





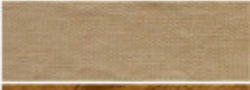






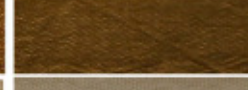








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Research dye project

Next time you get a coffee stain why not dye the whole shirt ? Coffee along black tea, berries, turmeric and many others are all part of natural dyes and have been for decades time. In this writing piece one will discuss the origins of coffee, its effect on the world as well as it's natural dying process, colors in the world of fashion today and a step by step on how to natural dye coffee at home.

Coffee was first found in the eastern side of Africa near Ethiopia and Yemen over 15 centuries ago around 800 B.C. It was first believed monks, Arab Sufi monks especially, would first drink coffee in order to reach total concentration during their nightly prayers (Roman, 2022). Coffee can be grown differently while some places coffee is grown with sun having little shade places like Ethiopia coffee are grown under the shade of a tree (Davis & Moat, 2017). During the sumptuary laws which “ restrict excessive personal expenditures in the interest of preventing extravagance and luxury ” (Britannica, 2009) ; lasted many centuries as each country had adapted their own sumptuary laws outlawed coffee as it was believed to create radical thinking and later deemed to have an additive effect. During the enlightenment period many somblized coffee to play a big hand as coffee house would host powerful political conversations; “Voltaire is said to have drunk as many as 72 cups a day” (Eber 2019). While natural dying has been around for centuries starting with plants and bark of trees; evidence of the exact date coffee was used for dying isn't recorded. As the 21st century shifts more to sustainability, big companies such as H&M practice using more naturally based coffee dyes generated in China (Farra, 2020).

However due to its inconsistency in regards to color remain and precise dyeing it is hard to determine the amount of coffee needed to produce the same color wave (Iowa state university, 2019). The Iowa state university has experimented further into fabrics take coffee dye, below is a chart of which shows how different fabrics such as cotton, rayon, silk, polyester and flax take in the natural brown color of coffee.

Type of fabrics	Non-mordant (control)	Type of mordants (5wt.%, o.w.f)		
		Alum	Copper	Iron
Cotton				
Flax (linen)				
Silk				
Rayon				
Polyester				

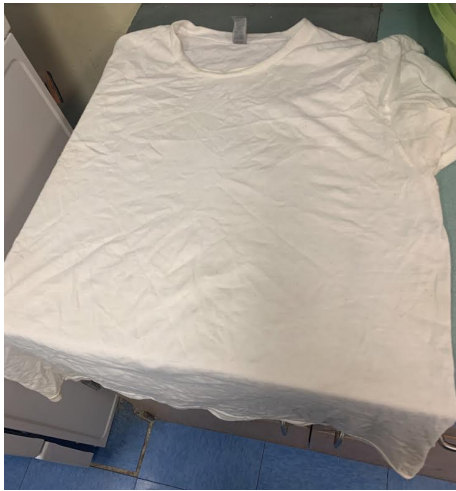
Notes. o.w.f. = on the weight of fabric; alum = aluminum potassium sulfate; copper = copper [II] sulfate; iron = ferrous sulfate.

(International Journal of Fashion Design, Technology and Education, 2019, Brewed coffee grounds offer sustainable alternative for clothing dye, chart)

While coffee creates a brown/nude dye color weave, it pairs well with bright colors such as orange. Every color creates a tone and each color has different connotations attached to them. Orange is a vibrant color which associates with it being bold, warm, and cheerful. The reason it is also my favorite color is because of how closely the connotations of the color align with my personality. Color theory has even proven that color can affect your mood just as clothing can affect your confidence. When it comes to my personal day to day clothing I don't always wear orange as it can be less flattering in different silhouettes. I wear more black clothing. However I try to accessorize by adding pops of color like getting an orange bag or shoe to bring out a pop of

color and express the boldness and exciting tone orange brings. A celebrity that pulled off an all orange fringe and feather gown was Kendall Jenner 2019 Met Gala. This sleeveless mermaid fringe beaded dress went viral in 2019 and was copy for prom season. Jenner paired the dress with a pumpkin diamond neckline, earrings and one single ring on the index finger. Since the dress itself was very daring she kept her makeup simple with neutral colors and a soft nude orange.

So by this point you may be asking yourself how do I turn this coffee stain into a Met Gala look ? Well let's start the dying process together.



Step one: Select an old piece of fabric that you are no longer using, having a light color fabric will be more present and easier to see. The item used needs to be fully organic. Try a 100% wool, silk or cotton fabric as I use the fabric of an old shirt. Having a mix blend fabric would be difficult to create a seamless color as Iowa study shown above.



Next is step two: As you select a pot make sure it is big enough to fit the item of your choice. After you wash out the pot you will need to determine how dark or light you will like your garment to be. Adding more water will dilute the pigmentation of the coffee; if you will like a darker dye add more coffee than water. I add three cups of water that should fill up your pot just below half way.



Step three: As we move along make sure to add some heat to the water, let it come to a slow boil and add the amount of coffee you desire based on the color weave you would like. I blended some of the coffee beans down so they would dissolve faster; when adding the coffee I poured in two cups of coffee bean into the hot water. Let the coffee set for 35 minutes or until you will see the water get darker as the beans come to a full bowl.



Step four: After the coffee water has turned dark brown turn off the heat and add in the item of choice. I added a white 100% cotton fabric; as you add the fabric to the coffee you will see a light pigment start to appear. For better color pigment leave the fabric in the dye for several hours. Take the coffee mix and your fabric and leave it in a container for two to three days. Make sure you have added vinegar for color hold and suspended your shirts with an acrylic band or a rubber band.



Step five : After taking the item of fabric out of the dye you will wash out the dye from the clothing to see how much of the color remains. If you feel like the color could be darker, let the item air dry, reheat the same dye if your like and add your fabric back in one more time. I received a nice sand brown color and let it as is.

As I finish this project and compare my original white fabric to the finished product I believe the colors could have been more pigment and the design could of came out better however it still created a nice sandy brown. Comparing the results of the dye to the tutorials I watched I would say that it wasn't as dark as their dye were more concentrated; created a better pigmentation. I believe I would have fixed this by re-dying the fabric over with a stronger coffee blend. I had used Turkish and Dominican coffee. If I was going to buy it over, I would only buy Turkish coffee as it was a darker blend. A mistake I made while dying was not making the suspension tight enough to create a more dramatic tie dye effect.

In conclusion natural dyes aren't the easiest to work with as we now have synthetic dyes that would create stronger pigmentation and constancy but redying helps for a better take in color. In this writing piece I was able to explore the history of coffee and how it's grown, its historical use and its effect when dying. Having to redo the project I would add tighter suspensions, have more concentrated coffee and added more vinegar as it retains color.



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