

## Metric System & Stock Solutions

Metric system—use it—it's infinitely easier, when dyeing, than pounds, ounces, gallons, quarts, and pints. Resist all your instincts and DO NOT CONVERT. For comparison purposes, keep in mind that 1 lb is about 454 grams and forget about any other conversions.

What's so easy?:

$$\begin{array}{rclclcl}
 1 \text{ gram (g)} & = & 1 \text{ millilitre (ml)} & = & 1 \text{ cubic centimetre (cc)} \\
 1,000 \text{ g} & = & 1 \text{ kilogram (kg)} & = & 1,000 \text{ ml} & = & 1 \text{ litre (lt)}
 \end{array}$$

To dye 500 grams of yarn a 1% color, we need 5 grams of dye (500 x 1%). With a 1% stock solution we need 500 ml of solution. Ergo, for 264 grams of yarn, we need 264 mls of solution! It's that easy. For a deeper shade, say 2%, you can either double the quantity of 1% solution.

If you frequently dye deeper shades, or dye with fiber reactive dyes, it is generally advisable to make 2% solutions.

EXAMPLE MEASUREMENTS & QUANTITIES (Procion MX Dyes)

<p><b>10 grams fiber</b></p> <p><b>2% Stock solution:</b> 20 grams dye 1 liter water</p>	<p><b>10 ml 2% stock solution for a 2% depth of color</b></p> <p><b>Salt: 9 g (90%)</b> <b>Soda: 1 g (10%)</b> <b>Water: 300 ml (depends on pot)</b></p>
<p><b>100 grams fiber</b></p> <p><b>2% Stock solution:</b> 20 grams dye 1 liter water</p>	<p><b>100 ml (total) 2% stock solution for a 2% depth of color</b></p> <p><b>Salt: 90 g (90%)</b> <b>Soda: 10 g (10%)</b> <b>Water: 4 liters (depends on pot)</b></p>

The chart is for illustrative purposes. In real life, we weigh the dry fiber/cloth and use the percentage key on the calculator, a lot! Alternatively, the spreadsheet provided at e-weaving.com includes all calculations.

(Salt and soda are dependent on depth of shade desired. The darker the color, the higher the percentage. Salt is much cheaper than dye.)

