## Plant Colourants used for Drawing (Botany)

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#### Abstract

Eco-friendly natural painting refers to the use of non-toxic and sustainable materials to create art that minimizes harm to the environment. Natural paints are made from ingredients such as plant extracts, natural pigments and water-based binders, which are free from harsh chemicals and synthetic additives. The eco-friendly painting methods, artists can reduce their carbon footprint and protect the environment. Additionally, natural painting materials are biodegradable and do not pollute the air or water systems. To create art in an eco - friendly, artists can support sustainability efforts and inspire.

**Key words :** Eco – friendly, sustainable, natural pigments, environment, artists and biodegradable.

Nature has abundant plant sources containing various phytoconstituents, such as roots, fruits, leaves, and bark. Natural dyes can also be extracted from some fungi, lichens, animals and minerals<sup>5</sup>. During the ancient period, people started using natural colourants derived from various sources for their work on caves. Later civilization this might be turned

into an occupation of certain community people. From the natural colourant madder and indigo is the base for producing a different combination of natural colours (Sankar Roy Mulik and Khubu Agarval, 2014). Natural colourants were applied in different industries like food, textiles, drugs, paper, leather, shoe polish, wood, cane, candles, paint, paper, rubber and cosmetics, etc., Due to their highly toxicfree nature, inspired the textiles industry to promote natural dye instead of synthetic dye even though costlier<sup>1</sup>.

#### Natural dye used as paint :

Natural painting is an artistic expression that captures the awe-inspiring beauty and diversity of the natural World. It is a form of art that celebrates the splendor of the outdoors, from the rolling hills and cascading waterfalls to the colorful flora and fauna that inhabit them. Natural painting seeks to convey the majesty and wonder of nature through the use of vivid colors, intricate details and creative perspectives<sup>5</sup>. Natural painting also known as eco-friendly painting, involves the use of natural materials and sustainable techniques to create artistic work. In India during the ancient period, artists used materials such as vegetable dyes and natural pigments derived from plants and minerals. Tamil Nadu, a state in southern India, has a rich tradition of natural painting known as "Tanjore Painting"<sup>4</sup>.

#### Collection of plant material :

The fresh petals of *Ceasalpinia pulcherrima*, *Clitoria ternatea* were gathered from Erode District and *Curcuma longa* was gathered from Tiruppur District. The above plants were recognized by Flora of the presidency of Madras and Gamble and Fischer<sup>2</sup>. The selected petals were washed removed from flower by using knife<sup>3</sup>.

## Materials required :

The following materials are required for the preparation of natural paint. They are,

S.No	Plant Extracts Applied	Quantity	Illustration
1.	Terminalia chebula (Seed)	50 ml	The second secon
2.	Clitoria ternatea (Petals)	30 ml	D. D.
3.	Curcuma longa (Rhizome)	30 ml	

Table - 1. Plant Extracts Required for Painting

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Plate - 1 Application of Natural Paint on Canvas



Flower petals of *Clitoria ternatea* L., Rhizome of *Curcuma longa* L., Beakers, distilled water, glass rod, camel canvas board - 30 cm x 30cm size, brush, pencil, *Terminalia chebula* seed extract as fixative agent.

The flower extract of *Clitoria ternatea* L. and rhizome extract of *Curcuma longa* L. were used as paint. In additionally seed extract of *Terminalia chebula* acted as fixative agent.

## Traditional process :

Canvas board was selected in the size of 40cm x 50cm. Scoured and bleached canvas was treated with aqueous solution of *Terminalia chebula* Roxb. The canvas was painted with the different natural dye extracted from different plants painted by room temperature for 30 minutes and dried in air<sup>2</sup>.

*Curcuma longa* remains the most favoured natural colour for obtaining bright yellow shades and is commonly used for painting. *Clitoria ternatea* petal extract gives bright violet colour and the mixture of equal amount *Clitoria ternatea* and *Curcuma longa* petals extract given green colour (Table -1 & Plate - 1). Similarly the painting on handloom cotton fabrics with different plant extracts such as *Rubia cordifolia*, *Laccifer lacca*, *Acacia catechu*, *Punica granatum*, *Terminalia chebula* and *Camellia sinensis*. Different mordants like Aluminum Sulphate, Ferrous Sulphate and Copper Sulphate were used as mordants employing a simultaneous mordant method applied on fabrics. The painted fabrics look like various handloom fabrics used for apparel and home furnishing purpose. In fact, as used for embellishing finished garments such as t-shirts, jackets, bags, pillows, and cushions<sup>5</sup>.

The herbal paint is made from plant based dye and it is cheaper than synthetic dye. The eco-friendly herbal paint are obtained from petals of *Ceasalpinia pulcherrima*, *Clitoria ternatea*, rhizome of *Curcuma longa* L., and *Terminalia chebula* seed extract. The different parts of the plants can produce various colours and the natural colourants played a vital role in protecting not only living creatures but also safeguarding our environment. References :

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