

"Violin Varnish Vernici Liuteria"

Product description and their use

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Link :

- *Facebook page (in album " My Varnish " you can find price and description of products)*
- *Blog*

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Introduction :

This manual is born with the intention of providing an overview of the use of oil varnish, coloured rosin varnish, wax polish and other products that are at the base of my musical instrument varnishing cycle.

It is at the same time intended to explain - without entering into too much technical features that are not of interest to the luteer or amateur - the characteristics of the products, the raw materials used and the way they behave.

The idea of using these handicraft products in favor of other types of varnish products and the treatment of musical instruments has arisen for various issues: the first and perhaps the most important thing is to instill in the luteer a greater awareness of what the product is using and what this contains. It is not permissible that a luteer at the end of the work (varnishing) has a total darkness on the product it is giving on the instrument and how this will occur in the following years.

The advantage of handicraft production is to be able to know the ingredients that are used and to be sure that raw materials of poor quality or even worse foreign matter (mineral waxes, fish oils etc.) are not used in the product. In order to reduce the cost of production to the detriment of quality and result.

Varnish should not be considered as a necessary "bad" and should not be used solely for protection purposes: it is also a part of the instrument with regard to sound and aesthetics.

Oil varnishes are my products preferentially for the following reasons:

- Elasticity of varnish film
- Water resistance and sweatiness
- Duration in time
- Ease of use
- Smoothness (important especially on the handle)

These advantages are usually much higher than those of alcohol varnishes .

Chapter I

Raw materials for oil varnishes

Oil

The oil used in luthery are distinguished by dry oils, non-dry oils and essential oils (used as solvents / thinners).

Dried oils (linseed oil, tung oil) have the ability to absorb oxygen and apply on a surface, they turn into more or less short time in a solid and elastic film. Technically, oil should not be considered a varnish, even though it has all the properties. The term oil varnish is reserved exclusively for a varnish product composed of dissolved resins in the oil; A good example is the amber varnish that is composed of "run" baltic amber, melted in linseed oil and diluted with turpentine essence (essential oil).

Non-dry oils less the properties of siccativ oils and tend to never solidify. They are used in lubricants for lubrication purposes during sanding and crushing operations or wood reviving treatments (ebony)
Non-dry oils are: olive oil, vaseline oil.

Essential oils are volatile oils with solvent properties to the oil, resin and waxes. The most important used in liuteria is the essence of turpentine which, besides being the best solvent for oils, waxes and resins used for the formulation of oil varnishes, has the property of absorbing oxygen and supplying it with oil, thus accelerating the varnish drying process.
Other oils used are: sponge oil, orange terpene, lavender essence and ceddar oil .

LINSEED OIL

It is the most important and most used in liuteria. It is obtained from the fruits of a herbaceous plant (lino usitatissimum). As has already been said, it is part of the category of siccativ oils.

To enhance its drying properties and thus reduce drying time, it is the raw linseed oil through heating processes and the addition of metallic salts which favorably favor oxygen absorption. Both the heating and the addition of the metal salts accelerate

the oxidation and polymerization process.

Flaxseed oil treated by heat action and addition of metal salts (dryer) takes the name of boiled linseed oil.

Oil that is always treated by heat action, in the presence or absence of oxygen and without the addition of metallic salts, takes the name of standoil.

RESIN

Amber

Fossil resin of various extinct conifers, containing succinic acid; Of yellow to light yellow to red or brown, may include inclusions of gas bubbles, small insects, etc. : Some varieties are fluorescent. Since ancient times for ornaments, amulets, small objects of use, it is mainly found along the coast of the Baltic.

It is the toughest and most resistant natural resin.

In the natural state it is virtually infusible in oils and solvents, so it is subjected to a process called "pyrogenation", which consists of heating the resin for some time above its melting point. During this process volatile oils, water vapor and carbon monoxide are developed and a resin depolymerization occurs which makes it fusible in the oil and the essence of turpentine.

The amber treated in this way takes the name of run amber .

The run amber is used for the production of "amber varnish", my amber varnish is composed by flaxseed oil in a ratio of 1: 1 (a part of resin and a part of oil).

Copal

is the commercial denomination of a subfossilic or fossilized vegetable resin, known since antiquity. At commercial and gemological level, it is distinguished from amber, narrowing it to fossil resins of older age. On the palaeontological level it is always an

organic rest.

The name comes from coffins, a Nahuatl language word that means incense.

Depending on the location or appearance, it is sometimes called with particular names: copal gold (Brazil), copal blanco (also known as Protium copal) and copal negro (Mexico), Kauri-Copal (New Zealand), Manila Copal (Philippines) .

The copal is similar to amber, but much younger, having just started the process of chemical-physical transformation (amberization) that will turn it into amber. It is easily distinguished by its opaque and milky appearance and the large amount of perfectly preserved insects and other animal animals that are included.

Unlike amber, the copal is much more tender and soluble in substances such as ether or gasoline. It is even possible to dissolve it completely and recover the contained inclusions.

Rosinate of iron (Brown)

Modified rosin with metal iron salts to give it strength, hardness and color. As the resin itself is colored, the addition of dyes is avoided.

Rosin of zinc (incoloured)

Hardened rosin resin with zinc salts. Technically it is called "Zinc Rosinate"

Since there is a union between the rosin resin acids with the zinc salts.

The same properties as brown colophony but no color is given to resin.

Great for the preparation of base varnishes thanks to its high index of Refraction.

It can be colored by fixing natural dyes .

Rosinate of zinc coloured by fixing vegetable colors

These are rosinate to which plant colorants have been fixed

WAX :

Italian beeswax

It is a wax of animal origin, used in "Polish wax abrasive". It is difficult to find in Italian products of common use, an excellent quality Italian beeswax: it is easy to distinguish from color and perfume. Commonly, bees of non-Italian origin are used and sometimes waxes containing low-melting waxes, very cheap (paraffin) and numerous foreign substances are also sold.

The melting point of beeswax is about 62 ° -65 °.

Shellac wax

It is one of the finest waxes, it is derived from the waxy part of the shellac. It is very brilliant and durable .

It is used in my product "Shellac wax".

It has a melting point of about 88 ° -90 °.

Chapter II

Definition of the main varnish product

GROUND FILLER

Below the definition of groundfiller should be listed those products for the treatment of Wood bottom to close totally or partially the pores of the wood. They can be Of the same composition of the varnish, with or without addition of inert excipients (Spain white, kaolin, pumice etc.) and with a greater dilution than Real varnish, this to facilitate the penetration of the groundfiller in the pores of the wood.

It is advisable to avoid products that contain inert fillers in precious work Preferably using a varnish (Zinc Rosin varnish , Madagascar copal varnish)

OIL-RESINOUS VARNISH

These are resins such as amber , hard-copal or colophony dissolved In linseed oil.

Depending on the amount of resin and oil, a relationship can be established

Of:

- 1: 1 called "short in oil"
- 1: 2 called "medium in oil"
- 1: 3 called "long oil"

The 1: 1 ratio provides brilliant and easy to sand varnish, Polished by the use of abrasive polish

The ratio 1: 2 provides intermediate characteristics.

The 1: 3 ratio provides highly elastic coatings.

The oleoresinous varnishes are the most valuable for use in liuteria.

Compared to alcohol varnish they are much difficult to fabricate, but theirs use is easy.

The drying of the oil varnishes is done by oxidation of the linseed oil that goes to Transform into a solid film no longer reversible; It deduces that solvents such as White spirit or turpentine oil no longer dissolve the varnish and therefore this Be sanded or removed with chemical varnish strippers.

Transparent dyes, pigments and pigments

The dyes must be understood as substances that dissolve in appropriate solvent (oil, white spirit, turpentine oil) and that give transparent coloration. Pigments are solid soluble powders that remain in suspension in the varnish and Give color coverage.

A varnish product that has a transparent layer is called stain

varnish, instead when pigments are added to the varnish product then you

Talks about varnishing or enamel; The latter may be an oleoresinous varnish with the addition of Pigments.

For varnish, however, is meant only oil combined with pigments.

Both the varnish and the enamel have the characteristic of forming a stain

Totally or partially covering. Transparent pigments are an interesting category.

Grinded in an oleoresinous varnish or raw linseed oil should be stacked in very thick layers

Thin (hand) on a previous layer of varnish can stain but the transparency is much long lower than colored rosinat varnish .

Polish

Under the name of "polish" all those liquid or cream products that they are used to polish a varnish film .

There are various types of trade on the market; unfortunately the litters often find themselves in front of products ignored by composition and consequently the interaction of polish with the varnish.

This is very serious if you think that many polishes contain alkaline or acids that serve to "stretch" the varnish film in order to obtain the gloss. These substances react with varnish components modifying it.

Sometimes the lure, after applying such products, it can be seen in the cloth used for polishing the varnish dissolved or totally removed.

Much of the products dedicated to the polishing of musical instruments are not other than formulations of furniture or car body products (as if it were not enough of low quality) resold as products for use in liuteria. These products give an instant pronounced but not lasting gloss. When we find ourselves in front of polish "carnauba wax and beeswax" these are contained only in very small quantities.

The best polish for liuteria is those based on dissolved solvent wax (white spirit , turpentine oil) also called "Encausti".

They can also contain an abrasive, if you need a sanding fine varnish.

Polished waxes, leaving a durable and shiny protective film

brilliant, they are ideal when you want to polish an oil varnish and especially for a lasting protection of all varnished surfaces.

My polish series (Polish wax abrasive and Shellac wax) do not contain mineral waxes, foreign substances and / or aggressive solvents, but only raw materials quality.

Chapter III

Specific use of "Violin varnish Vernici Liuteria " products

Products suitable for use as a ground

Zinc Rosinate Varnish , Madagascar copal varnish, tru oil

In the first layers if the wood is very porous the application should be done with a brush.

Full drying is expected, which usually takes place in 24 hours. When it starts forming the layer of varnish comes the sanding time of each layer before of the following statement.

The sanding is carried out with steel wool 0000 or waterproof abrasive papers of 800 - 1000 grain in water added with hand soap, that is to remove the dust that has accumulated on the varnish, both to smooth and smooth movie formed.

This procedure must be repeated several times until the desired result is obtained in general

5 to 6 hands are enough for woods such as fir.

Zinc Rosinate Varnish (ground for wood)

Cooked linseed oil varnish and modified rosin with zinc salts diluted with turpentine essence. Thanks to the high index of refraction of rosin, this varnish, it lends itself optimally to being used as a ground. Its light color and its transparency does not dirty wood. Resin-oil ratio 1: 1, so good body for a fast filling of the pores.

Do not recommend using it as a final varnish because it remains sticky for a long time because it does not have the resistance of oil varnishes formulated with hard resins (amber, copal of madagascar).

In the first hands it is advisable to apply the brush, so the varnish must be diluted to the point where the brush strokes are sliding easily.

The first hands should not be honed unless they have imperfections, the sanding is done

Grinding with 800-1000 abrasive papers in water with added soap.

Drying time: 24 hours

Amber varnish and Madagascar Copal Varnish

They are the finest oil varnishes. They are obtained from high treatment resin temperatures to make them fuse in linseed oil, and also the latter phase is carried out at high temperatures. There are times and different arrangements forget good varnishes from pyrogenic resins and only with the time and practice you succeed to get a good varnish for musical instruments.

Thanks to the amber resin you get a beautiful golden brown color ; transparency and light games increase when this varnish is applied. Same thing of the coat varnish which instead is less colored is suitable for use even in the first coats of varnish, the latter gives a golden yellow good for wood.

They are the hardest resins in nature and consequently provide oil varnishings the most prestigious type.

The varnish should be slightly diluted at the time of use. As a diluent use essence of turpentine.

should be done with nitrile gloves, avoiding those latex ones soluble in oils and essence, the varnish is "tapped" with the fingers in a manner uniform on the whole surface and then hand-wrapped, any excesses go removed by rubbing your hand on a cloth that does not release lint and impurities. If the varnish is still difficult to spread, you need to wet your fingers in the turpentine oil and continue to stretch it.

For proper drying of the varnish, the instrument should not be kept in the dark.

After a few minutes ,the glides of the glove are leveling

(but not completely) so it is not necessary to perfect leveling during the spread.

After drying it must be sanded with abrasive papers (generally 800 - 1000) wetted in water added with soap.

Avoid sanding too energetic, especially the first sanding must

be more focused on the cleaning of the coating layer than the screed. There

smoothing to level the varnish, so when you are ready to polish, it must

have the task of creating a perfectly flat surface.

Drying time 8 hours foldable (with caution)

24 hours (recommended)

Polishing 48 hours (recommended)

polishing after several months are desirable, as the varnish increases in hardness and as a result, an even greater gloss is achieved by abrasive action.

Polishing uses the "Polish abrasive wax".

BROWN modified rosin varnish

Varnish based on modified rosin with addition of metallic salts give a very transparent brown color. Treatment of Colophony is performed to give it hardness, color, remove its acidity and stickiness.

Drying time: 12 hours foldable.

Zinc-Madder Rosinate Varnish (Orange)

These are varnish varnishes made with zinc-rosin resin on which it has been fixed a natural dye (extracts of madder)

These varnishes should be used to give color layers.

Drying: 24 hours

Polish abrasive wax

Produced with carnauba wax and Italian beeswax.

Provides gloss both the smoothing action of the abrasive and because it leaves a slim Waxy shining protective layer.

It is not a product formulated with aggressive solvents and chemicals that could compromise the varnish on the which are applied; This happens rather often with products of use which we find commercially available for the lutein industry as well.

Before polishing, use abrasive papers 2000.

Application of the product : spreading it on the surfacevarnished and polished with circular movements with a soft cloth or wool; forIncrease the fluidity of the polish can be poured on the olive oil

You rub it until you see the glossy look.

Repeat the operation if necessary.

You can make this operation more fluid by heating the instrument with a hot air jet deriving from a heat gun in position 1, it also warms up the wadding pad.

Shellac wax

It comes from the waxy part of the shellac, it is one of the finest waxes in business. It has a melting point of 88-90 °. Provides a brilliant and lasting gloss superior to carnauba wax.

It must be applied by taking a small part and finely spreading it on the instrument, let 24 hours pass for complete drying of the waxy layer, after which with a phon or with a heat gun in position 1, the surface of the instrument and with a cotton swab circular movements are performed as long as the gloss appears. The application can be run again.

Chapter IV

varnish Cycles

Varnishing cycle is meant the entire varnishing phase that can be generally composed of:

- closing the pores of the wood (recommended if the wood is very porous) with colorless varnish (rosin zinc varnish)
 - varnishing;
 - Laying of different layers of color (Brown rosin varnish , madder zinc varnish) if you want a stain
 - Laying of other layers of varnish to protect the layers of color (amber or copal varnish) ;
- Polishing with polishing abrasive wax.
- Additional wax polishing (optional)

