

# COLOR BY ACCIDENT

## MAKING ONE-OF-KIND FABRIC

By Ann Johnston

**Color by Accident** is a simple and exciting way to dye fabric. The results are unlimited variations of color and value—your own one-of-a-kind fabrics. Following these recipes, you will create beautiful accidents of color. You will think of more variations of your own and, at the same time, begin to discover the infinite combinations of color.

My book, *Color by Accident*, is designed to be used as a workbook and a reference manual for the adventuresome. Beginning and experienced dyers will find it to be an inspiring guide for creating one-of-a-kind fabrics not available commercially. It includes Five Variations on a versatile method and 36 tested recipes. Not required are expensive equipment, dangerous chemicals or specialized studio space. Other books teach how to repeat a method and reproduce colors. This book points the way to exploring new color combinations and to achieving fabric that will be unique and visually complex. Included here are some guidelines you need to know before you begin. Please read through carefully.

### ABOUT PROCION®MX DYES

Procion®MX dyes are more reactive than the other types of fiber-reactive dyes, requiring only room temperature to bond with the fibers, they do not need to be steamed or heated to fix the color in the fiber. A concentrated solution of each MX dye color can be mixed and stored at room temperature, and thus frequent mixing of the powders can be avoided. Because they are so reactive, the colors will gradually lose their strength at room tempera-

ture after 5 to 7 days. Below room temperature, they will last longer. Once the dye powder is in a concentrated liquid, it is easy to use and measure in large or tiny quantities for color mixing. With Procion®MX dyes, the same recipes can be used for cotton, silk, viscose rayon and linen, and can be adapted to almost all surface design techniques.

### ABOUT FABRIC

The kind of fabric you use for dyeing is critical to the results you achieve. MX dyes are designed for cellulose fibers: cotton, linen and rayon (viscose rayon is made from wood fibers). They will also dye silk. Silk is a special fiber that can be dyed using acid or alkali as a fixative. All the recipes for MX dyes using soda ash as a fixative work fine on silk. Be aware that different fibers result in different colors using the same dye color. The difference between cotton and silk can be dramatic, depending on which dye colors are used.

Other attributes of the fabric also influence your results. The weave of the fabric, which you can see, and the way the fabric has been processed, which you cannot see, will influence color intensity and detail of texture. For cotton, the brightest colors with the most detail are achieved with a mercerized, fine broadcloth, that has no sizing or wrinkle-free treatments. Of course, any color on the fabric will influence the final dyed color. Even off-white, unbleached cotton will give a dif-

ferent final color than will bleached, white cotton. If you have a particular type of fabric you want to sew with, dye some of it to test the results. If you do not like the results, try another type of fabric. A frequent problem for dyers, the colors not being dark enough, can often be solved by using a mercerized cotton. Mercerization is a process using caustic alkali on the fiber when it is under tension. It makes the fabric look and feel more lustrous and results

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"PFD" means "prepared for dyeing," that is, it has no surface treatments that will interfere with the dye process. "PFD" is sometimes used to mean that the fabric is treated with a caustic alkali similar to the mercerization process. It does NOT mean that the fabric has soda ash or another fixative on it.

## PREPARE THE FABRIC

Almost all cotton in the fabric stores has a coating of sizing that prevents the dyes from penetrating completely into the fibers. This fabric has to be scoured (washed thoroughly in hot

water and detergent). Fabric without surface treatments is available from special suppliers, some of whom are listed at the end of this article. This fabric does not have to be scoured before dyeing. All silk should be scoured before dyeing, because it frequently has a residue of gum left from the silk worms.

To scour 1 pound of fabric, 3-4 yds (3-4 m), wash for 15 minutes in:

**Hot water, over 140°F (60°C)**

**Soda ash 1/2 tsp (2.5ml)**

**Synthrapol SP 1/2 tsp (2.5ml)**

**Rinse well, and dry.**

**Tear the fabric into the size pieces you will be dyeing.**

## MIX THE DYE CONCENTRATES

Use warm water to dissolve the urea first, then add dye powder. Do not dissolve dyes in water over 65°F (35°C) because hot water will reduce the reactivity of the dye.

**Water 1 cup (240 ml)**

**Urea 2 to 4 Tbs (30 to 60 ml)**

**Dye 2 Tbs (30 ml)\***

**\*Always mix black dye powder**

**DOUBLE: 4 Tbs per cup of water.**

Dye concentrates will keep at room temperature about a week. Warmer temperatures cause the dye to react more quickly with the water, so storing dye concentrates at cooler temperatures does extend their shelf life. They will still gradually lose their ability to react with the fabric, and should always be used at room temperature.

Be sure to follow safety rules: use gloves and wear dust/mist mask when measuring powders. Always keep covers on dye powders.

## MIX THE SODA SOLUTION

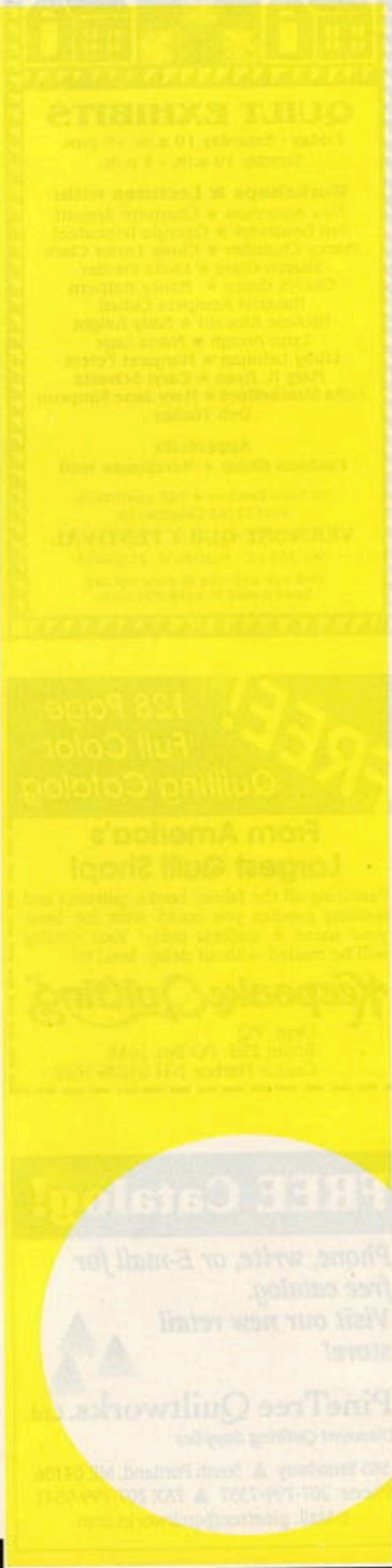
Dissolve soda ash in warm to hot water. Use while at room temperature for best results.

**Soda Ash 6 Tbs (135 ml)**

**Water 1 gallon (3.8 liters)**

## REMOVE EXCESS DYE

1. Remove soda ash and some of the extra dye by rinsing in warm water several times, by hand or in the washing machine.



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2. Then wash in hot, 140°F (60°C) water and Synthrapol SP. Rinse. Use 1-2 Tablespoons Synthrapol (15-30 ml) per wash load.  
3. Dark colors need even more washing to remove excess dye. Test color fastness by ironing wet over white cotton.

## SPRING COLORS

These spring colors range from clear yellow-green and turquoise to dark teal. You will use Variations #1, #3, and #4 and at the same time you will experiment with creating patterns with plastic clothes pins and rubber bands.

Have these ready before you start. Refer to the beginning of this article for mixing dye concentrates and soda solution. There will be leftovers.

Dye concentrates:

Blue	1/2 cup (120 ml)
Gold	1/4 cup (60 ml)
Orange	1/4 cup (60 ml)
Red	1/4 cup (60 ml)
Turquoise	1 cup (240 ml)
Yellow	1 cup (240 ml)

- 1 gallon (3.8 liters) warm soda ash solution

- 1 1/2 gallons (5.7 liters) warm water

Containers:

- Two 1- to 2-quart (1-2 liter) canisters
- One 1- to 2-gallon (4-8 liter) canister
- Two flat plastic boxes
- Plastic clothes pins
- Rubber bands
- Nine 1 yard (1 meter) pieces of fabric

## YELLOW-GREEN GRADATION

Based on **VALUE PARFAIT**

1. Wet 1 yd (1 m) of fabric in warm water, squeeze out some excess and arrange in a deep container.

2. Mix together the following dye concentrates with enough plain warm water to make a total of 1 cup (240 ml) liquid:

Blue	1 Tbs (15 ml)
Yellow	6 Tbs (90 ml)

3. Pour color over the fabric. Press out

some of the air bubbles. Manipulate the fabric as you wish; more movement of the fabric will make a more even color.  
4. Pour 1 cup warm soda solution over the fabric. Mix or press to distribute the soda ash through the fabric.

5. After 5-10 minutes, wet a second yard of fabric in plain warm water and arrange on top of first layer. Pour 1 cup (240 ml) warm soda solution over the second layer. Mix or press to distribute the soda ash. Manipulate the fabric as you wish; more movement of the fabric will make a more even color.

6. After 5-10 minutes, wet a third yard of fabric in plain warm water and arrange on top of the second layer. Pour 1 cup (240 ml) warm soda solution over the third layer. Mix or press to distribute the soda ash. Manipulate the fabric as you wish.

7. Let the dye work for one hour minimum after the last layer of fabric and soda solution is added. Press or turn the top layer of fabric once or more often during this time.

8. Remove excess dye.

## RED-VIOLET TO TURQUOISE BLEND

Based on **ONE LAYER, SEVERAL COLORS**

1. Fold 1 yd (1 m) of dry fabric and arrange in a large, flat container. Pour 1 cup (240 ml) plain warm water over the fabric, press to moisten and rearrange wrinkles as you wish. Wet a second yard of fabric in plain warm water, squeeze out some excess water, bind with rubber bands, and place in same container, next to the first piece of fabric.

2. Make the following colors in separate cups using dye concentrates and plain warm water. Each color should make 1 cup (240 ml) liquid. Pour the colors over different ends of the fabric.

Color A: Red 2 Tbs (30 ml)

Color B: Turquoise 6 Tbs (90 ml)

3. Press and turn first piece of fabric; do not move the second piece of fabric at all. The colors can be kept somewhat separate or blended completely, depending on what you do at this stage.

4. After 5-15 minutes, pour 2 cups (480 ml) warm soda solution over all the fabric. Press slightly to distribute the soda ash.

5. Let the dye work for one hour minimum. Press, stir, or turn the first piece of fabric once or more often during this

time. Leave the second piece of fabric undisturbed.

6. Remove excess dye.

## COOL YELLOWS

### Based on ONE LAYER, SEVERAL COLORS

1. For 1 yd (1 m) fabric, make accordion folds 2-3 inches wide across the width of the fabric and then fold lengthwise to fit in a narrow, flat container. Do the same process to a second yard (meter) of fabric, but use 6-10 clothespins along one edge to hold the folds tightly in place. Place both pieces of fabric together, upright on the folded edges, not flat in the bottom. Pour 2 cups (480 ml) plain warm water over the fabric.

2. Mix the following colors in separate cups using dye concentrates and plain warm water to make 1 cup (240 ml) liquid each. Pour Color A over the fabric; press to mix. Pour Color B into the liquid in the bottom of the container with a minimum of mixing.

**Color A: Red** 1/4 tsp (1 ml)  
**Yellow** 6 Tbs (90 ml)  
**Color B: Blue** 1/2 tsp (2-3 ml)

3. Allow the colors to fix where they touch the fabric without mixing.

4. After 5-15 minutes, pour 2 cups (480 ml) warm soda solution over the fabric. Press slightly to distribute the soda ash through the fabric.

5. Let the dye work for one hour minimum. If you do not stir or turn the fabric during this time, you will have more color variations.

6. Remove excess dye.

## TWO TEALS

### Based on ONE LAYER, ONE COLOR

1. Wet 1 yd (1 m) of fabric with 1 cup (240 ml) plain warm water. Press the fabric into the bottom of a container. Do the same in another container.

2. Mix together the following dye concentrates with enough plain warm water to make a total of 1 cup (240 ml) liquid for each color:

**Color A: Red** 1/2 tsp (2-3 ml)  
**Turquoise** 5 Tbs (75 ml)  
**Yellow** 1 tsp (5 ml)

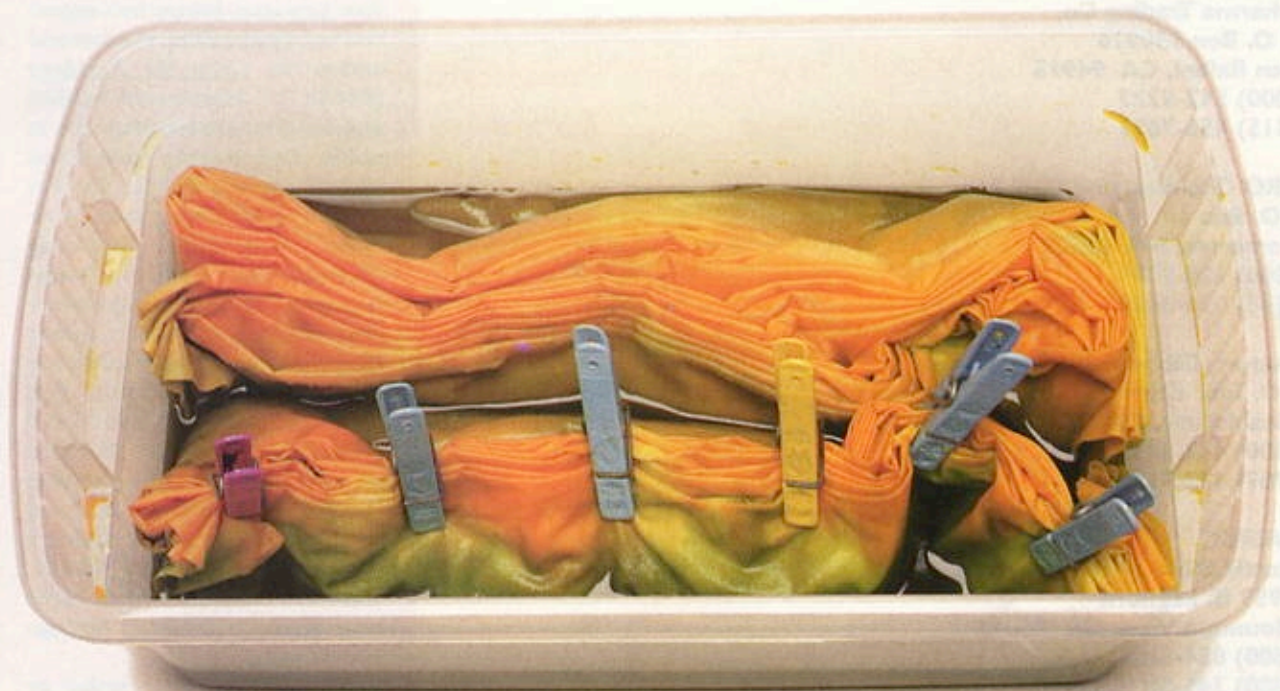
**Color B: Blue** 5 Tbs (75 ml)  
**Gold** 1 tsp (5 ml)  
**Orange** 1 tsp (5 ml)

3. Pour Color A over the fabric in the first container and Color B over the fabric in the second container. Press out some of the air bubbles. More movement of the fabric will make a more even color.

4. After 5-15 minutes, pour 2 cups (480 ml) warm soda solution over the fabric, 1 cup (240 ml) in each container. Lift and press to distribute the soda ash through the fabric. More movement of the fabric will make a more even color.

5. Let the dye work for one hour minimum. Turn the fabric once or more often during this time. Again, more movement of fabric will make a more even color.

6. Remove excess dye.





#### SOURCES

##### DYES, CHEMICALS, FABRIC

Dharma Trading Co.  
P. O. Box 150916  
San Rafael, CA 94915  
(800) 542-5227  
(415) 456-7657

##### PRO Chemical and Dye, Inc.

P.O. Box 14  
Somerset, MA 02726  
(800) 228-9393  
(508) 676-3838

#### FABRIC

Exotic Silks  
1959 B. Leghorn  
Mountain View, CA 94043  
(800) 854-SILK, U.S.  
(800) 345-SILK, CA

Testfabrics  
P.O. Box 420  
Middlesex, NJ 08846  
(908) 469-6446

#### Editor's note:

Ann Johnston brings her expertise as a dyer, quilter, teacher and author to Color By Accident (\$24.95). Her award-winning quilts and hand dyed fabric are in public and private collections throughout the world. She has been a contributing author to fiber magazines including *Threads* and *Surface Design Journal*. *Quilter's Newsletter Magazine* and *American Quilter Magazine* have also featured her work. Her first book, Dye Painting! (\$19.95) is considered a classic among dyers. She lives in Lake Oswego, Oregon with her family. To place credit card orders or inquire about retailer's discounts call (800) 724-2384. Overseas orders: Credit cards only please. Additional postage will be added.

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