

Chlorophyll

Certain plants and leaves appear green to us due to their containing a compound known as chlorophyll. Chlorophyll absorbs certain wavelengths of light such as those containing red and blue but it fully reflects green light making it appear green to our eyes.

We all know that chlorophyll plays an important role in all our lives as it is the bases for the production of plant energy through photosynthesis, energy taken from the sun which is our only source of free energy. Fueling all of life.



But Chlorophyll can also be used as a dye and is currently used commercially to dye a number of materials from soaps to cosmetics. Using Chlorophyll as a dye for these materials works fine but to try and turn chlorophyll in to dye for ink and paint making, although it can be done, will result in an extremely poorly lightfast colour. As Chlorophyll starts to degrade it's colour is almost totally lost. It is because of this that we see a change in leaf colour during autumn and winter. Since plants are constantly producing chlorophyll during the summer to catch and store as much of the sun's energy as possible, when it's darker it no longer needs to produce this colouring agent. When it's no longer produced we commonly see other colours emerging such as yellows and reds which are caused by more permanent colourants present within the leaf's structure. These colours are a lot more lightfast and can be made in to a suitable dye or can simply be ground in to a type of pigment. The dye or ground pigment obtained from autumn and winter leaves will resemble the colour of the leaf being used. i.e. dead leaves of a red colour will make red dye and pigment whereas yellow will make yellow.

“The colour of autumn leaves is the same colour you will get if you extract a dye or dry and grind the leaf in to a pigment!!”

