

**Immersion Dyeing on using WashFast Acid Dyes –
Using 1% Dye Stock Solutions**

Acid Dyeing Nylon Instructions

Depth of Shade for Nylon

Use 2% depth of color for full shade with nylon

Therefore, for 100 grams of fiber (dry weight) use 2 grams of dye powder.

Stock Solution

Stock Solutions are made at 1% dos(depth of shade): 1 gram per 100 mL of water

Therefore, for 100 grams of fiber (dry weight), use 100 mL of stock solution.

Note: Nylon is dyed at 2% for full shade, except for very dark and black which may need up to 4%. Silk and wool is dyed at 1%. At 1% or 2% strength the dye baths should exhaust, that is, all the dye should be absorbed.

Equation for Nylon 2%

DYE 1:2 Ratio _____ g Fiber x 2 = _____ mL stock (for 2% DOS)

H2O 1:40 Ratio _____ g Fiber x 40 = _____ mL H2O (1000mL=1 Liter)

Salt 1:1/2 Ratio _____ g Fiber x .5 = _____ g Salt

Fixer 1:1/6 Ratio _____ g Fiber x .15 = _____ g Citric Acid or Ammonium Sulfate

The Procedure

Total time = 60 minutes plus cool down

Use the charts above to determine the amount of each ingredient. Remember the amounts of dye, assistants and water depend on the quantity of fiber.

Step 1: Weigh your dry fiber to be dyed. Weight of Fiber: _____ grams

Step 2: Wet out your fiber by measuring ½ tsp (2.5ml) Synthrapol in roughly 2 ½ gallons (10 liters) of hot water per 500 gm of fabric. Soak for at least 30 minutes.

Step 3: Measure your stock solution dye amounts.

Color A _____ amount _____

Color B _____ amount _____

Color C _____ amount _____

Color D _____ amount _____

Total amount of dye _____

Step 4: Make the dye bath in a stainless steel pot.

Add water: _____ liters

Add salt: _____ grams

Add 1 tsp Synthrapol

Add dye stock: _____ mL

Add the Fixer (Citric Acid or Ammonium Sulfate): _____ grams

Step 5: Add the Fiber. Squeeze out the excess water from your fiber and then add it to the dye pot.

Step 6: Raise the temperature to 205 F (96 C).

Step 7: Keep at temperature and stir frequently for the next 30-60 minutes. The darker the color, the longer the dying time.

Step 8: Cool down. Allow the dye bath to cool to room temperature for at least 30 minutes or overnight (preferred). More dye will fix while cooling.

Step 9: Wash out fabric. Remove fiber and rinse it well in warm water. Wash with ½ tsp of Synthrapol per 500 gm of fabric. Rinse until water runs clear.