Immersion Dyeing Wool
using Liquid Reactive Dyes
Please read directions carefully before starting

This process allows you to use the Liquid Reactive Dyes on wool and other protein fibers. Keep in mind that some Liquid Reactive colors dye better than others, producing beautiful, but sometimes unexpected results. The black is not recommended for wool. These directions are based on dyeing one pound (454 gm) of fiber. Please increase or decrease the amounts proportionately. Always do test samples before working on a large project. For additional information, visit our website at www.prochemicalanddye.com.

Wear rubber gloves, apron, or old clothes.
Utensils used for dyeing should never be used for food preparation.

**Supplies**
Liquid Reactive Dye
Synthrapol
Citric Acid Crystals OR Sodium Bisulfate OR Acetic Acid 56%

**Procedure**

1. **Wet out the wool.** Measure 2 ½ gallons (10 liters) of warm 110°F (43°C) water, for each pound (454 gm) of wool, by using ½ tsp (2.5 ml) of Synthrapol. Soak for 30 minutes. Squeeze out the excess water before adding it to the dye bath. There is no need to rinse.

2. **Make the dye bath** in a non-reactive, stainless steel or enamel pot. For each pound (454 gm) of wool, measure:
   - 2½ gallons (10 liters) of room temperature 75°F to 95°F (24°C to 35°C) water
   - ½ tsp (2.5 ml) Synthrapol
   - 2 Tbl (35 gm) Citric Acid Crystals
   or 2 Tbl (56 gm) Sodium Bisulfate
   or 2 Tbl (30 ml) Acetic Acid 56%
   - Liquid Reactive Dye (see chart below)

   Be sure to give the dye bath a stir after adding each item.

<table>
<thead>
<tr>
<th>Pale</th>
<th>Medium</th>
<th>Dark</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>25% Liquid Dye</td>
<td>2 tsp (10 ml)</td>
<td>2 Tbl + 1 tsp (35 ml)</td>
<td>6 Tbl (90 ml)</td>
</tr>
<tr>
<td>33% Liquid Dye</td>
<td>1 ½ tsp (7.5 ml)</td>
<td>5 ½ Tbl (27 ml)</td>
<td>4 ½ Tbl (67.5 ml)</td>
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<tr>
<td>40% Liquid Dye</td>
<td>1¼ tsp (5.75 ml)</td>
<td>~1 ½ Tbl (23 ml)</td>
<td>3 Tbl (45 ml)</td>
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<tr>
<td>50% Liquid Dye</td>
<td>1 tsp (5 ml)</td>
<td>~ 3 ½ tsp (18 ml)</td>
<td>~2 ½ Tbl (36 ml)</td>
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</tbody>
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3. **Add the wetted out wool** to this dye bath. Start at room temperature and bring the dye bath to a boil gradually over a 45 minute period. Dye at a simmer for a minimum of 30 minutes for pale shades and up to 60 minutes for black and dark shades.

4. **Allow the fiber to cool** to room temperature in the dye bath. Rinse well in warm 110°F (43°C) water.

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