



*A modern world made of vegetal dyes originated exclusively from
ancient dying plants together with modern dyeing techniques*

*"Where there is **COLOR** there is **LIGHT**
and everything is **ILLUMINATED** as well as our **EMOTIONS**"*

YELLOW :

It's a color of mental calm that operates with clarity.

It is possible to get yellow from **Reseda** and **Safflower**.

RESEDA: harvesting with very high mowing to ensure a greater quantity of flowers and leaves compared to stems, which are poorer in dyeing substance. It is used to dye fabrics or yarns giving different shades of yellow, even with green hues.

SAFFLOWER: from this flower it is possible to get yellow, red-orange, cherry-pink, depending on the procedure adopted. It is used in the dyeing of textiles, as a coloring agent for cosmetics, even in contact with delicate parts (lipsticks), and as wood dye.



Red :

In its truest expression red indicates all that is immediate and physical, direct energy towards a goal.

It's possible to get it from **Arganetta**, **Robbia**, **Brazilian Wood**, **Safflower**.

ARGANETTA: arganetta's crushed roots are used in boiling water to dye fabrics, in alcohol or alcohol and oil to obtain thin coating of red wine suited to impregnate wood, or in oil as an oily basis for coloring cosmetic preparations.

ROBBIA: It is used in water to dye vegetable fibers such as cotton, better if adopting the Turkish procedure. Wool and silk are dyed with traditional process. Fixed on inorganic substrates, it is a renowned lacquer

both for water-based paints and those oil-based. In combination with ferric oxide, it gives the so-called "Tuscan red" colour. Also excellent for coloring wood pulp and as brown glazes for wood.

BRAZILIAN WOOD: Brazilian wood is traditionally used in the wool and silk dyeing, but the ease with which

releases its color (in water or in alcohol), makes it a versatile dye in all water-based lending (watercolors, gouaches, cellulose), as demonstrated by the mediaeval recipe books rich in information on how to obtain pigments from this wood.

SAFFLOWER: The Safflower is an ideal matrix for those who want to experiment with the ABC of Chemistry of natural substances, due to the different behavior of the hydro- and lipo-soluble dye molecules contained inside. In fact, from this flower it is possible to get yellow, red-orange, pink-cherry depending on the procedure adopted. It is used in textile dyeing as a coloring agent for cosmetics, even in contact with delicate parts (lipsticks), and as wood dye.



Blue:

Blue as depth.

It is possible to get Blue from **WOAD**: Indigo is extracted from its leaves. It has always been used to dye fabrics, fascinating anyone who tries the depth of the blue it can give. It is also used in the fine arts of miniatures on paper or in general in water-based paint (tempera, watercolors).

Also this colour is a kind of magic : in fact, it reminds us to the sky and to the sea at the same time, involving our senses in something that could be called "deep inside" state of mind.



Brown:

Of land, cortex, peel. Wearing it like a tree. Encasing.

You can get the brown with **chestnut extract, walnut husk and Nutgalls**.

WALNUT HUSK : dried husk from walnuts is a versatile colorant, able to dye fabrics, wood and also hair. Fresh contains a yellow pigment (juglone) but oxidizes just collected and condenses with the tannins present in the plant to give the features brown colors.

NUTGALLS : the galls are the raw material with which to get the famous ink "iron-Gallic", used for centuries and still today the starting point for those wishing to engage in the creation of a natural ink.

In the dyeing of non-etched tissues, galls transmit autumnal browns, more delicate but longer lasting than those obtained with the walnut. Using iron-based mordants instead, is possible to dye the dark shades tissues close to black.



Violet:

Who loves it, finds in a feeling of mistic deep, more than with Blue.

You can get the violet using **Logwood** or **Madder**.

LOGWOOD : the Logwood is a widely used dye-stuff (Textiles, inks, foods) and very powerful, thanks to the high hematoxylin content in the wood of this tree. It 'also versatile: you can get the purple, lilac, dark blue and even black.

MADDER : extracted for dyeing use, tranfers to the fiber colors from red to purple, brown and black (depending on etching).



Our ECO-DYE PHILOSOPHY :

Our state-of-the-art techniques have made possible dyeing light, medium and (in progress) darker colors on natural fibers like organic cotton and silk and recently also on normal or even organic viscose : this means, we can produce fabrics with a controlled, guaranteed and certified process which is 100% natural, reaching at the same time an acceptable or even excellent color fastness.

We can also offer FULGAR PATENTED EVO POLYAMMIDE, which is an EVO-lution of the polyamide yarn which is based on a natural polymer obtained from the ricin oil. This absolutely new kind of polyamide is uniquely resuming before-untargeted performance excellence together with eco sustainability.

(You can see the product website for more information : <http://www.fulgar.com/ita/prodotti/evo>)

Each of the natural dyestuffs described in this document, has its own spectrophotometric frequency profile, that can be absolutely recognized with the appropriate analyzes. It is like the DNA of the dyestuff and every dyestuff has its own fingerprint different from the others and above all different from the chemical dyestuff that could produce the same color on the fabrics. This way specific laboratory analysis can reveal and demonstrate the use of each particular natural dyestuff on the fabrics. This test method has been carried out by Prof. Maria Perla Colombini, which currently holds the prestigious place of Full Professor at the Department of Analytical-, Bio- and Environmental-Chemistry of the Faculty of Science at the University of Pisa, as an expert of ancient natural coloring techniques.

In ancient times in fact, no industrial or chemical dyestuff had been already discovered or invented and in those times textile industry was still an artisanal work based on what the men was able to find in nature to suit the purpose of dyeing. Of course, this was a time where the planet and its waters were still pure with no industrial pollution... we should think about this.

SCIENTIFIC REPORT / Object : ECO-DYE Declaration (extract of the complete original document)

Pisa, 24/02/2017

Hereby we confirm, after having carried out all specific analysis , that the main components of exhamined fabric's extractives fraction are molecules that belong to walnut hull. This demonstrates with no doubt that the fabric has been dyed with natural dyestuffs extracted from walnut hull.

Furthermore has been noticed a strong bond between the dye and the fabric fibers during the procedure: this means an acceptable color-fastness obtained with a real ecological dye-process.

“The fabric sample was dyed with walnut hull, using potash alum as mordant”.



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