioxide

**Orange** – annatto (bright orange), alkanet root plus turmeric (burnt orange), yellow oxide plus red oxide

**Yellow** – turmeric (gold), Yellow oxide mineral pigment, yellow ochre soil

**Green** – spirulina algae powder, chlorella algae powder, wheat grass powder, green oxide mineral pigment, French green clay

**Blue** – ultramarine blue mineral pigment, Natural indigo powder, Natural woad powder

**Purple** – purple ultramarine mineral pigment,

**Brown** – red ochre soil, brown ochre soil, brown oxide, cocoa powder, instant coffee powder, black walnut powder, burnt umber mineral pigment, alkanet root,

**Black** – charcoal, black oxide powder

**White** -- titanium dioxide

### About titanium dioxide

Titanium dioxide is added to other pigments in small amounts to make them more opaque. In large amounts titanium dioxide will make a pastel shade with the pigment.

Black is added to other pigments, in small amounts, to darken or sadden the shade. A wide variety of shades can be achieved with a single colored pigment and varying percentages of titanium white or one of the black pigments.

Red, blue, and purple pigments are the hardest to achieve using natural colors. Vegetable red colors can shift with pH changes, whereas mineral reds often lean toward brown.

Cochineal bugs offer a strong red pigment in water based applications, but in oil based the rich carmine color is elusive. Cochineal pink is reliable when mixed with titanium dioxide. A stronger red can be achieved by **making a lake color** (see below) and then utilizing the resulting precipitated pigment, as opposed to using the ground bugs.

Blues can be obtained from natural indigo or woad. But without a reliable red, the purple shades are hard to achieve using natural dye colors. Ultra marine purple is a synthetic color that is considered non-toxic.

Powdered natural dyes can be found at natural dye suppliers. You can even extract your own dye pigments from garden plants. It requires time and patience, but it's not expensive. Pigment extraction is an interesting science project for homeschoolers.

### How much pigment do I need?

When using mineral pigments like oxides, ultramarines, or micas or lake pigments a little goes a long way. 1 teaspoon of pigment is enough for most of these recipes. However, when using some vegetable sourced colors you'll need to experiment to get the depth of color you want.

Indigo, carmine from cochineal bugs, and alizarin from madder, are very strong colors. ½ teaspoon may be enough to give you a very rich shade of color in a crayon or pastel.

Try 2 teaspoons of alkanet root, annatto, turmeric, spirulina, or chlorella.

Use 2 tablespoons of cocoa, coffee, or black walnut powder for a deep rich brown. Using a tiny bit of titanium dioxide along with vegetable based colors can make them more opaque which makes the crayon color seem darker.

Mixing the pigment with oil before combining it with your beeswax recipe will help the pigment stay suspended in your wax it cools.

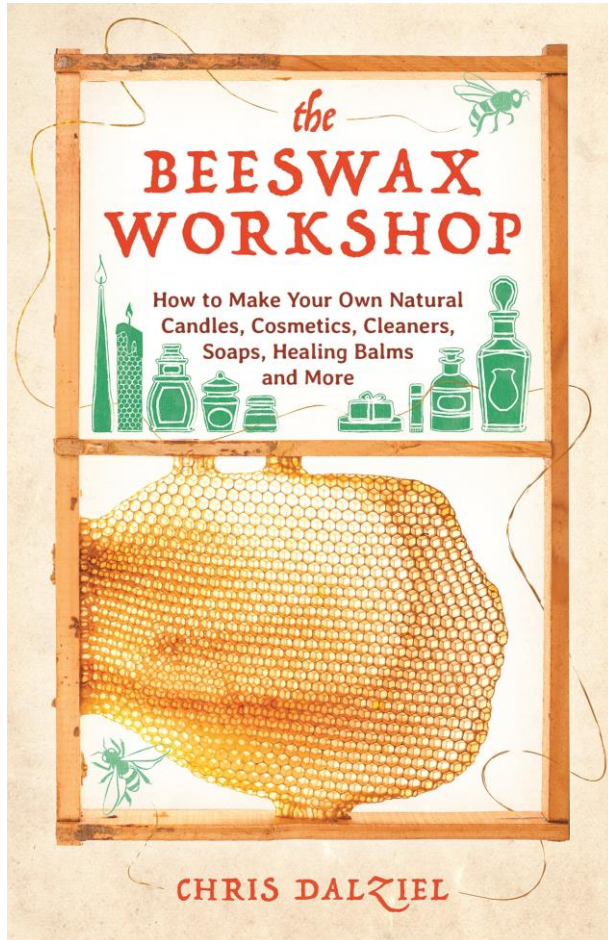
One more thing, vegetable based colors have a definite odor that you don't find in chemical colors. Indigo for instance is made by fermentation, and there is a definite *odor d'compost* when mixing it as a pigment. You can mask this with essential oils. It isn't so obvious in the finished wax crayon, but it's there. Turmeric has its distinct fragrance, too.

***Please wear a dust mask when grinding pigments to protect your lungs.***

Wearing a dust mask, grind the pigment finely as you would to make mineral make up. You can grind it in a coffee grinder reserved for pigments or with a mortar and pestle. Mix the measured pigment with a scant amount of the oil-based binder, blending from the edges to the center with a palette knife until the right consistency is achieved.



These instructions are excerpted from my book, **The Beeswax Workshop**. Get your copy of [The Beeswax Workshop](#) while it's still available in print. Available on Amazon and through Barnes and Noble.



## How to Make a Lake Pigment

Not all natural dyes are oil soluble. In order to use the pigment from water soluble dyes in an oil or wax based pastel or crayon you must first create a lake pigment, like the artists of history.

- 1) Extract the dye
- 2) Add alum as a dye fixative
- 3) Add washing soda to cause the dye to precipitate
- 4) Strain the insoluble pigment out of the dye liquid
- 5) Dry the insoluble pigment
- 6) Grind the insoluble pigment as finely as possible
- 7) Add the pigment to oil
- 8) Stir the oil into your wax base

Use a pot that you have set aside for natural dyeing. Thrift store finds and garage sale finds (or even the recycling bin) are some of the best places to gather the pots and equipment that you need.

- 1) Place  $\frac{1}{4}$  to 1 cup of dye material in the pot. Add 1 to 2 cups of water. Bring the pot to a simmer over medium heat. Simmer for 10 minutes. Strain the liquid from the plant material. Place the plant material back into the pot. Cover with additional water and simmer again for 10 minutes. Strain the liquid from the plant material. Repeat this one more time. Add all the liquid together into one container.
- 2) Measure out the alum (aluminum sulfate) 10 grams per 1000ml of dye liquid and washing soda (sodium carbonate) 5 grams per 1000ml of dye liquid. These two chemicals are potentially harmful to skin, lungs, eyes, and not safe to eat. Wear a dust mask, gloves, and safety glasses when handling. Make sure that the bowl is no more than half full, otherwise it may overflow. The mixture may fizz up.

- 3) Add the alum to the warm dye bath. Stir gently. The alum will bind with the dye particles.
- 4) Add the washing soda to the dye bath, stirring gently. It may fizz up. The washing soda causes the dye pigment to become insoluble in water and settle to the bottom of the dye bath. You may see a color change, this can be dramatic, or it can be subtle.
- 5) Stir the dye liquid and then leave it for an hour to settle.
- 6) Pour the dye liquid through a cloth to filter the precipitate. A handkerchief or coffee filter works well.
- 7) Dry the precipitate fully.
- 8) Grind the precipitate until it is as fine as possible. Store the powder for future use or use immediately.
- 9) To add to crayons or pastels, stir the powdered pigment into a small amount of oil or melted cocoa butter, to add to your wax crayon base. Pour into the mold.



## Beeswax Pastels Recipe

(Adapted from *The Beeswax Workshop* by Chris Dalziel)

Yield: 2 x 1-ounce pastels

### Ingredients

- 2 tablespoons white beeswax
- 2 tablespoons jojoba oil
- 2 teaspoons prepared oil-based pigments, earth pigments, or natural lake pigments for each color

### Directions:

- 1) Create a double boiler using a tin can inside a pot. Bend a pouring spout on the can with a pair of pliers. Simmer the beeswax and jojoba oil in the can inside the pot, over medium heat until the beeswax is melted. Remove from the heat.
- 2) Stir in the pigment, evenly distributing it with the pigment in the wax mixture. Continue stirring while the mixture begins to cool.
- 3) Pour mixture into prepared molds.
- 4) Allow the pastels to harden fully before removing from the mold. They will be ready to use in 24 hours.
- 5) Repeat this recipe for each color you require.
- 6) Package the crayons in a delightful festive tin, for gifting.



## Trouble Shooting Guide

### **My pigment separated when the crayon cooled.**

Stir the pigment into the wax until the wax begins to thicken, before pouring the crayon or pastel into the mold. Then cool completely before unmolding the crayon

### **My crayon is sunken instead of being pointed.**

Wax shrinks as it cools. Top up the mold when the crayon or pastel has started to shrink but before it is cooled completely. Reserve some of your pigmented wax for this purpose.

### **Where can I find earth colors and clay pigments?**

Backyard clay soils, river beds, and natural depressions in the soil often contain clay particles that can be used as pigment. Yellow and red clays are rich in oxidized iron particles. These are traditionally used for paint and other artistic expression. Grind them against a harder stone to get them fine enough to use in crayons and pastels for pigment.

### **Where can I find natural pigments to use for crayons and pastels?**

Soap making suppliers carry natural dye pigments for coloring melt and pour soap. These can be used for crayon and pastel pigments as well. Experiment with the amount to use, these colors can be concentrated, so you would use less.

## Resources

### ***The Beeswax Workshop***

written by Chris Dalziel, contains over 100 recipes for art supplies, candles, salves, cleaning products, personal care products, household items and more. Grab this print book while it's still available. Ask for it at your favorite independent book supplier.

### ***Natural Earth Pigments***

Find natural earth pigments already ground and ready to use at [Earth-Pigments.com](http://Earth-Pigments.com)

### ***Natural Dye Extracts***

Natural dye extracts can be used as is to color wax pastels, crayons, and other oil based art supplies. [Maiwa.com](http://Maiwa.com) carries a full range of [natural dye extracts](#).

### ***Beeswax***

If you aren't raising your own bees or have a trusted beekeeper in your neighborhood you can find quality filtered beeswax at [Sperry Honey](#). Grown in North Dakota. Source your beeswax from trusted US suppliers to ensure that it is made without fillers or contaminants.





#### ABOUT THE AUTHOR

Chris helps natural moms create a homegrown lifestyle so they can create health and wellness for their families naturally. She is a teacher, author, gardener, and herbalist with 35+ years' of growing herbs and formulating herbal remedies, skin care products, soaps, and candles.

Chris is the founder of the DIY Herbal Fellowship, the DIY Herb of the Month Club, the Joybilee Farm blog, and an instructor at Joybilee Academy. Chris believes in giving her readers a quick win because each quick win builds confidence and empowers intuition for self-reliance and natural health.

Chris is the author of the *Dehydrator Cookbook for Beginners, A Guide to Dehydrating Fruits, Vegetables, Meats, and More* (2022), *The Beeswax Workshop, How to Make Your Own Natural Candles, Cosmetics, Cleaners, Soaps, Healing Balms and More* (2017), *Homegrown Healing, from Seed to Apothecary* (2016), and *The Beginner's Book of Essential Oils, Learning to Use Your First 10 Essential Oils with Confidence* (2015)