YELLOW, in Dyeing, is one of the five simple and mother colours. See COLOUR.

The only materials used by the calico-printers for the production of fine yellows are the quercitron-bark (see Quercus), and the Weld, or Reseda Lutolina, which fee. In order to obtain calices of the finest yellow or more delicate lemon colour, it is necessary to dry the pieces in the open air, as the stove would not fail to injure such colours; stove-drying having a tendency to change a yellow into an orange. In the operation of dunning the mordants for these pale yellows, care should be taken that it be not done at a higher temperature than 96° or 100°, as such a high temperature would impair their beauty. But besides, by dunning at this low temperature, the dyeing may be completed at about 110°, which will give a much livelier colour than if a higher temperature had been employed. For all the different shades of reds and yellows, the mordant employed by calico-printers is the acetate of alumine; which is prepared by a mixture of the sulphate of alumine with acetate of lead, both in a state of solution; so that, on the theory of double decomposition, sulphate of lead is formed, which precipitates while the acetate of alumine remains in solution. Of late this article has been prepared from the pyroglaucous acid, by means of lime and alum, in the following manner:—The pyroglaucous acid is first patted through a still, to divest it of a portion of the tar which is always diffused in it: it is then saturated with lime or whiting; and the acetate of lime thus formed is decomposed by a heated solution of sulphate of alumine. The result of this double decomposition is sulphate of lime, which precipitates, and acetate of alumine, which is drawn from the sediment of the calceareous sulphate and preserved for use. Mr. Parkes cautions the manufacturer against the use of lime in the process for making acetate of alumine; and he says that the true mode of making it, though more expensive, is that recommended by Berthollet, which consists in decomposing sulphate of alumine by means of saccharum furnarii, or acetate of lead. Mr. Parkes mentions a method of producing yellows on calico, which, though not often practiced, has nevertheless a very good effect. The process is as follows:—A strong decoction of bark, thickened with gum tragacanth, is to be mixed with a portion of very pure muriate of tin; and this, when printed with the usual management, will produce a colour of great brightness and durability. This mode possesses one very important advantage; viz. that if it should be necessary to pad a piece in diluted acetate of alumine to obtain a pale lemon ground, the yellow figures previously done by the above process will not give out any part of their colour to the second mordant; whereas, whenever a strong yellow has been produced in the common way, the pattern is very apt to spread, and to become irregular, and often to stain the ground, when the piece comes a second time into the acetate of alumine. Parkes's Eff. vol. ii.

Turmeric likewise gives a good yellow, though not the best.

Woollen cloth, impregnated with a solution of alum and tartar, acquires on being boiled with the watery decoction, an elegant, but not very durable orange-yellow or gold-coloured dye. It is rarely made use of by the dyers, on account of its price, and the perishable nature of its colour.

There is also an Indian wood, which gives a yellow colour bordering on gold. This wood, called fufluck, is a species of mulberry-tree, of a deep sulphur-yellow colour, which it readily gives out both to water and spirit. The watery decoction dyed prepared woolen of a very durable orange-yellow; the colour is imbibed by the cloth in a moderate warmth, without boiling.

The fufl or fuft of the French is a yellow wood or root very different from our fuftick; it gives a fine orange dye to woollen, but the colour is extremely perishable in the air. This is called cotinus cotarii, or Vincet fumab.

The leaves of many kinds of herbs and trees give a yellow dye to wool or woollen cloth that has been previously boiled with a solution of alum and tartar. There is, indeed, no colour for which we have such plenty of materials as for yellow.

Mr. Hellot observes, in his Art de Teindre, that all leaves, barks, and roots, which on being chewed discover a flight of altrigerosity, as the leaves of the almond, peach, and pear trees, althark (especially that taken off after the first rising of the sap in spring), the roots of wild patience, Rtx (Salix), yield durable yellows, more or less beautiful, according to the length of time that the boiling is continued, and the proportions of alum and tartar in the preparatory liquor: that a large quantity of alum makes these yellows approach to the elegant yellow of weld; that if the tartar is made to prevail, it inclines them to an orange; and that if the roots, barks, or leaves, be too long boiled, the yellow proves tarry, and acquires shades of brown. Neumann's Chemical Works, by Lewis, p. 384. 434.

The Chinese are famous for their yellows in dyeing, which never change with washing. They make this dye of the flowers of the acacia, in a manner in which we might use several of our productions to a great advantage.

It is thus: they gather the flowers before they are perfectly ripe, and dry them in an earthen vessel over a gentle heat, till they crisp up in the manner of tea-leaves; they then add to them the ripe feeds of the sassafras tree in different proportions; and then boiling them in river water with alum, they give the yellow in any degree that they please.

They have three kinds of yellow, which they distinguish by the names of Ngo-hoang, king-hoang, and hoang alone.

The first of these is the brightest yellow; to dye five or six
fix ells of filk of this colour, they use a pound of the flowers of the acacia, about two ounces of the seeds, and four ounces of alum.

The king-hoang is a somewhat deeper yellow: to dye this, they use the same ingredients in the same proportion as in the former case; and when the filk is dry from the dipping in this, they give it a second dipping in a slight tincture of Brazil wood: this brings it to the fine strong yellow we see.

The hoang, or pale yellow, is made of the same ingredients as the first, only instead of four ounces of alum they put in but three ounces: river water is found to be greatly preferable to any other for the extracting of these colours; but even in that there is great difference, some doing the business much better than others.

The Chinese are so expert in judging on this occasion, that they can tell by the taste of water whether it will or will not do; and if it taste faint they know it is faulty; but they dip the pieces twice into it instead of once, and the colour succeeds well.

The flowers of the acacia, when they have been prepared by roasting in this manner, may be kept all the year round, and employed in dyeing as occasion requires, only there is to be longer boiling for the dried flowers than the fresh ones; and it is always found that the fresh flowers give the brightest colour. Obs. fur les Coutum. de l’Aïe, p. 254.

Greens are usually made of yellow and blue mixed. With yellow, madder red, and goat’s-hair prepared with madder, are made the golden yellow, Aurora, panpy, nacarat, Ifabella, and chamois colour, which are all colds or shades of yellow.

Mr. Peter Woulfe has given the following receipt for making the yellow dye:—Take half an ounce of powdered indigo, and mix it in a high glass vessel, with two ounces of strong spirit of nitre, which should be previously diluted with eight ounces of water, for preventing the indigo’s being set on fire by the spirit; because two ounces and a half of strong spirit of nitre will set fire to half an ounce of indigo: let the mixture stand for a week, and then digest it in a sand-heat for an hour or more, and add four ounces more of water to it; filter the solution, which will be of a fine yellow colour. If the indigo be digested twenty-four hours after the spirit of nitre is poured upon it, it will froth and boil over; but after standing about a week, it has not that property.

One part of the solution of indigo in the acid of nitre, mixed with four or five parts of water, will dye silk or cloth of the palest yellow colour, or of any shade to the deepest, and that by letting them boil more or less in the colour. The addition of alum is useful, as it makes the colour more lasting: according as the solution boils away, more water must be added. None of the colour in the operation separates from the water, but what adheres to the silk or cloth; and consequently this colour goes far in dyeing.

Cochineal, Dutch litmus, orchil, cudbear, and many other colouring substances treated in this manner, will all dye silk and wool of a yellow colour.

The indigo which remains undissolved in making Saxon blue, and collected by filtration, if digested with spirit of nitre, dyes silk and wool of all shades of brown, inclining to a yellow.

Cloth and silk may be dyed green with indigo; but they must first be boiled in the yellow dye, and then in the blue. Phil. Trans. vol. lx. part i. p. 129, &c. See Dyeing.

Painters and enamellers make their yellow of maflicot, or, as some write it, maflicot, which is cerule raised to a yellow colour by the fire; or with yellow ochre. Limmers and illuminers make it with saffron, French berries, orcanette, &c.

Mr. Boyle tells us a most beautiful yellow may be procured by taking good quicksilver, and three or four times its weight of oil of vitriol, drawing off, in a glass retort, the saline menstruum from the metallic liquor, till there remains a dry snow-white calx at the bottom: on pouring a large quantity of fair water on this, the colour changes to an excellent light yellow.

He says he fears this colour is too coldly to be used by painters, and he does not know how it would agree with every pigment, especially oil colours. Works abr. vol. ii. p. 91. See Vitriol.

Branton observes, that it was anciently the custom to paint a man’s door yellow, and he saw a house with a man, to declare him a traitor to his king.