

Like everything else, the aniline colors are liable to be adulterated. I have not found this to be the case with the dyes of the more respectable manufacturers; it has been said, however, that sugar is occasionally added—even to the extent of 50 per cent. Mr. Joly states this to be the case, and says that the fraud may be easily detected by treating the dye with absolute alcohol, or a mixture of alcohol and ether, when the sugar will remain as an insoluble residue, and can thus be estimated. I am unacquainted with any accurate method for estimating the strength of the colors, but for practical purposes have found the trial by dyeing to answer a useful end. Instead of testing on skeins of wool, I find small squares of white merino, or cashmere, preferable, as affording a more even surface, and a greater mass of color. A known weight of the dye should be dissolved in alcohol and added to the bath of warm water, with the necessary mordants. A square of cloth of known weight—say 10 grains—is immersed in the bath, and, after a stated time, removed. The strength and shade of the color can thus be compared with previous samples, dyed under like conditions. It is a good plan to paste these squares, by one edge, in a blank book, noting anything worthy of remark on the margin. The colors are thus preserved from the action of the light, and will be found very useful for reference.

It is impossible to use any dye, successfully, without due regard to cleanliness. This is, perhaps, more particularly the case with the anilines. The slightest trace of a foreign substance will often materially alter the shade. Earthen or enamelled vessels should be used whenever practicable. Iron is generally to be avoided, if for no other reason than that it is difficult to say when it is really clean. Woollen and silken goods, before being dyed, should be thoroughly washed in soap and water, and then carefully rinsed in clean rain water. Cotton requires a previous mordanting before it can be dyed with anilines, as vegetable fibre possesses no affinity for the colors. The preparation generally consists in treatment by sumac, or stannate of soda, and subsequently by sulphuric acid: special directions will be given in those cases requiring particular treatment. The spirit used should be pure, and especially free from aldehyde; methyl spirit does not appear to injure some of the dyes. Spirit containing shellac turns roseine of a bluish color. It will be noted that chemical distinctions as to the source of the dyes are, for