



Cochineal is among the most beautiful and versatile, natural dyes on the planet. It has excellent light and washfastness properties and produces a powerful range of reds, fuchsias, scarlets and purples. It is permanent on all natural fibers and is generally used with a mordant such as alum. The color (carminic acid) comes from the bodies of female insects of the species *Dactylopius*. These parasitic insects are farmed on the prickly pear (nopal) cactus, which is native to Mexico, Central and South. Jacquard's Cochineal comes directly from a small, family owned and operated, organic farm co-op in Lima, Peru.

**WARNING: Use common sense and good housekeeping with dye powders. Avoid creating and breathing dust.**

## BASIC INSTRUCTIONS

1. Mordant fabric by soaking it in a solution of alum and water: Dissolve ½ cup alum in 25 cups water per pound of fabric.
2. Dissolve a small amount of dye in a pot of hot water.
3. Bring to 180°F, add fabric and hold for 10-20 minutes.
4. Remove fabric; rinse in cold water.
5. Wash using synthrapol and cold water.

## MORDANTING

Mordant fabric by soaking in a solution of water and alum. Dissolve ½ cup alum in 25 cups water per pound of fabric, or 15% by weight of dry fiber.

*NOTE:* For cellulose fibers, some dyers recommend pretreating fabric with tannin (8%). Adding cream of tartar (6%) to the mordant solution will shift the resulting colors toward a truer red. Adding iron (2-4%) will shift color toward purple.

## DYE PREPARATION

The insects must first be ground. Use a blender or a mortar and pestle.

*NOTE:* Fineness of grind may affect resulting color. Many dyers extract the colorant from the grind before dyeing, but you may also include the powder in your dye bath. Simply dissolve the powder in a small amount of hot water and add it to your dye bath.

### To extract:

1. Put the powder in a saucepan and cover with three inches water.
2. Boil for 30 minutes.
3. Strain the liquid and set aside.
4. Place the cochineal pulp back in the saucepan and again cover with water and boil for 30 minutes.
5. Add this decanting to the first decanting.
6. Repeat up to four times, total.
7. Use the combined decantings, diluted with water as desired, to create the dye bath.

## DYEING

*NOTE:* Cochineal is extremely sensitive to pH. The rich carmine red of cochineal can be shifted to orange with the addition of an acid (vinegar or citric). Adding an alkaline (soda ash) will shift the color to a deep fuchsia. Use Synthrapol or another neutral detergent for pre and post-treating fabric to avoid unexpected shifts in color.

1. Bring dye bath to 180°F, add fabric and hold for 10-20 minutes.
2. Remove fabric, rinse in cold water, and wash using Synthrapol.