How to Dye Wool/Nylon Blends using a One-Bath Dyeing Process

This is a general one-bath atmospheric dyeing procedure for wool/nylon blends which have been acid-fulled. Acid and low-energy disperse dyes are typically used on these blends. The Orco™ acid dye classes that are used for this application are Orcoacid™, Orco Milling™, and Orcolan Neutral™ dyes. If Orcolan Neutral™ or Orco Milling™ dyes are used, it is important for the dyebath pH to be adjusted to around 6-6.5 along with the addition of 4% owg ammonium sulfate, as the acid-fulled wool will initially have a pH range of 4 to as low as 2. This low pH will cause a very quick strike of the dye onto the fiber causing unlevel dyeings. Orcocil™ Disperse dyes are used to dye the nylon component of the nylon.

1. Prepare goods as necessary.
2. In a bath at 100°F(38°C), adjust pH to 4.5 with either ammonia or Orco Buffer 14 Powder™, add goods, and circulate for 10 minutes.
3. Add:
   - 5.0 % owg Glauber’s Salt
   - 1.5 % owg Orco Leveler LW-470™
   - 1.0 % owg Orco Nylon Resist P™
   - 4.0 % owg Ammonium Sulfate (add this only if Orco Milling™, or Orcolan Neutral™ dyes are being used)
4. Circulate at 100-120°F(38-49°C) for 10 minutes and add:
   - X % owg Orcoacid™, Orcolan Neutral™, or Orco Milling™ Dyes properly prepared
   - Y % owg Orcocil™ Disperse Dyes properly prepared
5. Raise temperature slowly to 200-205°F(93-96°C).
6. After 15 minutes, add 1-2% owg sulfuric acid to exhaust, if necessary. If Orco Milling™ or Orcolan Neutral™ dyes are being used, acetic acid may be used.
7. Continue running at 200-205°F(93-96°C) for a total of 60 minutes.
8. Cool back to 160°F(71°C), drop bath, and rinse.
9. Finish goods if necessary.