How to Exhaust-Dye Cotton Using **Orco Reactive R-Series™** Dyes

1. Prepare cotton goods so they have good absorbency, wet-out, and contain no residual chlorine, peroxide, or alkali.

2. At 120°F(50°C) add:

   1.0%
   
   X g/L(oz/gal)
   
   0.067 oz/gal(0.5g/L)
   
   X % owf
   
   **Orconol CHSA Conc™** on weight of fabric(owf).

   Common Salt* or Glauber’s salt as prescribed on chart shown below

   Sodium Hexametaphosphate,

   **R-Series™** reactive dye properly prepared.

   % owf dyes | oz/gal(g/L)
   --- | ---
   to 0.75 | 2.7-6.6 (20-50)
   0.75-2.00 | 10 (75)
   2.01-4.00 | 13.3 (100)
   4.01+ | 13.3 (100)

3. Run for ten minutes.
4. Bring dyebath to 140°F(60°C) at a rate of 1-3°F/minute.
5. Add prescribed amount of soda ash as shown in chart below. Soda ash may be added in portions to promote improved leveling. Run for 10-20 minutes.
6. Add prescribed amount of Caustic 50% as shown in chart below. This will maximize yield of the dye. Run for 30-40 minutes.

   % owf dyes | Soda Ash oz/gal(g/L) | Caustic 50% oz/gal(g/L)
   --- | --- | ---
   10:1 | 20:1 | 10:1 | 20:1
   to 0.75 | 0.67(5) | 0.67(5) | ---- | ---
   0.75-2.00 | 0.67(5) | 0.67(5) | .13(1.0) | .07(0.5)
   2.01-4.00 | 0.67(5) | 0.67(5) | .27(2.0) | .13(1.0)
   4.01+ | 0.67(5) | 0.67(5) | .40(3.0) | .20(1.5)

7. After dyeing, overflow rinse until clear using cold water. Drop bath.
8. In new bath at 100°F-120°F(38°C-50°C), neutralize with 1 g/L(0.133oz/gal) Acetic Acid 56% or more if necessary for neutralization of residual alkali for 15 minutes. Drop bath.
9. Soap at boil using 0.25% owf **Orconol CHSA Conc™** for 10-15 minutes.
10. Warm rinse at 140°-175°F(60°-80°C). Cold rinse.

* For shades using **Orco Reactive Blue RW Special™** use Glauber’s salt in place of common salt and use ½ the amount. Glauber’s Salt is recommended in jet-dyeing machines as common salt may cause pitting in machinery.

** For shades using **Orco Reactive Turquoise RP™**, raise dyebath temperature to 165°F(75°C).