

## More on Mordants

A **mordant** is a fixative that allows dye molecules to bind to fibre, creating a link between the two. The word comes from the Latin 'mordere' which means 'to bite', because in the past it was believed that the colour bit into the fabric.



A chemical compound, the mordant, if used in the correct quantity and with the appropriate fibre, can coax out a plant dye's full colour spectrum and extend its light fastness. Using a mordant is often helpful and sometimes necessary, depending on the dye and fibre combination.

Generally, animal fibres such as silk and wool bond more readily with most plant dyes and take less time to mordant properly. Plant-based fibres, such as cotton, linen, and hemp often benefit from pre-mordanting with tannin and alum to achieve successful results.

Some plant dyes themselves already contain tannins or other natural binders which act as built-in mordants. For example, many fruits, vegetables, roots, barks, and berries contain dye compounds that, with the right fibre, will adhere directly to the fibre without mordanting. Some natural mordants, like pomegranate, salt and alum, exist, but the more effective mordants are heavy metals (lead, mercury, copper, and such), which have unsavoury toxicity profiles.

**At TCoN the only mordants used are alum, iron acetate and tannin**, all natural and not harmful to the environment, and all neutralised with lime.

We have recovered a mordant dyes technique, Turkish red, which is based on Dr. Ela M. Dedia's discovery and use oils to deal with the issue of cotton not retaining the alum easily, the quest of all natural dyers...

The tannic acid (a specific form of tanning) and natural dyes extracts easily biodegrade in septic tanks, since aluminium hydroxide (the end product of alum mordanting step) in combination with lime can precipitate and therefore be removed.

Any discharge of alum in the soil will form minerals (gibbsite, gypsum) that are normal constituents of soil. Unlike the sodium chloride and sulphate used in synthetic dyeing, neutralized alum will not salinize the soil.

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