

ADVANCED NATURAL DYE KIT

COCHINEAL

The rare natural dye from a domesticated insect

REDS, ROSES, LAVENDERS and PLUMS



PREPARED by CHERYL KOLANDER, Master Natural Dyer, Aurora Silk
www.aurorasilk.com

YOUR KIT INCLUDES:

COCHINEAL Dye: 4 ounces ground + 4 ounces whole

“Whole” cochineal is dried scale insects which have been hand raised on leaves of prickly pear cactus in South or Central America. This dye is so precious that at times the color has cost more than the silk it is dyed upon! Cochineal makes the brightest and richest, as well as the most permanent reds. The colour is easily modified to plums and lavenders by the use of different additives and the various metal salts called “mordants”.

MORDANTS:

One ounce each of TIN, COPPER, and IRON, plus four ounces of ALUM.

ASSISTS:

One ounce each of OXALIC ACID and CHALK (Calcium carbonate).

SOMETHING SPECIAL TO DYE:

12 squares of silk, hand hemmed hankies 11” x 11”

INSTRUCTIONS for multitudes of colors with just this one dye

There is enough dye and enough mordant for you to create many more beautiful reds, roses, plums, pinks and lavenders. Follow the general directions in “PRINCIPLES OF NATURAL DYEWORK”, enclosed. Wool and silk, as well as wild silk or Tussah are the recommended fibers to dye with Cochineal. On Cotton, hemp and rayon, expect much paler shades.

**For additional supplies: www.aurorasilk.com
Pacific time**

503-286-4149

General instructions: Please read “Principles of Natural Dyeing” which is part of the supplemental packet enclosed with this kit.

CONTAINERS = DYEPOTS. Except for the dye extraction and Tin mordanting, all the dyework can be done with hot tap water and a little more time (“leave to soak overnight”). Thus any non-reactive container can be used for the actual dyework: glass, ceramic, stainless steel, plastic all work equally well. The container only needs to be big enough for the material that is going to be dyed. For the dyework of the silk squares in this kit, gallon plastic milk or water jugs, with the tops cut off, work very well.

For mordanting with Tin and for the extraction of the dye, use stainless steel pots, or glass, or unchipped enamel. Pots so used should be reserved for dyework and not used for cooking (or you will have pink spaghetti!).

**SPECIFIC INSTRUCTIONS:
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by Cheryl Kolander, ©

Prepare a STOCK DYE SOLUTION: Take ½ of the ground Cochineal (=2 ounces), and place in a 4 quart saucepan. Fill half way with warm water. Heat slowly to a boil, stirring occasionally. Boil, gently and covered, for 30 minutes. Strain out this liquid, which is the dye, into another container. Because the cochineal has been finely ground, 80 – 90% of the dye has been extracted. However, to get every bit of dye, you may add more water to the Cochineal grounds and re-boil. Strain and keep aside for light shades. Expect approximately 2 quarts of concentrated dye solution, and two quarts of light solution for pinks, from the second boil.

RED #1 SCARLET and variations to PLUM:

Wet out four of the silk squares in warm water. Fill a 4-quart saucepot with warm water. Dissolve into it, ¼ tsp TIN MORDANT. Add the wet silk; poke out any air bubbles. Heat on low for 1 hour.

Take 1 cup of the stock concentrated dye solution and warm in a saucepot. Add two of the Tin mordanted silk squares. Heat for about an hour. Let cool till they can be handled.

Remove the squares. Save the dyebath for Plums, below. Rinse one square, and lay it out to dry. This is your first Cochineal color!

In a glass or plastic container dissolve 1/8 teaspoon of the OXALIC ACID crystals in 2 or 3 cups hot water. When well dissolved, add the second square. Let it sit approximately 1/2 hour, then remove and compare to the first. Acid makes colours more orangey. This orange toned red is what is called "Scarlet". The exact hue of the first square will depend on the natural acidity or alkalinity of your water.

PLUM variation: Take the other two Tin mordanted squares and add them to the saved dyebath that was just used for scarlet. Heat for about an hour. Let cool till they can be handled.

In a pan dissolve 1/4 teaspoon of the IRON MORDANT in hot water. When well dissolved, add both squares. They will turn to a lovely plum. Remove one square, rinse and dry, while the second, longer in the iron, will turn more blue. Remove it when it has changed "to your taste", rinse and dry.

If Plum becomes too blue, soak the silk in the Oxalic acid solution that was used to make Scarlet.

RED #2 CRIMSON and variations to VIOLET:

Wet out four of the silk squares in warm water. Fill a 4-quart saucepot with warm water. Dissolve into it one (1) teaspoon ALUM MORDANT. When well dissolved, add the wet silk; poke out any air bubbles. Leave overnight *or* heat gently for one hour, and let cool at least until they can be handled.

Take 1 cup of the stock concentrated dye solution and heat in a sauce pot. Add two of the Alum mordanted silk squares. Heat

gently for about 1 hour. Let cool until they can be handled. Rinse and dry one square.

Prepare three glass or plastic containers with two to three cups warm water in each. To the first add 1/8 teaspoon OXALIC ACID crystals; to the second add 1/4 teaspoon CHALK*; to the third add 1/4 teaspoon IRON MORDANT. When all is well dissolved, add a silk square to each modifying solution. After about a half hour, or when the color has changed enough, remove the silk, rinse and dry.

This should produce a range of magenta reds, from a balanced red with the acid, through a crimson, blue-toned red with no adjustment, to a violet red with the chalk and finally a deep violet with the iron. In this way you learn to control the color of Cochineal by varying mordant combinations and varying the acidity or alkalinity of the dyebath.

* Actually, a teaspoon of clear non-sudzing AMMONIA is a better choice for silk than chalk. It can be purchased at any grocery store and may be substituted for the chalk.

LAVENDER'S BLUE with COPPER MORDANT

Wet out two of the silk squares in warm water. Fill a non-reactive container, not used for food, with hot water. Add 1/8 teaspoon of COPPER MORDANT. When well dissolved, add the silk. Let sit overnight.

Take 1/4 cup of the stock concentrated solution, or several cups of the weaker second extraction dye solution. Add to hot water and add both the squares of silk. Remove one after just a short time, such as in one minute; leave the other in the dye to cool overnight. Compare the difference in depth of color.

TWO FOR YOU or

“SUPER ECO-FRIENDLY COLOURS PLUS”!

Use the last two squares to dye “exhaust” colors. Add one to the used Tin mordant, heat for an hour and let cool, then dye it in the

used Scarlet dyebath. Add the other square to the used Alum mordant, heat for an hour or let sit overnight, then dye in the used Crimson dyebath.

The general rule for re-using mordants is that 1/4 of what you first put in is still there after the mordanting is complete. Therefore, a mordant bath for four squares still contains enough to mordant a fifth, afterwards.

TO DISPOSE of used dye and mordant solutions: I first recommend that you exhaust the mordant and dyebaths, as per “SUPER ECO FRIENDLY COLOURS” directions. Then the tiny amounts of trace minerals add no more to the waste water system than the urine of several mineral-supplement users. Cochineal is Natural Red dye #4, the red food dye used today in soda pop, cranberry juice and other red edibles, worldwide.

MORE DYEWORK: There is enough dye and enough mordant for you to create many more beautiful reds, roses, plums, pinks and lavenders. Follow the general directions in “PRINCIPLES OF NATURAL DYEWORK”, enclosed. Wool and silk, as well as wild silk or Tussah are the recommended fibers to dye with Cochineal. On Cotton, hemp and rayon, expect much paler shades.

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TO STORE COCHINEAL STOCK SOLUTION: Cochineal dye contains much protein and does rot! To store: Freeze; or in the refrigerator it will usually keep several weeks. Alcohol can be added as a preservative: approximately 1/5th by volume of 40% grain or vodka allows the solution to be stored in the refrigerator indefinitely and at room temperature for many days.

**Please wear “RUBBER” (vinyl or latex, thin or thick)
GLOVES when doing dyework.**

SAFETY FOR CHILDREN:

While this Cochineal is the same that is used as a natural food dye, it is wisest to keep these and all dyes and assists OUT OF THE REACH OF CHILDREN.

It is especially important to STORE ALL MORDANTS AND ACID OUT OF THE REACH OF CHILDREN.

This kit can safely be used with older children, but only under ATTENTIVE ADULT SUPERVISION. SAFE FOR RESPONSIBLE TEENS, 12 and above.

Do not drink or eat the dye or mordant solutions. First aid for splashes in the eyes is to rinse well with tap water. (It's like getting vinegar in your eyes).

The Cochineal in this kit was raised in the Andes of Peru or Equador. To insure purity it is imported whole and ground at the Natural Dyeworks of Aurora Silk.

For some easy tie-dye directions, and examples of these silk squares so dyed, see www.truefibers.net. To learn about other Natural Dyes, read Cheryl Kolander's "Brilliant Colours with Natural Dyes on Silk and other natural fibres." from www.aurorasilk.com