

Early History of Photography: The Anthotype Process

Objectives:

1. To understand how early photographic processes worked.
2. To produce photographic anthotype prints using materials easily found at home

Description:

In this unit, you will experience the anthotype photographic process created by astronomer Sir John Frederick William Herschel in 1842. This process uses natural dyes made from light-sensitive materials to create beautiful, colorful prints.

You will create prints using materials readily available in your home, such as flowers, spices, detergent, and rubbing alcohol to create anthotype prints. Traditionally, anthotype prints were made of translucent, natural objects such as flowers, feathers, and plants, but you can print anything that is interesting and translucent. We will also experiment with creating negatives to produce stunning prints.

Watch this [video](#) if you need help creating an anthotypes with turmeric and [this one](#) for flowers and berries.

Document the whole process of gathering materials, creating your paper, and printing by taking photographs and post these images to your website.

- On your website, create a page called "Early Photography"
- On that page, you must include pictures of your materials, process, and results.
- Include a minimum of 10 process photographs
- Write at least two paragraphs explaining your process along the way. Each photograph must have a short explanation.

Gather your materials:

1. Borax
2. Turmeric
3. Plants or vegetables for anthotype dye (see list)
4. Alcohol
5. Thick paper
6. Rubber gloves
7. Trays
8. Old glass photo frame
9. Translucent objects (see list)
10. Water
11. Foam brush or any paint brush
12. Newspaper to protect surfaces

Natural Photo-sensitive materials that can be used for anthotypes:

1. Turmeric
2. Flowers
3. Hibiscus (Jamaica) flower
4. Poppy
5. Red carnations
6. Roses
7. Berries
8. Cherries
9. Cranberries
10. Blackberries
11. Beets
12. Red Cabbage
13. Juices
14. Tea
15. Coffee
16. Wine
17. Seaweed

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Semi-transparent objects for anthotypes

1. Flowers
2. Leaves
3. Thinly sliced vegetables and fruits (on top of the glass)
4. Money
5. Feathers
6. Lace
7. Thin fabric with designs
8. Old negatives (film)
9. Glass objects
10. Drawings that are made on thin paper
11. Old letters
12. Writing or drawing on paper that has been stained with grease
13. Magazine or newspaper images

How to make Turmeric Anthotype paper

1. Cover your work surface to protect from staining and be sure to wear gloves and an apron or old clothes.
2. To prepare the emulsion add one teaspoon of turmeric powder and four teaspoons of alcohol into your mixing container, stir well to release the curcumin.
3. If using other materials such as berries, crush or boil the material, strain it, then use it. You may try adding vinegar or alcohol to change the depth of your colors. The color that you see may not be the color you end up with.
4. Allow the deep yellow / orange mixture to stand for a few minutes until the solids fall to the bottom of your container.
5. Pour off the vibrant liquid and coat the paper with your brush. There should be enough emulsion to coat a piece of A4 paper.
6. Place away from light (e.g. in a cupboard) until the paper is completely dry and then cut to size you want - you can make several different images from one piece of coated paper.
7. When dry, cut the paper into smaller pieces (5x7 and at least three 2” test strips)

Creating an anthotype test print

Creating test strips will save you time and materials. You will create test prints to determine the best time and mixture of chemicals.

1. Cut some of your anthotype paper into 2” strips. These are your “test strips.” Write the following on the back of each strip-- these notes will help you to figure out the best time of day, exposure time, and chemical proportions.
 - o Desired exposure time (1 hour, 2 hour, 3 hour)
 - o Time of day and date (time and date affect the amount of light hitting the paper)
 - o Other notes such as amount of turmeric, alcohol, etc
2. Each strip should be exposed separate from the others on its own frame so it can be removed without disturbing the other prints. Position your translucent objects on top of your test strips. Sandwich each print in an old frame.
3. You can expose several of these strips at the same time, removing them from the sun as the desired time expires.
4. Place your print in bright sunlight on a flat surface or on a sunny window.
5. Leave each strip to be exposed for its desired time then develop.
6. As the print sits in the sunlight, you will notice that the exposed parts will become lighter and lighter. The unexposed parts (under the object) will retain the strong yellow color.
7. Develop each strip as it comes out of the sunlight by following the instructions under “developing the anthotype.”

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8. Take note of the most effective time, time of day, and chemical mixture. Use that time and chemical mixture to create your final prints.
9. If you didn't create a successful print, try adjusting the following and retesting:
 - Increasing or decreasing the exposure time (light print means too much sunlight, dark print means not enough)
 - Increasing the amount of turmeric

Developing the anthotype

1. Add two teaspoons of Borax to a half cup (125ml) of warm tap water and stir until completely dissolved.
2. At the sink, pour the borax solution over your exposed paper and you will see that the unexposed parts turn a dark brown.
3. When the image stops changing colour rinse it thoroughly with clear water to remove any excess Borax.
4. Allow your anthotype to completely dry.
5. Store your print in a cool dark place to make the print last longer.
6. Anthotypes will naturally fade over time. To prevent this, coat with wax, spray varnish, or resin to preserve them. You can also scan your images or photograph them have a digital copy to edit and share.