OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

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1.- INTRODUCTION

Old Wood was founded in October 2001, making its formal debut at the MONDOMUSICA instrument fair in Cremona, Italy. Its aim is to supply makers and restorers of stringed instruments with a complete range of top-quality finishing products to bring out the light, warmth and natural beauty of wood, while enhancing its acoustical properties.

Today, **Old Wood** is a leading specialist company. It employs a team of highly qualified craftsmen and technicians whose experience ranges from instrument making to industrial chemistry.

Old Wood created the 1700 System, an easy-to-apply schematic process encompassing ground varnishes, glazes, oil varnishes and natural colours, which allows us to formulate a whole world of finishes that can be used with any number of techniques.

The 1700 System strives to achieve a balance between an instrument's beauty and its musical quality, while helping it to age in a noble and elegant manner, and easing the task of the luthier. **Old Wood** uses carefully selected high-quality raw materials, and manufactures its products using traditional methods and following the most appropriate directions given in old manuscripts, while applying strict quality controls

Old Wood Genesis

I started to frequent Master Evelio Dominguez's workshop during the late 70's where he introduced me to the art of instrument making. Among other things, I learned the differences between the spruce top of a new guitar and the spruce that has seen the pass of the time because of its golden colour. These findings marked the beginning of my investigations.

When I opened my own workshop in 1986, I started to receive old instruments that needed to be restored. They were authentic jewels made in Cremona , Parma , Napoles, Brescia , Venecia, Milan … This is when I started to decipher the golden wood effects and decided to immerse myself deeply in the reading of old manuscripts, articles, chemistry books … to develop a product that would give the wood the same appearance that old instruments have.

In one of my trips to Cremona in 1991, I had the opportunity to meet Master PierAngelo Balzarini. I showed him my work and extended him an invitation to participate and collaborate in my research. He encouraged and stimulated my work and through out the years his unconditional support and trust became priceless to me. Once the formula was made, he was the first one to apply it on his violins, on the violins of his students and on the instruments of masters that visited his workshop.

I was working with old colours and varnishes that I had read about in ancient manuscripts, when in 1993 I finally found the formula I was looking for. It made violins shine with the same light old instruments did.

I have called this product **Italian Golden Ground 1700** because of its appearance. Since it was discovered, it is being used by famous master violin makers, some of them have had the courtesy to send me thank you letters that I show in my **testimonials**.

Encouraged by the success of **Italian Golden Ground 1700**, I started to develop what I call the "**1700 System**". This is a range of handmade products that includes **Grounds** for the wood, **Oil Natural Colours**, **Oil Classical Varnishes** and **Natural Pigments**.

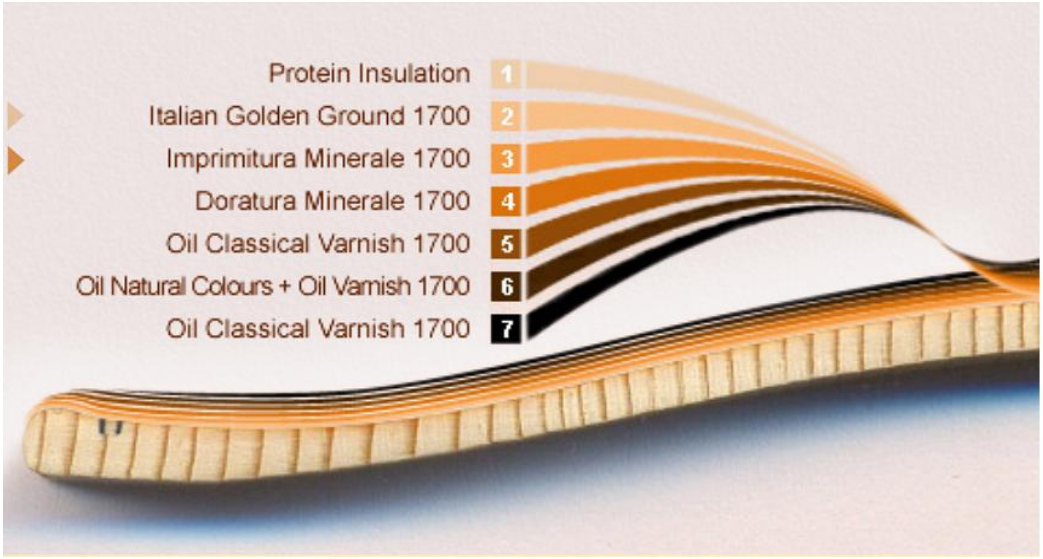
José María Lozano
Maestro Luthie

2.- 1700 SYSTEM

1700 System is a simple and easy-to-apply process specifically developed by OLD WOOD for wooden instruments. It covers grounds, oil natural colours, and oil varnishes, and enables you to generate a wide spectrum of finishes adaptable to any technique using oil-based coatings.

1700 System helps to achieve a balance between the beauty of the instrument and its musical quality, ensuring that both will improve with age, and facilitating the luthier's task.

Wood treatment and varnishing scheme:



1700 System
Wood Treatment & Varnishing Scheme

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. 1. Protein Insulation . GELATINE solution (2 – 3%).

This consists of the application upon wood that is clean and ready to varnish of a solutioncontaining one or more protein compounds. These may be of animal origin (glue, gelatine,albumin, casein, egg yolk, etc.) or vegetable origin (gum arabic, tragacanth, cherry tree gum,sarcocollin, fig tree sap, etc.

** L M: Condax, in research conducted in 1970 for the Mellon Institute of Pittsburgh, found thatprotein sealer (glue and albumin) was used as a primer. For his research he used microtome sections and varnish samples from a 1699 Guarneri, a Tecchler, and a Venetian instrument dated 1707.**

OLD WOOD recommends that you begin by isolating the wood, applying a 2-3% gelatine solution, and adding a small amount of albumin (egg white). For spruce, apply three coats of this solution; for maple, one is enough. It is best to apply the solution with a piece of sponge,

and to use a hair dryer to dry each coat, in order to avoid internal tension in the wood. If the gelatine solution is increased with albumin, then when it is dry the instrument should be exposed to sunlight or ultraviolet light in order to boost the albumin's properties of coagulation and insolubility.

• Albumin is obtained from egg whites, which are 85% water, 12% albumin 0.2% fat and other components. It belongs to a group of proteins that have the property of coagulating under heat. When diluted, applied in a thin coat and exposed to the light, it acquires insolubility properties under normal humidity conditions.

• Gelatine is a pure form of glue made from delicate animal tissues and which is refined with greater care and purity than ordinary glue. It is sold in thin colourless sheets or in powder form.From a chemical viewpoint, the complex proteins making ¡up the glues can be divided into two classes.
- Condroitin: Responsible for the glues' adhesive properties.
- Glucosamine**:** Responsible for their gelatinous nature.
Gelatine contains more glucosamine and condroitin than glue. Its properties are more gellative than adherent. Gelatine, glue or casein will degrade at temperature above 53º C, changing colour and losing a large part of their adherent properties.

• Gum arabic and tragacanth *** are used as a primer or undercoat with very good results, by means of an old formula employed in Cremona and in other Italian city-states, and are known as "Camisega" **(**. *Tecnica Costruttiva Deggli Antichi Liutai Italiani / Euro Peluzzi*).
*** *To prepare tragacanth it should first be soaked in alcohol, and then dissolved in water.*
• Gelatine or glue + Alum***: Successfully used since antiquity is the procedure of adding 4 -5 % de alum to the glue or gelatine, as a hardener and the make them less hygroscopic This method is used only with glues made from skin and pure gelatines. If added to bone glues, the solution will be cloudy.

*** *The alum should be dissolved in water and then be applied the to glue or gelatine solution. The resulting preparation should be disposed of after use*

.
. *Recommended books:*

- *The Artist's Handbook of Materials and Techniques /* Ralph Mayer
- *Dictionaire des matériaux du Peintre /* François Perego
- *Malmaterial und seine Verwendung im Bilde /* Max Doerner
- *Vernici in liuteria /* Gabriele Carletti

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2. Italian Golden Ground . One or two applications.

The application of one or two coats of Italian Golden Ground (PH= 7) furnishes white woods like maple, spruce or poplar, with a remarkable interior light and a lovely colour –golden cinnamon—which arises from the interior without modifying or saturating the structure, giving it a warm aspect and producing an effect similar to the exposure of the wood to sunlight over a long period.

. See:
- Italian Golden Ground
- Application instructions.
- Application examples.
- Application video.
- References.

. 3. Refractive Ground → One or two applications.
and / or Imprimitura Minerale . One application.

Refractive ground is a transparent and pale coloured compound that gives a refraction index similar to wood. Formulated without minerals, this compound enhances to a maximum level the refraction process of light. This is possible due to its processed terpenic polymers.

Refractive Ground enhances considerably, wood protection against external agents (humidity, alcalis and acids) following the line of Classical Master's Grounds *(According to the studies by Luis M. Condax.)*.
Its optimal surface layer penetration, avoids fibre saturation, achieving a unique lightness.

Refractive Ground **is applied before mineral grounds or oil / spirit varnishes**. It works as a sealer, since it **avoids an excess** of varnish absorption on wood, that could interfere negatively in the acoustic quality of the instrument.
Refractive Ground should be applied with hand and in one or two thin layers (*use nitrile or vinyl gloves and a small brush to reach difficult parts*)**.** Its adequate viscosity and reology provides an excellent levelling on every layer applied *(If desired, it can be diluted with regular solvents for oil varnishes)*. To force the drying, it is recommended Solar or UV exposure.
Imprimitura Minerale is a transparent ground that produces a very high refraction and enhances the acoustic properties of the instrument. It is used as a colourless primer for saturating the pores of the wood.
* In 1989 *Dr. Barlow and Dr. Woodhouse published their research findings. They suggested that as a primer for antique Italian varnish, a coat of mineral particles was used in a medium of resin oil or linseed oil.*
Their analyses of Stradivari instruments showed that the mineral layer was made of a mixture of minerals and other elements, but there were significant variations among instruments.
*Their study did not examine self-cementing elements, puzzolana, creta, soluble glass (potassium silicate) or ground glass.**

Imprimitura Minerale should be applied by hand (use nitride or vinyl gloves) in a single, very thin coat. Its use will prevent the saturation of the structure of the wood with colour when Doratura Minerale is subsequently applied, and will ensure that the latter provides a high level of refraction and dichroism.

. See:
- Imprimitura Minerale
- Application instructions.
. 4. Doratura Minerale . Two applications.

The minerals in Doratura Minerale are processed by hand to ensure a spectacular and warm, clean, and clear golden hue, which is stable under light (7), transparent, and highly resistant to oxidation and deterioration over time. Its use gives high refraction and enhances the acoustic features of the instrument.
Doratura Minerale should be applied by hand (use nitride or vinyl gloves), in two extremely thin coats.

. See:
- Doratura Minerale
- Application instructions.

. 5. Oil Classical Varnish . One application.

OLD WOOD's Classical Oil Varnish products are perfectly suited for this process, but we recommend the optimum properties of Classical Amber Varnish – OW., one of the varnishes mentioned in the oldest manuscripts, and obtained from the heating of amber, unlike Clear Amber Varnish *** - which is not made or sold by OLD WOOD – and which at the end of the 19th century began to be made using the dangerous chloroform method** and in the 20th century with rock salt *** and which was never included among the classical varnishes.

** **Berger, Ernst.** ***Beitraege zur Entwicklungsgeschichte der Maltechnik.*** **Munich, Callwey, 1897 – 1909. Folio 389.**
*** ***The Violin Makers Journal*****, June, 1961, p. 4. Robert Hill.**

Classical Oil Varnish – OW**.** products must be applied by hand (using vinyl or nitrile gloves) in a single, extremely thin coat. A brush or sponge may be used, but the best results are obtained using the hands.

This coat operates as an intermediate sealant between the last coat of Doratura Minerale and the coat of Oil Natural Colours – OW. By isolating the colours; saturation is avoided, transparency is assured, and refraction and dichroism are augmented.

. See:
- Classical Oil Varnish
- Application instructions.

. 6. Oil Natural Colours + Oil Varnish . One or more applications.

OLD WOOD's wide range of Oil Natural Colours what developed specifically for application to wooden instruments.

The application of Oil Natural Colours – OW. is easy and simple:

The colours are mixed, and a few drops of and Classical Oil Varnish– OW are added as a medium. To make application easier, a few drops of linseed oil may also be added.

The general application is done by hand (use nitride or vinyl gloves), and the colour is spread uniformly, in like a **glaze**, using a small paintbrush for the volute and other to remove excess colour from areas of difficult access.

• The colours can also be applied with a brush, but in this case more varnish should be used to make a more fluid solution.

For this application we recommend Classical Amber Varnish – OW.

Here follows the formula for obtaining excellent results in applying OLD **WOOD** colours:

A few drops of Classical Amber Varnish– OW. + A few drops of Liquin *** – Winsor & Newton o similar. (± 50% of each).

*** *Liquin (W & N): This is a type of long oil alkyd resin in gel form, used as a medium of excellent performance in artistic painting.*

. See:
***- Oil Natural Colours* – OLD WOOD**
- Application instructions.

. 7. Oil Classical Varnish . One or more applications.

Once the coat of Oil Natural Colours – OW is polymerised (dry) **any of the** Classical Oil Varnish – OW. varnish may be applied as a **glaze** by hand (use nitride or vinyl gloves), in one single and very thin coat. The hands are best, but you may also obtain good results with a sponge of brush.

Depending of the desired objective, processes **6** and **7** can be repeated once or twice more, as indicated below:

Colour glaze → Varnish glaze
+
Colour glaze → Varnish glaze
+
Colour glaze → Varnish glaze

. 8. FINISHING . Two or more applications

It advisable to finish the instrument with two or more coats, as desired, with any product in the Classical Oil Varnish– OW range.

Remember that the coats must be as thin as possible for the best results.

. See:
- Classical Oil Varnish 1700
- Application instructions.

. 9. POLISHING

A newly built instrument may be used by the musician in rehearsals and concerts at a good level, but only when the wood has attain its optimum degree of vibration and the varnish has fully hardened does it begin to develop in a state of maturity.

Finishing with oil-based varnish requires the utmost care, since the total polymerisation of this type of finish takes at least two years. The colour coats and varnish, even when dry polymerised), remain delicate and should not be subjected to rough handling or friction. This is true of all oil-based varnishes.

• Process of finishing and polishing the varnish:

1. The varnish should be sanded very lightly to remove any dust without damaging the varnish itself or the colour
- Use Micro-mesh or similar extra-fine emery cloth, soaked in dearomatised liquid paraffins (which do not contain dangerous aromatic hydrocarbons) or mineral oil that does not attack the varnish or colour. Use nitrile or vinyl gloves.

2. Polish with Super Nikco on a piece of cotton or gauze. Alternatively, take a the piece of cotton gauze to which Super Nikco has been applied, and add a little extra fine-grain Tripoli polish compound. Polish with the utmost care, especially on the edges, the head, and rib joints, which are the areas most likely to lose colour.

3.- TESTIMONIALS

Elio Severgnini
"After some trials, I have been using Old Wood 1700 on different instruments. It does not matter what varnish one uses, spirit varnish or oil varnish, to get the optimum result on the preparation of the wood. Particularly on the work well finished for the later varnish application. It causes the morphological characteristics of the wood to show up clearly, and also enhances the acoustics. The combination of these two aspects of an instrument, makes the job obvious to the eyesight and the same time, it speeds the response of the sound."

Elio Severgnini
Dear José María,I wanted to congratulate you for the fantastic varnishes that you have developed and gather all the excellent qualities that must have a varnish: resisting , flexibility, transparent, beauty, etc...

When I use your Imprimitura Minerale, The ground Italian Golden Ground becomes more present and luminous, but with your Doratura Minerale, all this is ensalced in a incredible way. What a show of light, colour and sound!. Must see it and ear it to believe it. It is fascinating.

Eric Blot
"Thank you very much for the excellent product. Your new Old Wood is even better than the one before. Congratulations! I use it with success."

Favio Volta
"I have been using 1700 Italian Golden Ground since I tried it the first time, five years ago. I am very happy with the results. I have not stopped using it, even after changing my way of varnishing. It is for any kind of varnish, oil varnish, spirit varnish, or mixing varnish. I have never found another product to compare to the 1700."

Giorgio Grisales
"Since 1999 I have been using Old Wood for my instruments, after trying a lot of different kinds of wood treatment products. Only Old Wood 1700 allows me to clearly show off the quality of the wood and I obtain chromatic variations that let me create a homogeneous and transparent background color that is perfect for the later application of transparent oil or spirit varnish."

Lucca Maria Gallo
"I use Old Wood 1700, since I first discovered it. I have always achieved the very best results in my instruments. It has added light even to wood that is not particularly beautiful. I believe that this is the product that all violin makers have been waiting for and I cordially recommend it. It makes life easier."

Luiz B. Bellini
"Dear José María Lozano: I thank you for having dedicated yourself in developing your Old Wood products, specifically the 1700 Italian Golden Ground. I use it on my violins, with very good results. Congratulations!"

Marc de Sterke
"I have been working with the old wood 1700 products of Mr Lozano and I can vouch for the excellent quality that he offers. The oil varnish applies easily and has a very beautiful depth and a wonderful consistency. It dries and polishes well and remains supple, The sheer beauty of the Brescia brown varnish (if put on a good ground) impressed me . The grounding is also of a very high quality and makes the wood sparkle underneath the varnish. All in all a highly recommendable range of products. It is rare to meet a person with such an in depth knowledge of varnishes.Bravo Mr.Lozano!"

Michele Dobner
"The flame's depth, the light that the wood receives and the winter rings of the spruce of my instruments, are shown up clearly, very similar to the classical Cremonese of the 1700s. Thank you, Old Wood!"

Primo Pistoni
"I write to congratulate you sincerely because your product (1700) for preparing the wood is exceptional. I have done different trials of gelatin isolate for more than a year. Each test has shown that me that colour attained by the wood is very natural (I use only sunlight). The instruments acquire a beautiful cinnamon color and the result of varnishing improves. Bravo! I am very thankful to you.

Sergio Scaramelli
Dear José, With this letter I want to thak you that, since I use your products, the sound of my basses has improved a lot. The varnishes has an excellent quality, elasticity a beauty. Thak you.

Marc de Sterke
To all violinmaker colleaguesre: new pigments in oil.JM Lozano's pigments in oil allow one to achieve wonderful results easily without grinding. The 12 splendid colours (from venetian red, or alizarin to golden oak to walnut brown are interchangeable and mix with any of his or any oil varnish.Personally I was amazed how easily I could achieve any colour combination with such intensity and transparency.This wonderful addition is highly recommendable for anyone who works with oil varnishes.Bravo JM Lozano!

4- PRODUCTS

GROUNDS

Iluminate the Wood and Boost the Sound

The background treatments to be applied on violins, violas, cellos, double bass and Spanish guitars; an excellent application to be used before applying organic and inorganic colors, and oil or spirit varnishes.

Italian Golden Ground 1700

ITALIAN GOLDEN GROUND (IGG) is a balanced combination of organic and inorganic compounds that exert a controlled and superficial action on the self-oxidising agents of the wood.

Italian Golden Ground A: The inorganic compounds in Italian Golden Ground A harden th e fibre in the amorphous zones in the wood, strengthening the growth rings without changing their structure, and thus boosting the acoustic properties of maple and spruce.

Under exposure to natural or artifical ultraviolet light, Italian Golden Ground A gives the plain surface of the wood a uniform and transparent golden cinnamon colour. It ensures an excellent finish, with refraction properties that highlight the resinous structures (winter rings in spruce, and marbling and flames in maple).

Italian Golden Ground B: Enhances the action of the Italian Golden Ground A acting as a colour printer. It also intensifies resinous areas, the texture and the natural light of the wood.

It stablishes the gotten ground colour by stopping the later degradation of the wood to a undesire grizzily colour (with inside light) no letting the photo oxidation and the chemical change of the lignine, also protects the inherent aesthetics and luminous qualites and texture of the wood for life time.

Visible results obtained in 2 hours.

Amount: 2 x 60 cc (2 x 2 oz)

Efficiency: 5-6 violins / 4-5 violas / 2 cellos

Amount: 2 x 125 cc (2 x 4.25 oz)

Efficiency: 10-12 violins / 10-11 violas / 3-4 cellos.

Imprimitura Minerale

Imprimitura Minerale is a transparent ground formulated with mineral compounds and pyrogenated colophony resin, modified with polymerized linseed oil.

The thin and elastic layer of layer of mineral compounds saturating the pores on the surface of the wood enhances the acoustical balance and tone of string instruments, while providing additional mechanical and chemical protection.

Meanwhile, the size distibution of these mineral particles –approaching nanotechnology – and their crystallization system bring about a synergy with the main vehicle of the varnish, creating different refraction levels between the layers and the substratum (the wood itself), contributing to the desired dichromatic effect.

The vehicle used is a highly purified (through pyrogenation and chemical processes) colophony resin, which protects the wood from external agents, and provides it with high levels of transparency and refraction. This oleoresinous ingredient is modified via the substantial addition of linseed oil, which, after being cold-pressed and thermally polymerized, helps bring the varnish to its optimum level of surface uniformity, elasticity and drying time, while maintaining its translucent quality.

It can be diluted with linseed oil, nut oil, white spirit, turpentine, or lavender oil. To obtain the best results, only a very thin coat should be applied.

Bibliographical references:

- Marciana Manuscript.
- Louis M. Condax.
- Ralph Raphael.
- Andrew Dipper.
- Gabriele Carletti.
- Max Doerner.
- Ralph Mayer.
- Rutherford J. Gettens & George L. Scout.
- Mary P. Merrifield.
- Claire Barlow & Jim Woodhouse

Doratura Minerale

OLD WOOD developed **Doratura Minerale** with several objectives in mind:
1. Boost the basic golden hues of the instrument.
2. Enhance the luminosity.
3. Obtain a high refraction.
4. Enrich the optical properties of the wood and the nuances of colour, once successive coats of **OLD WOOD** Oil Natural Colours and **OLD WOOD** Oil Classical Varnishes are applied.
5. Strengthen the dichroic effect.
6. Improve the instrument's acoustical properties.

The oleo-resinous components of **Doratura Minerale** are processed and formulated by hand and combined with several chemically pure minerals to make complex anisotropic dyes that provide a golden colour that is spectacularly warm, clean, clear, and fade-resistant (lightfastness rating 7). It is highly resistant to oxidation and ageing, and features crystalline transparency.
Doratura Minerale should be applied by hand (with vinyl or nitride gloves) in two extremely thin coats. It can be thinned with spirits of mineral oil, turpentine oil, or Oil spike lavender lavender.

OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

OIL NATURAL COLOURS

Gloss, warm, transparent and with optimum lightfastness.

*** READY TO USE ***

OLD WOOD's Oil Natural Colours collection was developed specifically for simple and easy application to wooden instruments. Natural colours in linseed oil, warm, clear and full of life, designed to be mixed together to achieve an xceptional palette of colours. Natural colours prepared to save time and to do work life much easier.

OLD WOOD has created the "pioneer system " of pigment pastes covering a range of hues made from the primary colours (red, yellow, and blue). OIL NATURAL COLOURS is a palette of pigment pastes, made from 100% natural red,yellow and brown pigments. The warm tones are those used by the classical masters and evoke life, strength, vitality and passion. Combined with blues and greens; they enable the luthier to create his own palette of colour.

OLD WOOD provides luthiers with have access to premium quality pigments, prepared in a oil-based smooth paste format, ready to use, easy to apply and, with a range of shades that permits the creation of an infinite universe of clean, intense, and vibrant colours.

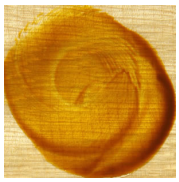
OLD WOOD's range of pigments is inspired on the colours used in different Italian schools --Amati's bright golds; the red-oranges favoured by Stradivari, Guarneri and Bergonzi; the luminous browns of Magini and Gasparò de Salò; and the deep violet-reds of Montagnana.

To achieve this, we carefully select 100% natural organic pigments, those used traditionally for centuries. Freely mixed and applied in thin coats of glaze, they offer the luthier the chance to create unique colours with unrivalled warmth, transparency and depth.

They should be applied in very thin coats as glazes to prevent excessive colour saturation. In this way you will obtain colours that are both rich and transparent, full of life, and with harmonious nuances that complement the dichroism of **OLD WOOD** grounds and varnishes.

The **OIL NATURAL COLOURS** are shipped ready to use, but they may be diluted with oil mediums such as **Classical Amber Varnish** or any other **OLD WOOD** oil-based varnish, allowing the luthier to adjust the consistency of each colour.

Oil Natural Colours Range



Weld - Indian yellow *(Roseda Luteola L.)*.

The original Indian yellow pigment was brought to India from Persia in the 15th C. It is an organic material (magnesium salts derived from euxanthic acid), taken from the urine of bovine animals fed with mangos. In the early 20th C. it was outlawed to avoid cruelty to animals and because of Hindu beliefs.

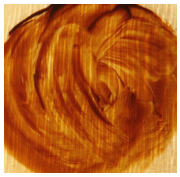
It is a pigment of incomparable transparency and luminosity, with a deep orange hue and a fluorescent green verging on gold, and OLD WOOD has used its name for **Weld – Indian Yellow**, which is vegetable origin (*Roseda luteola L.*) from the *resedaceae* family. The *Roseda luteola,* also known as weld, comes from the Latin *luteola*, meaning a yellowish colour associated with certain flowers.

Known in prehistoric times and mentioned by the Pliny, it was used widely in Europe, especially in the 15th and 16th C. in Italy, Spain and France, as a very stable dye for wool and silk.

The dye compound is luteolin, a flavonoid (flavone) with the chemical structure of phenyl benzopyrone.

OLD WOOD offers a very transparent yellow pigment, deep and luminous with a touch of orange perfectly complementary to the deep reds by proximity and to the purples by opposition.

Cosmos – Golden Oak *(Cosmos sulphureus Cav.).*



Belonging to the *Asteraceae* family, it originated in Central America. The Aztecs used it as their main dyestuff for yellow-orange shades, as is mentioned in the 16th C. Florentine Codex compiled by Fr. Bernardino de Sahagún, where we learn that *Xochipalli* was the Nahuatl name for this dyestuff obtained from the petals of the *Cosmos sulphureus* which grows in Mexico.

The main colouring agent in *Cosmos sulphureus* is a pentahydroxy chalcone hexoside, an anthochlorine type flavonoid generically known as coreopsin. However, colouring is also provided by additional flavonoids in the plant, such as isoquercitin and the luteolin glycosides.

OLD WOOD processes these complex dyes to create two golden hues, one of them greenish with oaken nuances (**Golden Oak**) and the other more yellow with bright orange tones (**Golden Yellow**). Both are highly transparent, vibrant, warm and full of life.

Cosmos – Golden Yellow *(Cosmos sulphureus Cav.).*

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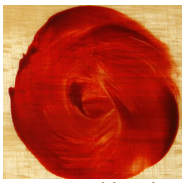
The main colouring agent in *Cosmos sulphureus* is a pentahydroxy chalcone hexoside, an anthochlorine type flavonoid generically known as coreopsin. However, colouring is also provided by additional flavonoids in the plant, such as isoquercitin and the luteolin glycosides.

OLD WOOD processes these complex dyes to create two golden hues, one of them greenish with oaken nuances (**Golden Oak**) and the other more yellow with bright orange tones (**Golden Yellow**). Both are highly transparent, vibrant, warm and full of life



Alizarin – Red *(Rubia tinctorum L.).*

This is one of the most stable natural pigments, and for centuries it was the most commonly used red dyestuff. It is obtained from the root of the madder, a plant belonging to the *Rubiaceae* family, cultivated in the Mediterranean and Middle East. It was used by the Romans, Egyptians and the Greeks, who called it *erythrodon*.

It is believed to have been brought to Italy during the Crusades, and European cultivation began in the 13th C.

The pigment, which artists call “Rose Madder”, was first isolated by in 1826 by the chemists Colin and Robiquet, who found it to be based on hydroxyanthraquinones, the two colouring agents in *Rubia tinctorum* extracts, which were permanent alizarin and purpurine. These extracts were used to formulate different hues of red, from brownish to purplish and bluish.

In 1868, the German Graebe and Lieberman managed to synthesise alizarin, commonly known as crimson, and industrial production began, after which only painters used the natural product.

OLD WOOD uses the extract of *Rubia tinctorum* to make two different colours, Red and Brown Red.

Both produce shades that are pure, bright, warm, transparent and full of life.

Cochineal – Dark Violet *(Coccus cacti).*

Cochineal is the common name given to *Coccus cacti*, *Dactylopius coccus*, an insect that feeds on oily prickly pear plants. The dye carmine is obtained from the female insects.

Spaniard began harvesting cochineal in Mexico in the 16th C., and some sources attribute its first use in varnish to the franciscan monk of Pisa.

A similar Crimson dye had been obtained from the kermes scale insect in the Old World, and there is evidence the kermes dyestuffs were traded in Armenia around 150 BC. Both insects produce carminic acid, which is also an anthraquinone united to a structure derived from glucose (glucosidal hydroxyanthrapurin). It was fist synthesised in a laboratory in 1991.

OLD WOOD, starting with the original luminous and bright deep red pigment with bluish tones, increasing blue hue, transforming it into a dark reddish purple of great depth and warmth that retains its transparency and liveliness.

It is one of the most difficult hues to obtain

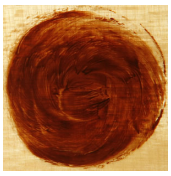
Sorghum – Venetian Red *(Sorghum Halepense.).*

Extract from the sorghum plant, belonging to the *graminaceae* family, and the different varieties produce colours ranging from dark red and brown to light yellow and white. In China sorghum extract was used traditionally as a red fabric dye, but new extraction methods now make it possible to obtain a uniform quality that allows the use of these dyestuffs in other fields.

OLD WOOD uses the variety whose main colouring agents are pelargonidin, petunidin, cyanidin, all of them anthocyanidin compounds and more specifically isoxanthoketone galactosides.

Pelargonidin produces a reddish orange, while cyanidin delivers a magenta hue and petunidin bluish shades.

Accordingly, with **Venetian Red** OLD WOOD has created a pigment paste that produced a dark red brownish colour with great transparency and depth, and above all a silky warmth



Pernambuco – Golden Brown *(Caesalpina echinata).*

Originating in Asia, it was much appreciated in Europe in the 15th and 16th C. as a bright red dye. It as in the 16th C. that Portuguese seafarer found trees in Brazil similar to those of India, and which we know today as Brazilwood (in Portuguese *pau brasil* or “blazing wood”), from which the country would take its name.

Pernambuco o Brazilwood trees belong to the *leguminosae* family. OLD WOOD has chosen the *Caesalpina echinata* species from which the compound brazilin is taken. It becomes brazilein when it oxidates in the air and under light.

OLD WOOD processes both these compounds, transforming their initial colour of dark red with shiny and lush purple overtones to an ochre/purple/brown which produces bright, vibrant, transparent and highly stable golden shades.

Alizarin – Brown Red *(Rubia tinctorum L.).*

This is one of the most stable natural pigments, and for centuries it was the most commonly used red dyestuff. It is obtained from the root of the madder, a plant belonging to the *Rubiaceae* family, cultivated in the Mediterranean and Middle East. It was used by the Romans, Egyptians and the Greeks, who called it *erythrodon*.

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In 1868, the German Graebe and Lieberman managed to synthesise alizarin, commonly known as crimson, and industrial production began, after which only painters used the natural product.

OLD WOOD uses the extract of *Rubia tinctorum* to make two different colours, Red and Brown Red.

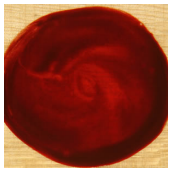
Both produce shades that are pure, bright, warm, transparent and full of life.

Walnut – Dark Brown (Junglans regia).

OLD WOOD has developed an exclusive transparent brown shade, made with a unique process. The colour **Walnut – Dark Brown** has two applications.Used alone, it gives a walnut colour with a glaze effect of incomparable luminosity and warmth. But it may also be used to add nuances or as a neutralising colour agent.

Generally speaking, in order to darken a colour, we can always turn to its complement, or can employ black, being very careful not to use too much, for it can appear cold and diminish the desired transparency. The aim is to maintain a harmonic balance of colours in which all the nuances are apparent, without distortion or excessive darkening.

Walnut – Dark Brown is the neutral shade that OLD WOOD has developed to correct the red or any other colour that has been used to excess, while maintaining transparency, enhancing the hue and correcting the excess without damage, and enriching the higtlights.



Lac Dye – Cherry Red *(Coccus Laca).*

This red pigment, which the English call *lac*, is obtained from a resinous dark red substance found in the secretions and eggs of female insects of the species *Coccus lacca* or *Kerria lacca lacca*, of the *Kerriidae* family, as deposited in certain trees and bushes. From this material shellac is obtained. The term *lac*, from which the word *lake* is derived, is used generically to describe the complexes obtained by the chemical fixing of dyestuffs in inorganic material.

From this Indian Lake is obtained, a deep and dark red pigment that is very lightfast.

Between 1960 and 1980 the chemical nature of this dyestuff was shown to be several derivatives of the anthraquinone known as laccaic acid A, B, C, E, F) and small amounts of kermessic acid.

Widely used during the Renaissance, the best lac dyes were named for the cities in which they were prepared —Venice, Florence, Antwerp—which happened to be major ports.

OLD WOOD processes the traditional Indian lac to obtained a shiny red with strong brown and deep purple hues, and great transparency.

Chlorophyll – Green *(Chlorophyllaceous).*

Chlorophyll is one of the so-called photosynthetic pigment, and is found in all organisms that perform aerobic photosynthesis: **cyanobacteria**, plants, and algae.

Chlorophyll was discovered in 1817 by Pelletier and Caventou who isolated it from the leaves of plant. The two chemists also isolated other substances that would be used in pharmaceuticals, such as caffeine and quinine.

Its chemical structure has of two parts, a poryphin ring with a single magnesium atom in the centre, and a long phytol chain.

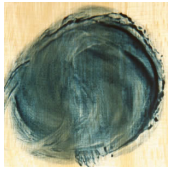
Chlorophyll is also the generic name for a large number of compounds, including Chlorophyll a, which is a microcrystalline pigment with a blue-green colour, and Chlorophyll b, which is green and bright yellow in colour.

Algae containing chlorophyll often has secondary pigments such as carotenoids and phycobilins, which supply yellow, orange, and reddish tones.

In alchemy the colour green, in the form green crystals, symbolised the “secret fire” of the living spirit in substances.

OLD WOOD presents a green hue with a faint hint of yellow, that is warm, clean, lively, and very transparent.

In accordance with the Michel-Eugéne Chevreul chromatic circle, the pigment chlorophyll complements the red pigments that are so profusely used in string instruments, creating harmony through complementariness.



Indigo – Blue *(Indigora Suffructicosa Mill).*

This dye is extracted from plants of the genus Indigofera, of the family Fabaceae and the species *suffructicosa mill*.

Indigo dye was used in Mesopotamia and by the ancient Greeks and Romans (the Greek word *Indikon* means “Indian substance”). In the 13th C. Marco Polo was the first to document the process of making indigo dye in India, and the plant was brought to Europe by Vasco de Gama in 1498.

For many years it was regarded as “the king of dyes”, and it is what gives blue denim jeans their colour.

The chemical compound is called indigotin, and the German chemist J.F.W. Adolf Von Baeyer was the first to synthesise it in the laboratory in 1880.

OLD WOOD’s Indigo is an excellent complement to clear yellow hues such as **Cosmos Yellow** and the **Weld Indian Yellow**), adding the spirituality of blue to the warmth of the yellow.

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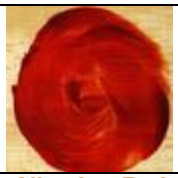
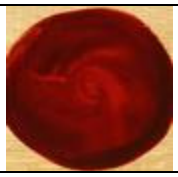
Grounds, Oil Varnishes & Natural Colours

Colour Card

Oil Natural Colours

The **OLD WOOD Colour Card** is based on photographs of original applications of **OIL NATURAL COLORS** to maple wood. The tones and hues are only an approximation to reality, since they vary with the conditions of the light under which they are viewed, or the properties of the computer monitor.

		
Weld - Indian Yellow	Cosmos - Golden Oak	Cosmos -Golden Yellow
		
Alizarin - Red	Cochineal - Dark Violet	Sorgo - Venetian Red
		
Pernambuco - Golden Brown	Alizarin - Brown Red	Walnut - Dark Brown
		
Lac Dye -Red	Chlorophyll - Green	Indigo - Blue

OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

OIL CLASSICAL VARNISHES

Beautiful and Supple Oil-based Varnishes

Old Wood 1700 Varnishes are based on traditional recipes used in the 15th, 16th, and 17th centuries. Formulated by hand, they contain the purest and most carefully selected ingredients, and the cleanest and most beautiful oils.

The selection and balanced formulation of excellent raw materials makes them especially resistance to the passage of time, and endows them with the qualities most highly prized in classical varnishes: fast drying, suppleness, resistance, impermeability, brightness, transparence and beauty.

Classical Amber Varnish

Varnish with a high concentration of resin. It is formulated with Baltic Amber, linseed oil thickened with the sun and polymerized linseed oil.

It produces a beautiful, transparent, warm and resistant layer. It gives one an optimum result to be combined with pigments, colorings and also on glazes. It enlivens the colors and gives depth, luminosity and incomparable solidity.

From many centuries, artists have been using amber to make all kind of decorating materials. Amber is a fossilized form of the resin exuded from trees. The original molecular structure of exuded resin contains acids, oils, alcohol, aromatic compounds, etc. To become amber, these components undergo a series of chemical alterations. Volatile components (terpenes) evaporate and, longer molecular chains appear, forming stronger bonds. This new molecular structure is Copal resin. This hard resin becomes incorporated into sediments and continues the polymerization and the turpene evaporation process under anaerobic environment, achieved through immersion in water. This is the amberization process.

After several millions of years, the resin is transformed into an amorphous polymerized glass with a hardness value of 2 - 3 called amber or succinite, which its chemical formulae is C10H16O.

Old Wood uses a selection of genuine pieces of succinite or Baltic amber, which is warm to the touch and has a characteristic aroma of resin. It is impervious to alcohol and acetone, and occasionally has dark cracks where traces of iron sulphur (pyrite crystals) are found.

This amber is turned into a molten black amber through a deesterification process under strict thermal conditions in which the chains are broken. The fluid is then cooled and crushed to render it soluble in the linseed oil medium.
Linseed oil, or linum usitatissimum, is an unsaturated fatty acid with a large number of non-conjugated double bonds, which gives it a high oxidizing potential. According to their film- forming ability, it is a soft, flexible drying oil.

Old Wood works with pure or crude cold-pressed linseed oil, which is refined and filtered to remove phospholipids and gummy micellar compounds. This oil is subjected to several thermal processes, under strict conditions, to enhance its surface uniformity, drying capacity, and resistance to external agents. Lastly, linseed oils are combined under carefully controlled conditions to ensure their proper performance.

The drying and curing by polymerization of the applied varnish occurs in three stage: induction, initiation and cross linking, in an oxidation process. Autoxidation must be accelerated by means of drying or sicative catalysts. To ensure that it takes place from bottom to top, a careful balance of nontoxic and highly active soluble metallic cations from synthetic carboxylic acids are used, since they work both at the surface and

in depth. Manganese --which is one of the oldest drying agents known-- and strontium --one of the newest-- are both used, in combination with calcium and zinc.

References:

- Heraclitus. (s. XI)."De Coloribus et Artibus Romanorum".Cap.11-A y 44.
- Theophil's Manuscript. (s. XII). Capítulo 37.
- Leonardo Da Vinci (1452 – 1519). "Book of notes".
- Dr. Ketam's. (2ª m. S XV). "Flemish Manuscript".
- Anónimo alemán (1503 – 1506). "Liber Illuministrarius" . Sec. 19.
- Marciana Manuscript. (1503 – 1527). Paragraph 395.
- Timoteo Rosello. (1575). "Della Summa de Secretti Universali".
- Theodore Turquet de Mayerne. (1620). "Pictoria, Sculptoria et qua Subalternum Artium". P. 43 (« The true varnish of lutes and viols »)
- Chrstopher L. Morley. (1697). "Collectanea Chymica Leydensia"
- Mary P. Merrifield. " Medieval & Renaissance Treatises on the Arts of Painting".
- Geary L. Baese. "Classic Italian Violin Varnish"
- Martin Roberts Zemitis. "Violin Varnish and Coloration".
- Luciano Colombo. "The Old Varnishes for Violin Making".
- Vincenzo Gheroldi.«Venici e Segreti Curiosissimi. Cremona 1747». "Il Manoscritto4 (H 113) della Biblioteca Trivulziana di Milano".

Venice Varnish

This is a varnish made with Alerce turpentine of the highest quality and purity, combined with sun-thickened linseed oil and polymerized linseed oil. It is pyrogenated for several hours to transform it into a solid, tenacious resin, similar in color to an amber resin.

It produces a film of great beauty –smooth, transparent, and glossy. It is softer than amber varnish but equally supple and elastic. It may be diluted with linseed oil, nut oil, white spirit, turpentine oil, or lavender oil.

The Alerce turpentine (commonly known as "Venetian turpentine") used by **Old Wood** is a semi-fluid oleoresin from the Tyrol, obtained in the autumn by boring into the heartwood of the European larch tree, also known as the Laricis terebintina, in autumn. It is a clear balsam, light in color, and has a sharp pine aroma.

Its two principal components are turpentine oil and resinous acids, and it is free of abietic acid crystals.

This genuine Venetian turpentine is heated for several hours to remove volatile components (oleum terebinthinae), and it attains a thick resinous texture which, in combination with polymerized linseed oils (see "**Classical Amber Varnish**") generates a synergic effect to achieve a brilliant and tough coating with a color and other properties that are similar to those of amber varnish, but softer.

References:

- Anónimo Alemán. (1503 – 1506). "Liber Illuministrarius". Receta nº 20.
- Marciana Manuscript. (1503 – 1527).
- Theodore Turquet de Mayerne.(1620)."Pictoria, Sculptoria…".

Vernice Liquida Superiore

This varnish is made of pyrogenated Baltic amber, pure Alerce turpentine, sun-thickened linseed oil, and polymerized linseed oil. It combines the properties of **Classical Amber Varnish** and **Venice Varnish**. It produces a very shiny balanced film that is transparent, supple, elastic, and lustrous. It may be diluted in linseed oil, nut oil, white spirit, turpentine oil, or lavender oil.

References:

- Theodore Turquet de Mayerne. (1620).” Pictoria, Sculptoria…”.

Brescia Brown Varnish

This varnish has the same characteristics as **Vernice Liquida Superiore**, but it is processed to give it a deep and transparent brown color like that preferred by the classical master luthiers of the Brescia school.

It combines well with pigments, dyes, and in glazes, and can be used to heighten the color of earlier coats. It may be diluted in linseed oil, white spirit, turpentine oil or lavender oil.

Cremona Varnish

The ingredients used in **Cremona Varnish** - of processed thickened Spanish turpentine, Baltic burnt amber, and cold-pressed virgin Swedish linseed oils - all serve to heighten the varnish’s flexibility, resistance, and elasticity.

The hue of the applied product is somewhat lighter than that of **Classical Amber Varnish**, but just as warm and luminous, obtaining an even more unctuous and prolonged aplications. Achieving excellent levelling, drying and transparency parameters.

Cremona Varnish may be thinned with linseed, walnut, or tung oil, or with spirit mineral, turpentine oil, or oil of spike lavender.

Italian Varnish

OLD WOOD combines several oleo-resinous ingredients with different elasticity ratings such as genuine Spanish Pitch, pure Italian Larch turpentine, and cold-pressed virgin Swedish linseed oils, which are first processed and refined. Our balanced formulation give off a bright, warm, and transparent golden hue.

Italian Varnish features excellent adherence of the dried film the addition of polymerised linseed oils enhances its elasticity even further - It dries well in a uniform coat -, enhacing for the best working properties: optimum during time and levelling performance.

Italian Varnish may be thinned with linseed, walnut, or tung oil, or with spirit mineral, turpentine oil, or oil of spike lavender.

Vernice Comune Originale

OLD WOOD formulates one of the oldest varnishes described in detail in the classic manuscripts.

Authentic Spanish pitch (pegola spagnuola) is chemically and thermally purified to form the base, a brilliant and transparent oleo-resinous compound.

To lend greater flexibility to **Vernice Comune Originale** a variety of thickened and polymerises linseed oils are added until the optimum plasticity is achieved, along with the ideal rheological properties to assure a perfect application and a uniform coat thickness.

The applied film is bright, highly transparent and luminous, and it has a light hue which detracts but little from the colours of the **grounds** and the **Oil Natural Colours** OLD WOOD.

Vernice Comune Originale may be thinned with linseed, walnut, or tung oil, or with spirit mineral, turpentine oil, or oil of spike lavender.

NATURAL PIGMENTS

Natural Pigments: Translucent and full of life

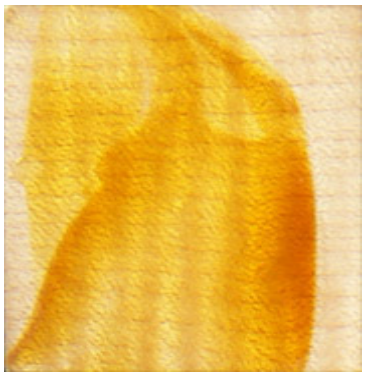
Old Wood's Natural Pigments are obtained from selected plants to make pure organic pigments. No additives or fillers are used to increase their weight or volume.

They are made in accordance with classical techniques and antique formulas to be used with oil, spirit, or alcohol mediums. They are subjected to the strictest quality control standards.

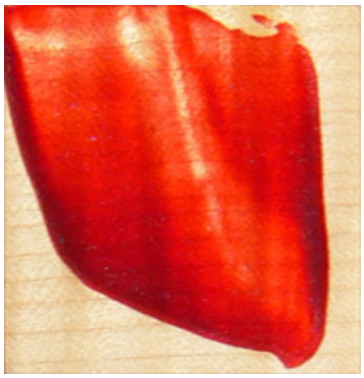
The result is a series of artistic colors which offer a rich palette of warm tones and brilliant shades

Aplication Card and Pigment Range

This colour card was created based on original applications of OLDWOOD oil natural colours on maple wood. The colours you see may be different to the real colors


Weld – Yellow


Cosmos – Golden Yellow


Alizarin - Red


Pernambuco – Ruby


Sorgo – Venetian Red


Chlorophyll – Green

6.- ANNEX

OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

Old Wood®

Grounds, Oil Varnishes & Natural Colours

1700 System

ITALIAN GOLDEN GROUND 1700 (IGG) is a balanced combination of organic and inorganic compounds that exert a controlled and superficial action on the self-oxidising agents of the wood.

Under exposure to natural or artifical ultraviolet light, **ITALIAN GOLDEN GROUND 1700** gives the plain surface of the wood a uniform and transparent golden cinnamon colour. It ensures an excellent finish, with refraction properties that highlight the resinous structures (winter rings in spruce, and marbling and flames in maple).

The inorganic compounds in **ITALIAN GOLDEN GROUND 1700** harden the fibre in the amorphous zones in the wood, strengthening the growth rings without changing their structure, and thus boosting the acoustic properties of maple and spruce.

* Italian Golden Ground 1700 *

APPLICATION SCHEME

FINAL CLEANING ? INSULATING ? IGG 1700 A ? ULTRAVIOLET ? IGG 1700 B ? GENERAL VARNISH

? APPLICATION INSTRUCTIONS ?

PLEASE READ THESE INSTRUCTIONS CAREFULLY

? 1.- **FINAL CLEANING**

? Perform the final cleaning on the instrument as usual. ? It is advisable to clean the instrument with scrapers and then with horse tail (scouring rush) or smooth hound skin (if unavailable, just with scrapers).

? 2.- **INSULATING**

? Prepare ±3 – 5% dilution of gelatine in a glue pot or another organic solution.
? Heat solution and then filter with a piece of cotton cloth or muslin or with an appropriate filter.
? Apply the solution with a brush or sponge:
? **MAPLE**: It does not require to be insulated. but we recommend that one coat be applied. ? **SPRUCE**: Apply 2 or 3 coats. Let each coat dry thoroughly before applying the next.
? If different areas shine more than others, it means that they are saturated with the solution and you have to proceed in removing the excess (gelatine) with a damp cloth.
? Allow to dry completely and softly wipe over it again with horse tail, hound skin or a scraper to remove the raised wood grain.

? **3.- APPLICATION IGG 1700 - A**

? Perform a **test** on leftover pieces of the spruce and the maple used to make the instrument.
? Extract 8-9 c.c. (violin), ±10 cc. (viola) or ±32 cc. (cello) with a syringe in order to prevent contamination of the remaining solution and put it into a glass container.
? Apply the extracted product in a uniform coat on the instrument with a ±3 cm2 sponge.
? Do it first longitudinally and then circularly. ? Do not pressure on the sponge because this could remove the insulating layer.
? Once it has been allowed to dry, place the instrument inside an ultraviolet chamber or in the sun for 3 to 10 hours. The exposure time depends on the level of ultraviolet light in the chamber, which must include between 6 and 10 UV-A and UV-B lamps.
? ? For a more intense ground color, apply a second coat of **IGG 1700-A** and place it inside the UV chamber or in the sunlight for a second time.
? Ex. orientate: **2ª APLICATION IGG 1700 – A** on a **Violin**: ? **MAPLE**: Extract 4cc. ? **SPRUCE**: Extract 2cc. And add 1cc. of distilled water.

? **4.- APPLICATION IGG 1700 - B**

? Extracted ± 8-9 cc. (violin), ± 10 cc. (viola) or ±32 cc. (cello) with a syringe in order to prevent contamination of the remaining solution and put it into a glass container.
? Apply the extracted quantity in a uniform layer over the instrument with a ± 3 cm^2 sponge.
? **Do it** longitudinally first and then circularly.
? Avoid pressing down hard with the sponge so as to not damage the insulating layer.
? Allow to dry for ± 10 hours. Exposure to ultraviolet light or to the sun is not necessary. If desired, you may apply a second coat of **IGG 1700 - B**.

*** THIS IS THE END OF THE TREATMENT PROCESS USING THEITALIAN GOLDEN GROUND 1700 ***

? **5.- GENERAL VARNISH**

? Varnish the instrument as usual **ITALIAN GOLDEN GROUND**. **1700** is compatible with all varnishes based on oil, spirit, alcohol, balsams, and synthetics.

CAUTION

Use only between 20º C and 28º C. Wear gloves, and keep the workspace well ventilated.Shelter t the product from direct light. Never use the IGG 1700-A and IGG1700-B products together. Do not swallow, and avoid contact with skin and eyes. Keep out of the reach of children. Do not dispose of this product into the environment.

Old Wood®
Madrid. Spain.EU
www.oldwood1700.com

OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

Old Wood®
Grounds, Oil Varnishes & Natural Colours

Imprimitura Minerale 1700 is a transparent ground that produces a very high refraction and enhances the acoustic properties of the instrument. It is used as a colourless primer for saturating the pores of the wood.

* Imprimitura Minerale 1700 *

APPLICATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS CAREFULLY

1. To stir well until the blend is homogenised with a small wooden stick.

2. Use vinyl or nitryl gloves, both to facilitate the application of the varnish and to prevent it from being absorbed through the skin.

3. An excellent result is obtained by applying 1 - 2 very thin and uniform coats.

4. Use a brush, and leave small deposits (islands) of varnish on the application zone (top, back, sides, etc.).

5. Use the hands to spread the **Imprimitura Minerale 1700** in circular and long movements, exerting a slight pressure on the wood fibers, and trying not to leave any excess.

6. Allow to dry in the sun or inside a UV chamber. Drying time will depend on the amount of light, temperature and humidity (± 8 hours).

7. Once dry, apply a second coat of **Imprimitura Minerale 1700** following the same directions.

8. Once the varnish is completely dry, gently wipe the surface with a linen or cotton cloth dampened with odourless kerosene (be sure to wear gloves) in order to remove any remaining mineral particles that may have risen through the surface of the previous coat.

CAUTION

Wear vinyl or nitryl gloves. High humidity or too thick an application may increase drying time.
Use in a well-ventilated workspace. Keep out of the reach of children. Petroleum distillate.
Do not ingest and avoid any contact with skin or eyes. Vapor harmful to skin and respiratory tract.
Do not dispose of this product into the environment.

OLD WOOD IS NOT RESPONSIBLE FOR THE IMPROPER USE, HANDLING, OR ALTERATION OF ITS PRODUCTS.

Old Wood®

Madrid. Spain. EU - www.oldwood1700.com

Old Wood®
Grounds, Oil Varnishes & Natural Colours

The minerals in **Doratura Minerale 1700** are processed by hand to ensure a spectacular and warm, clean, and clear golden hue, which is stable under light (7), transparent, and highly resistant to oxidation and deterioration over time. Its use gives high refraction and enhances the acoustic features of the instrument.

*** Doratura Minerale 1700 ***

APPLICATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS CAREFULLY

1. To stir well until the blend is homogenised with a small wooden stick.

2. Use vinyl or nitryl gloves, both to facilitate the application of the varnish and to prevent it from being absorbed through the skin.

3. An excellent result is obtained by applying 2 very thin and uniform coats.

4. Use a brush, and leave small deposits (islands) of varnish on the application zone (top, back, sides, etc.).

5. Use the hands to spread the **Doratura Minerale 1700** in circular and long movements, exerting a slight pressure on the wood fibers, and trying not to leave any excess.

6. Allow to dry in the sun or inside a UV chamber. Drying time will depend on the amount of light, temperature and humidity (± 8 hours).

7. Once dry, apply a second coat of **Doratura Minerale 1700** following the same directions.

8. Once the varnish is completely dry, gently wipe the surface with a linen or cotton cloth dampened with odourless kerosene (be sure to wear gloves) in order to remove any remaining mineral particles that may have risen through the surface of the previous coat.

CAUTION

Wear vinyl or nitryl gloves. High humidity or too thick an application may increase drying time.
Use in a well-ventilated workspace. Keep out of the reach of children. Petroleum distillate.
Do not ingest and avoid any contact with skin or eyes. Vapor harmful to skin and respiratory tract.
Do not dispose of this product into the environment.

OLD WOOD IS NOT RESPONSIBLE FOR THE IMPROPER USE, HANDLING, OR ALTERATION OF ITS PRODUCTS.

Old Wood®

Madrid. Spain. EU - www.oldwood1700.com

OLD WOOD ©
Grounds, Oil Varnishes & Natural Colours

OLD WOOD's Oil Natural Colours collection was developed specifically for simple and easy application to wooden instruments. Natural colours in linseed oil, warm, clear and full of life, designed to be mixed together to achieve an exceptional palette of colours. Natural colours prepared to save time and to do
work life much easier.

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* Oil Natural Colours *

APPLICATION INSTRUCTIONS

1. Take a pinch of each of the colours selected and mix them together in a clean recipient. When you have the desired colour, add a few drops of any product in **OLD WOOD's Classical Oil Varnish 1700** line, and mix it well with the pigments. To obtain the best results with this procedure we recommend **Classical Amber Varnish 1700**. In order to make the application more fluid, add a few drops of linseed oil.

2. To test the colour, use a finger to spread some of the colour mix onto a sheet of transparent cellophane and hold it against the wood to see approximately how it will look when the colour is applied directly. By superimposing additional sheets of cellophane with colour mix you will see how the wood will look after several applications of colour.

3. The colour mix should be applied by hand (use vinyl or nitride gloves), and spread uniformly like a glaze. Use a small paintbrush for the volute and a fine brush to remove any excess colour from hard-to-reach zones. Use the hands to remove excess colour from other zones, using absorbent kitchen paper to clean excess from your gloves, and from the brushes used. Any leftover colour mix can be re-used, but be sure to add varnish to make it liquid enough.

4. Expose the instrument to sunlight or UV radiation in a dust-free area. When the application is completely dry, if any powder or dust is apparent, use a clean piece of linen cloth to wipe the instrument gently. This will remove any particles without damaging the colour. Utensils may be cleaned with raw or refined linseed oil, followed by soap and hot water.

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* Oil Classical Varnishes *

APPLICATION INSTRUCTIONS
READ INSTRUCTIONS CAREFULLY

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Grounds, Oil Varnishes & Natural Colours

1. Prepare in the usual manner for applying oil-based varnish, ensuring surfaces are clean and free of grease.

2. This product may be used as an exceptional medium for applying pigments and/or dyes.

3. When applied alone, as a finishing varnish, this product gives excellent results in terms of transparency, warmth, resistance, and suppleness.

4. Use vinyl or nitryl gloves, both to facilitate the application of the varnish by hand, and to prevent it from being absorbed through the skin.

5. Use a piece of synthetic sponge of ± 3×3 cm., a paint brush or apply with the hand.

6. Apply a thin coat and expose to sunlight or artificial UV light until it is dry (± 8 hours depending on the amount of light).

7. Make sure each coat is perfectly dry before applying the next one (12-24 hours).

8. Thick coats of varnish can producer the opposite of the desired results. High humidity or too thick an application may increase drying time.

9. Polish as with any oil-based varnish.

CAUTION
Use vinyl or nitryl gloves.
Use in a well-ventilated workspace.
Keep out of the reach of children.
Do not dispose of this product into the environment.
Do not swallow, and avoid any contact with skin or eyes.
Petroleum distillate.
Vapor harmful to skin and respiratory tract.

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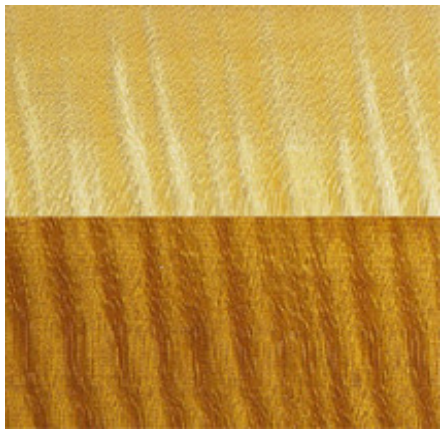
Aplication Card

Italian Golden Ground 1700

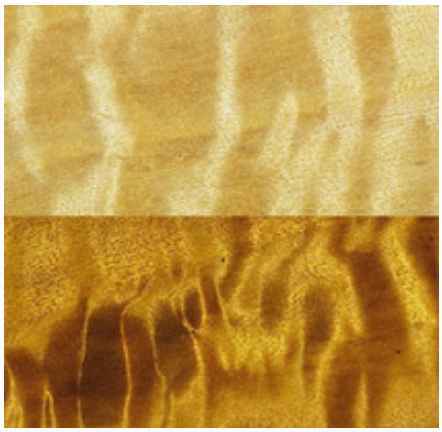
This colour card was created based on original applications of OLDWOOD Italian Golden Ground on different wood types. The colours you see may be different to the real colors

Spruce



Maple

Italian Poplar



Curly Poplar