Dyeing to Quilt Workshop

The quilting artists have been leading surface design of late. Attested by books like Complex Cloth, Dyes and Paints, Transforming Fabrics and Fabric Dyeing and Printing that have all come out in the past few years. These books introduced multiple techniques on how to dye, paint, stamp, print, screen, stencil and create one-of-a-kind coloured and textured fabrics. One of the more popular sections has been with dyeing. The following are excerpts from class notes by Betty Conlin, a prominent Canadian quilter. There will be many other techniques introduced here in G&S News, so look towards future editions for more techniques.

Topics Covered

- Rainbow Dyeing
- Gradation Dyeing

Materials Used (see formulas to determine quantities)

- Procion 'MX' Fiber Reactive Dye
- Sodium Carbonate & Urea
- Measuring cup, measuring spoons and stirring sticks
- Non Iodized salt (sea salt / pickling salt)
- Zip-lock bags or plastic containers.
- Masks (Required when mixing powder dyes only. Dyes are relatively safe when in liquid form).
- Gloves and Apron
- String
- Bucket
- TNA Soap (Synthrapol® or Lissapol ND will be good too).
- Large aluminum roasting pan

Making Stock Solutions
Please note that the following solutions can be shrunk proportionally. Also instructions here are slightly different than those previously written by us. We have just added more detail and simplified it this time.

Prewash Fabrics (required)

1) Pre-wash all fabrics with TNA Soap (similar to Synthrapol®) in a washing machine to remove all sizing and dirt. TNA Soap is specially formulated to not only remove dirt and sizing but to also easily rinse out of the fabrics to assure good dyeing.
2) Use approximately 60mL in a washing machine to pre-wash approximately 20 yds of lightweight cotton. Dry fabric.
3) Presoak Solution (makes 4.0L) - direct
4) application only.
5) Dissolve 250gm Sodium Carbonate and 1 cup salt in 4.0L of hot tap water. Solution can be stored in a seal container for two months after use.

Chemical Water (makes 1.0L)
Mix 10 tsp urea to 1.0L of hot tap water. Use this solution to dilute dye solution further or for Gradation Dyeing Technique.

Dye Solutions (makes 1.0L) - direct application only.
- Dissolve 25gm dye in 1.0L Chemical Water (as noted, amounts can be proportionately reduced i.e. you can mix one cup or 2 cups at a time).
- Add a few drops of TNA Soap also. In this incident the soap will act as a wetting agent to help break the surface tension of the fabric and allow the dye to enter the fabric easier.
- Solution can be saved for 1 month but it is ideal to use within 48 hours.

Rainbow Dyeing

1. Precut fabric and soak in Presoak Solution for 15 minutes.
2. Use 12 zip-lock bags and pour the following amounts of dye into each one. Please note that red, yellow and blue are general colour definition. Red could be scarlet or fuchsia, Blue could be marine or turquoise and Yellow could be either golden yellow or bright yellow. Using different primary colours will give you a different colour wheel.

   1) 1/2 cup (125mL) red
   2) 1/2 cup (83mL) red & 2 Tbsp yellow
   3) 1/4 cup red & 1/4 cup yellow
   4) 1 Tbsp red & 1/2 cup yellow

   5) 1/2 cup yellow
   6) 1/2 cup yellow & 2 Tbsp. blue
   7) 1/4 cup yellow & 1/4 cup blue
   8) 1 Tbsp yellow & 1/2 cup blue

   9) 1/2 cup blue
   10) 1/2 cup blue & 2 Tbsp red
   11) 1/4 cup blue & 1/4 cup red
   12) 1 Tbsp blue & 1/2 cup red

3. Take fabrics out of presoak solution and squeeze excess back into bucket and put one piece into each bag of dye. Seal bag
4. Move dyes around in bag for a minute and let stand.
5. Agitate bag.
6. **To Set, Follow ONLY one of the following two methods**

- Microwave on high for 4 minutes. Take out of package and leave at room temperature until cool.
- Let stand in bag for 24-48 hours.

7. Take out and rinse under luke warm water until water is clear.

8. If a lot dye is still prevalent in rinse water, process with Raycafix Fixing Agent (see last edition of G&S news).
9. Wash fabrics in TNA Soap
10. Dry & iron. Fabric is now ready to be used in your creations

Gradation Dyeing

1. Precut fabric and soak in Presoak Solution for 15 minutes
2. Place 6-8 zip-lock bags (or glass jars) on the table numbered #1-6 or 8. Place bags in pan to protect in case of leakage.
3. Pour 1/4 cup of dye solution into a cup and add 1/4 cup of chemical water.
4. With the remaining 1/4-cup solution, add another 1/4 cup of chemical water to this solution.
5. Pour 1/4 cup of the new mixed solution into Bag #2 and with the remaining 1/2-cup, add another 1/4 cup of chemical water to this cup.
6. Keep repeating this until Bag #8 depending how much you want to extend the gradation.
7. Take fabrics out of presoak solution and squeeze excess back into bucket and put one piece into each jar of dye.
8. Move dyes around in jar for a minute and let stand.
9. Agitate bag every few minutes
10. **To Set, Follow ONLY one of the following two methods**
    a) Microwave on high for 4 minutes. Take out of package and leave at room temperature until cool.
    b) Let stand in bag for 24-48 hours.
10. Take out and rinse under luke warm water until water is clear.
11. If a lot dye is still prevalent in rinse water, process with Raycafix Dye Fix (formerly Retayne)
12. Wash fabrics in TNA Soap
13. Dry, iron and fabric is now ready to be used in your creations

NOTES:
fat quarter = approx 400 square inches
25gm of dye = approximately 6-8 tsp
1.0L of water = 4 cups
3 tsp = 1 Tbsp

Dyes, Paints and Chemicals - SAFETY
There have been many questions regarding safety in handling dyes, paints and chemicals. The following are some basic common sense rules.

- You should clean up your work area afterward. I find liquid "Vim" to be very effective.
- NEVER eat in your work area.
- Purchase separate containers or utensils for your dyes, paints and chemicals. If possible, stainless steel is recommended, but plastic is usually fine.
- Always work in a well-ventilated area but avoid drafty areas, as this will cause powders to become airborne.
- ALWAYS wear a dust mask when handling powdered dye or chemical. Any dust exposure is potentially harmful.
- Although most people don't seem to have a reaction to the dyes, the solutions are generally basic (pH level of 9-12). Gloves are highly recommend, first to avoid staining and secondly to avoid potential allergic reactions.

- Any dye stains on hands with Procion MX are usually removed with Reduran Hand Cleaner. If you do not have this soap product, the stains usually will disappear within a few days through normal activities such as washing your hair or dishes.

- When in emergency, please refer to the MSDS for proper safety procedures or contact your physician when in doubt.

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