Washfast Acid Dyes on Wool

General Procedure:
Thoroughly wet out yarn or fabric. Set the dye bath at the recommended temperature with the salt and Ammonium Sulfate*. Add the yarn and work for 5 to 10 minutes.

Raise yarn (on stick) and add the pre-disolved dyes. Mix Well.
Lower yarn. Heat bath to a slow simmer turning yarn often to ensure levelness.
Simmer for 30 to 45 minutes turning yarn every 5 minutes or so.
Exhaust heavy shades with an addition of Ammonium Sulfate equal to 1/2 the amount of acid with which you started (Lift yarn, add diluted Ammonium Sulfate slowly, mix, replace yarn and simmer for an additional 20 minutes). Turn off heat. Cool to almost room temperature before removing yarn.
Rinse yarn well in tepid water. (NOTE: dye bath may be saved and reused by adding 1/4th the amount of salt and sufficient dye for desired shade a starting again with fresh yarn. Additional Ammonium Sulfate may be required to exhaust bath. After second use, discard bath).

1. WET OUT: Use 1/8th tsp. Synthrapol SP per gallon of warm water. this will wet out and help penetrate the spinning oils. Soak until thoroughly wet. Squeeze out excess water before adding to dye bath. NO need to rinse.

2. DYE BATH:
2.1 Use 30 times as much water (by weight) as yarn. Since 1 gallon of water weighs 8.3 lbs., you need 30 divided by 8.3 or about 3 1/2 gallons of water for each pound of yarn dyed.
2.2 Add 2.0% Sodium Sulfate (Glauber Salt) or Sodium Chloride (common table salt) based on the dry weight of the fiber. 3.0% of 1 pound is 0.03 times 16 oz, which equals 0.48 oz. for each pound of yarn, or 1 level Tablespoon.
2.3 Acid: Use 3% of Ammonium Sulfate* based on dry weight of fiber. 3.0% of 1 lb equals 0.03 times 16 oz. or approximately 0.48 oz (or 1 level Tablespoon) per pound.
2.4 Dye Use up to 4% on the dry weight of the yarn for very deep shades. The dyes can be mixed to attain innumerable shades, but the total dye used should not exceed 4%. Dissolve by pasting with a small amount of tap water until no lumps are visible. Dilute with boiling water to at least a quart in volume.
2.5 Containers: Use Pyrex measuring cups or safety beakers. Dye Vessel: a 20 quart canning pot is ideal.

*56% Acetic Acid may be substituted for the Ammonium Sulfate. Use 3% or approximately 3 level teaspoons per pound of fabric.