PICENE Violin Varnish Materials

Picene Clear Varnish – Base Products, to be modified for use in varnishing.

Based on Rosin-Oil, with additions of Stand Oil, Lavender Oil, Venice Turpentine and other natural resins. These fused varnishes can be tinted with colour as desired and have very good light refraction qualities.

Rather than final varnishes, they are intended to be adopted by the maker and modified to suit the desired end result. For example, it may be the wish of the maker to add some colour to the material, or to add other oils/oleo-resins, etc to modify the dried finish of the varnish film.

A basic understanding of the raw material ingredients incorporated into Picene No.1, 2 and 3 is essential before use. Further technical information can be found in the book "Colours for Violin Varnish".

Picene no.1 Clear Rosin-Oil/Oil/Oleo-Resin Varnish

[Cooked Rosin oil, Venice Turpentine, Lavender Oil, Stand Oil]

Picene no.2 Clear Rosin-Oil/Oil/Oleo-Resin Varnish

[Cooked Rosin oil, Venice Turpentine, Lavender Oil, Stand Oil, Dammar Varnish]

Picene no.3 Clear Rosin-Oil/Oil Varnish

[Cooked Rosin oil, Dammar Varnish, Stand Oil]

Picene "1736" Violin Varnish

Once a year we produce our own 'house' varnish by fusing generic, natural materials during the late spring/early summer in Central Italy. The preparation of the varnish is dependent on dry weather, free of humidity. As the ingredients are gently cooked, there is a danger of combustion, so the whole operation is done outdoors. The various ingredients are slowly fused together to create a warm red-brown varnish which has elasticity but also great depth of gloss upon drying. It is prepared with cooked Silver Fir Strasbourg Turpentine, Rosin-Oil, Cold Pressed Linseed Oil from Veneto, Chios Mastic Resin and while still warm, let down a little with Turpentine. We hesitate to offer this as a final varnish, as it is (like our other products) a starting point – but in effect it could be used alone, just with the addition of colouring matter.

Rosin Oil

Colophony rosin, cooked to form a pouring liquid consistency. It can be used as the base for different varnish preparations. Used alone it shows the defect of being friable upon drying – it is fragile, prone to cracking or splintering when used without other additions. In general, it can be made more plastic (flexible) by combining with a variety of vegetable oils – for example Cold Pressed Linseed Oil, Walnut Oil, Sun-thickened Linseed Oil or Stand Oil. Further refinement can be achieved by adding in oleo-resins such as Silver Fir Turpentine (so called Strasbourg Turpentine), Venice Turpentine (Larch Turpentine) and Canada Balsam.

Rosin in Wet Paste

Colophony is the dried resinous portion left behind **AFTER** liquid turpentine distillation. By tradition in Europe, turpentine was produced on the north-west coast of Portugal – although some small scale production is still evident, modern sources for turpentine can also be from Turkey and beyond (Far East, South America, etc). Most sources for Colophony/Rosin feature pale, straw coloured resin pieces or chips, which are readily re-dissolved into Turpentine to make a wet 'varnish' material. Where this Rosin is cooked/warmed gently to form a pouring liquid, it can be referred to as Rosin-Oil. However, 'true' Rosin-Oil is produced by extracting both liquid and solids from the tree, gently warming, then sieving to clear any debris. This **WET PASTE** is hard to come by but is the ideal base material for producing the best cooked Rosin-Oil. We take this wet paste and gently warm, before filtering and bottling. The supply of raw material can change from harvest to harvest, so the actual Rosin-Oil may show variations of colour. In general it is a warm orange-brown colour.

Because it contains some liquid turpentine, it is easy to fuse and blend with vegetable oils/oleo-resins when compared to Rosin-Oil produced by simply melting Colophony Rosin.

Procedure for using Picene 1, 2, 3.

As indicated, these clear varnishes are intended to be combined with other media to obtain the desired results.

In most cases, to achieve a smooth mixing of liquid additions to the base material, it is useful to slightly warm the product. This will enable a smoother, more consistent mixture. The jar of clear Picene 1, 2 or 3 can simply be placed in a warm water bath prior to use, to soften the overall mixture. For example, an extra proportion of Stand Oil could be added, to help achieve more elasticity and produce a deeper gloss to the dried 'varnish' film. If both the Picene material and the Stand Oil are pre-warmed when mixed, the end mixture will be more thorough. With some oleo-resins, such as Venice Turpentine, placing in a warm water bath is essential to ensure the material can be poured and mixed.

Care should be taken not to introduce steam/vapour into the varnish mixture, as this can appear in the dried film at a later stage, long after drying, as a form of bloom within the varnish layers. This is especially the case with Mastic Varnish, which can show extensive bloom if the original concoction of resin and turpentine is subjected to moisture/water vapour during solving.

Dilution

The Picene Clear Varnishes (1,2,3) can be diluted/modified with Turpentine. They cannot be reduced/diluted with alcohol.

The best grade of Turpentine is Double Rectified, where any residual resinous compounds are eradicated from the volatile liquid. Storage of turpentine should be in a closed cupboard (without light) or in a brown glass bottle, or closed tin. When turpentine is decanted, the air in the container should be reduced by dropping glass marbles into the container until the level of solvent touches the cap of the bottle/container. Air and light will tend to allow turpentine to thicken slightly and/or change colour – typically to a straw-brown shade but sometimes to green.

Avoid petro-chemical solvents such as White Spirit or Low Odour Solvent, as they tend to evaporate with a sharp, clean 'edge'. By contrast, Turpentine has a very slight oiliness, which creates a more rounded dilution, when combing with natural oils and resins.

Be careful not to over dilute varnish preparations – as Turpentine will percolate through ground layers easily and this can lead to uneven varnish films.

Additions of Colour to Varnish

Colour can be introduced in the form of dry pigment or pigment paste.

Dry Pigment

Powdered dry pigment can be introduced into the varnish layers to create colouring effects.

Transparent colours are generally used, as it is a given that more than one layer will be applied and the presence of the wood grain is visible through the varnish layers. Full technical detail for the pigments generally used in violin varnish are found in the book "Colours for Violin Varnish", where the relative transparency of individual pigments is indicated.

For the maker interested in reproducing the look of older instruments, it is essential to understand the historic use of certain pigments and also that in older violin varnish films, combinations of more than one colouring matter is more than normal.

For example, any machine-age pigments can be dismissed if authenticity is required. Modern translucent iron oxide pigments are mechanically 'micronised' to incorporate transparency.

It is true they have excellent transparency but the particle size and form is more regular when compared to natural earth pigments. It is a curious thing but in older varnish layers a variety of particle sizes and forms inform the aesthetic.

The passage of time is also a crucial factor: the varnish film itself can change over time (usually becomes harder, more friable but also worn where the instrument comes into repeated contact with the player. Similarly, the colour in the varnish could change due to fragility to light or air. For example, natural madder lakes (as with most plant pigments) can

be reduced in colour strength when exposed to light. The original colour may appear duller over time. Mixtures between stable and unstable colouring matter can also show changes.

For example, concoctions of Gamboge and Dragon's Blood (normally prepared as a spirit varnish with alcohol) can change upon exposure to light. In general, the Gamboge colouring will fade more than the Dragon's Blood.

In relation to oil painting, the ability of pigments to withstand fading is better when applied to a wooden ground, with multiple layerings. Remember that the oil painting tends to work on a bright white ground – where light refracts to its fullest extent. The violin-maker works onto raw wood, with various layerings – that tend against full refraction. In combination with this, the instrument player stores the violin in a closed case, away from light. It is likely therefore, that the same colour applied to a white canvas could fade more than when applied to a violin.

Preparation of Pigment for Varnish

Rather than simply mix the dry pigment into the varnish material, it is wise to first 'wet' the pigment. This is best done by grinding with a drop of turpentine, using a glass muller onto a glass slab. The pigment slurry can then be slowly mixed into the varnish material until the desired colour saturation is achieved. A drawback with this technique is that the introduction of a small amount of Turpentine (solvent) may lead to the 'varnish' being too thin.

An alternative is to mill the pigment into a drying vegetable oil. The modern equivalent to Circa 1600s Linseed Oil is single estate Cold-Pressed Linseed Oil. The seeds of the flax plant are pressed without heat to create a rich, warm yellow coloured oil, which is pungent and robust. It has a warm golden colour, which mirrors the typical warm tones of the transparent colourings that older violins display. Modern *refined* linseed oil is extracted with heat and is a darker green-brown shade prior to chemical bleaching. The end product normally sold as Refined Linseed Oil will be pale in colour – but this is due to chemical bleaching and over time, the green-brown appearance will return. By contrast, the best quality cold-pressed linseed oils retain their warm golden yellow colour.

Single estate oil is best, as oil produced from blended productions from more than one cultivation tend to show less character.

Cold-pressed oil has the advantage of high acid yield, which enables the dry pigment to be mixed into the oil more readily. It is also self-levelling so that flat applications can be more easily achieved than with Refined Linseed Oil (which shows brush striations – the 'suede' effect).

Linseed Oil has been produced in many countries – the Low Countries, northern Germany, the Baltic, Ireland, also the north of Italy.

Some commercial cold-pressed grades of linseed oil are filtered and cleaned (with an alkali substance – clays such as Fuller's Earth can be used). However, to retain the natural impurities and 'footings' commonly found in first pressings could be an advantage in terms of authenticity and in relation to older varnish layers.

To produce a simple oil-pigment paste, for use with the Picene products, simply mill dry pigment into the chosen oil with a glass muller on a glass slab. The more thoroughly mixed, the smoother the paint-paste. Extended mixing will ensure the pigment particles are thoroughly coated with oil and will adhere to each other better – hence a finer/smoother mix.

Bear in mind that, any hand-mixing of pigments cannot be compared to machine milling, where a finer blending is more easily achieved. A less pronounced mixture may in fact be an advantage in the case of varnish layers. A loose 'jumble' of pigment into oil is arguably more consistent with older varnish layers, where the colouring matter is dispersed into the varnish without prolonged blending (over-mixing comes to mind here). Machine milled paint will obtain a more homogeneous feel – whereas hand-mixed paint/varnish show more character and variation.

Pigment particle size and form vary from one pigment to another. The same colour can be manufactured in different ways. For example, natural plant colours are normally expressed as dyestuff with a mordant, then 'struck' onto a transparent base. This transparent base material can be anything from ground egg shell, to finely ground marble, to a solution of alum.

The variations in historic recipes are endless and the maker should not assume that something labelled 'natural madder lake' is the same from one source to another.

The only way to ensure best results, is to make test paint-outs onto wooden slips, prepared in the same way one would the actual instrument body.

Oil - Pigment Paste

Prepared pastes where pigment is milled in oil are also available.

However, as suggested, machine milled product may be over mixed and the end result too 'sleek' and without variation. With our product, we carefully mill pigment and oil to a certain extent, that preserves the character of each individual pigment: if the pigment is granular then it is not over-mixed. For example, Cinnabar from the old mercury mines on Monte Amiata has a granular texture, the pigment particle being sieved between 0-60micron. We see this as a positive attribute – we want some of that granulation to be present in the dried paint film. By contrast, most natural plant pigments have a 'soft' presence and are beautifully transparent – so that individual pigment particles are not visible. In effect we see their transparent quality with the naked eye – only under the microscope do the particle reveal themselves.

With regard to our own oil-pastes, we use only single estate cold-pressed linseed oil and pigment. The pigments are milled to retain their individual characteristics. For example, we have some end stock from the long closed Sienna quarries on Monte Amiata. These historic pigments were produced in the nineteenth and twentieth centuries (production ceased in the1980s), by carefully cutting of rock, pulverisation, washing, sieving and extra grinding.

The resultant Raw and Burnt Siennas are brighter and more translucent than modern Siennas (which are currently quarried on Sardegna).

Granular earth pigments (where a variety of pigment particle sizes and formats are present) are commonly observed in older varnish layers. Irregular particles catch the light from a

variety of angles. It stands to reason that a combination of pigments with varying particle sizes and structures will make for a more interesting colouring layer.

Picene Colore – Dry Mixture

A mix of dry pigments, carefully prepared to achieve a warm orange-brown colour.

Composed from four historic colours:

Vine Black – very small particles, perhaps less than 1 micron. Processed from vine lees (the waste cuttings from pruning after the Vendemmia).

Terra Rosa – natural earth (clay base) from south of Tuscany near Montalcino. This pink-brown earth is highly prized for its gentle translucency and warm tone. The high clay (silica) content guarantees transparency.

Cinnabar – natural Vermilion, from the old mercury mines on Monte Amiata. The red stones are pulverised, sieved and washed to produce the finished pigment, in two grades:

1. 0-60micron
2. 60-120micron

The finer micron size is used in Picene Colore.

Natural Madder Lake – our own production of madder, derived from the roots of the madder plant. Soft bright pink appearance as a dry powder. It is very transparent. When milled into oil, the colour appears as a warm crimson shade.

This unique blend of pigments gives a warm orange-red colour that will be familiar to most instrument makers. The variety of pigments and particle formats ensures a divergent appearance when mixed into varnish, rather than a flat, homogeneous appearance (as could be the case with modern pigments).

From our catalogue we offer a complete range of dry pigments, so that the maker can vary their colouration and surface appearance according to their practice.

Picene Colore - Coloured Varnish

Prepared with the Picene Dry Mixture in single estate cold-pressed linseed oil, to form a buttery paste.

A convenient way to add a small dose of colour into varnish.