



**Utrecht Art Supplies**

## Product Profile: Utrecht Copal Medium

### Introduction



Utrecht Copal is a fluid oil painting medium that combines the benefits of historical natural resin mediums with the stability and strength of modern synthetics.

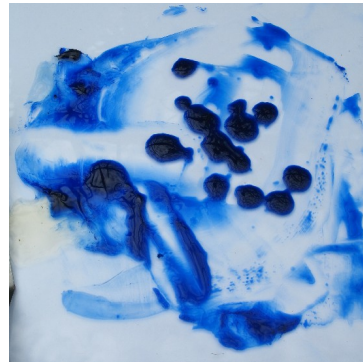
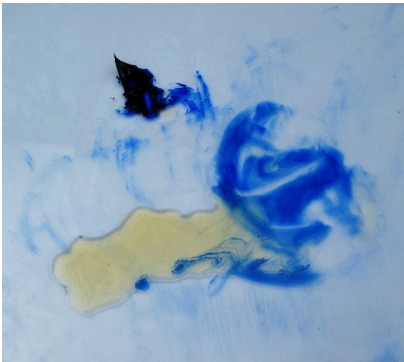
### Origin and History

Copal is a natural tree exudate resin derived from diverse botanical sources both fresh and semi-fossilized. Copal is hard like fossil amber, but with greater solubility.

Raw gum from the former Belgian Congo (present day Democratic Republic of the Congo) in Africa was widely regarded as the best quality copal; other sources include Zanzibar, the Philippines, Madagascar and various sites in South America. Traditionally used for varnishes and painting mediums, Copal was in wide use until the the mid 20th century when it was largely replaced by alkyds, due to difficulty in obtaining the raw material, along with much more consistent quality and greater durability of synthetic resins.

While soluble in alcohol as a shellac-like wood finish, natural copal can only be prepared as an artist's varnish at extremely high temperatures through a dangerous process<sup>1</sup> which should

not be attempted in the studio (unlike **damar** and **mastic** which can be dissolved in solvents at room temperature).



### Composition

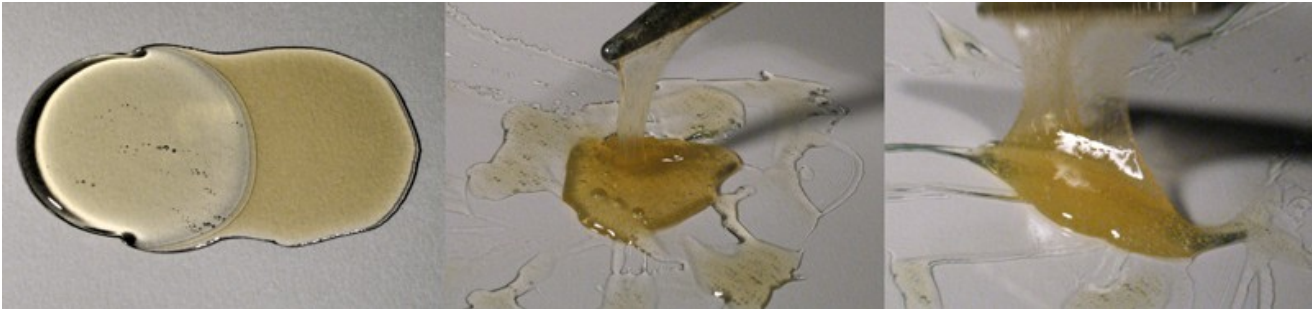
Utrecht Copal Medium is a mixture of natural and synthetic resins blended with refined turpentine<sup>2</sup>, formulated to offer many of the benefits of traditional copal-based mediums (solvent resistance, high gloss, rapid tack) without the darkening and embrittlement associated with natural copal<sup>3</sup>. It is light amber in color and fluid in consistency.

- 1 Raw copal gum is heat-polymerized in a process called "running" which renders the material soft and syrupy; the molten resin is then dissolved in linseed oil heated near the flash point. The resulting concentrate is thinned with turpentine and used as a varnish and as a component of painting mediums.
- 2 Turpentine-sensitive individuals should be aware that this product does include turpentine
- 3 Wide variation in source and quality together with concern for darkening and embrittlement have led some conservation experts to caution against the use of natural copal in permanent painting.

## Applications

Copal Medium can be used alone or in combination with other oils, varnishes and thinners. Used straight, Utrecht Copal Medium can be used to thin paint, enhance transparency and impart gloss; it speeds initial tack and supports adhesion between layers. Copal medium reduces migration of unstable colors and helps prevent reaction between incompatible pigments<sup>4</sup>.

Unlike damar, copal is solvent-resistant when dry, perfect for clean lifting with glaze techniques. Whites and pale colors blended with Utrecht Copal Medium retain brightness and resist staining from subsequent applications. Copal Medium enhances vibrancy, deepens dark colors and helps retain the wet appearance of mixtures. Natural resins give high gloss for a "candy" finish, while synthetics impart flexibility, permanence and long-lasting neutral color.



*Stand Oil (left) mixed with Copal Medium (right)*

Utrecht Copal can be blended with **Stand Oil** to produce a syrupy, jelly-like medium ideal for distinct, fluid brush strokes and heavy glazes<sup>5</sup> (thin with Odorless Mineral Spirits as desired for a more fluid medium).

Questions? [Ask the Expert](#)

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<sup>4</sup> These are rarely a problem with modern artists' colors, but are known to have occurred with older materials.

<sup>5</sup> Mix 1 part Copal to 6 parts Stand Oil to produce a thick jelly.