j p b music
The Coach House
66a Clifton Road
Weston-Super-Mare
N. Somerset
BS23 1BW
website: www.jpbmusic.com
Fax: 01934 613939
Tel: 01934 628600
email: paul@jpbmusic.wanadoo.co.uk
Suppliers of your Requirements for Violins, Violas, Cellos and Double Basses

KOLOPHONIUM

Everything you ever wanted to know about colophony (violin rosin)

a) Raw material - raw colophony is mainly extracted from resin from one of the 110 different species of pine tree. In particular the common, or forest pine is regarded as being a productive source of resin. Trees can be found in Europe, Asia (Taiga), as well as in forested areas of North America and New Zealand. Fir, spruce and larch produce considerably less resin. Because of this, resin products extracted from these sources are, for the most part, used as an additional component in the creation of violin rosin.
The name colophony comes from the old Libyan town of Colophony, where particularly good quality colophony was produced. Back then it was still used for the creation of smoke for medical and magical purposes.
b) Production of raw colophony – the first step begins with the removal of the rough bark. This takes place with the return of warmer weather at a height of 50 cm on trees designated
for resin removal. The second step involves the planing of approx. 1 cm wide V-shaped layers into the thin layer of bark prepared during the first step. Following this, pitch begins to flow through the wound in the tree into the container positioned below it. Wounding of the tree must be repeated every 4 – 5 days. The next stage is distillation: Using steam distillation, the resin is separated into two component parts: steam distillable oil of turpentine and the non-distillable colophony residue. Colophony comes to market in lump, clot or powdered form.
c) Additives for violin rosin – differing ingredients can be admixed to the purest possible raw material. Ingredients added depends mainly on the violin rosin producer, the recipe and the field of application (violin, cello, double bass):
Scraped resin – comes from spruce or pine trees. Scraped resin consists of resin remains that have to be thoroughly cleaned before further processing
Larch turpentine oil – produced by distillation of larch turpentine
Venetian turpentine – extracted by drilling the heartwood of the European larch
Larch balsam – valuable and syrupy resin from trees at least 25 years old
Carnauba wax – comes from a type of Brazilian palm tree. Leaves are cut off and boiled out. This process produces a liquid wax that can be skimmed off.
Beeswax
Balsam turpentine oil – produced by distillation and filtration of Portuguese pine balsam
Mastic – Resin from a type of Greek cultivated pistachio
The list provided may be incomplete, but it does provided an insight into the materials that can be added to raw colophony in the production of violin rosin. Of course, the exact composition of individual violin rosin products, often based on old recipes, remains the well-kept secret of produces.
d) Application – the musician's aim is to achieve optimal application of violin rosin – a round or square shaped dark coloured lump.
The first question arising: Should the piece of violin rosin be roughened or applied as is – namely lustrous and smooth? If the purchased violin rosin is not too hard it can be applied as is.

All renowned produces of violin rosin recommend musicians to thoroughly clean their bow hair before using a new brand. The best way of doing this is to apply a string-cleaning agent with a cloth or a clean toothbrush. When this is completed, run the bow over the violin rosin (or the other way round) until the bow hairs have picked up enough rosin. 10 -12 times for a freshly cleaned bow should be sufficient. 6 – 7 coats for a bow already coated with colophony is enough. To avoid creating grooves, continuously rotate the violin rosin during application.

Be careful not to apply too little colophony - even if the consequence is the creation of copious amounts of colophony dust. Musicians usually compensate for reduced hold by increasing pressure on the bow. The result is a loss of feeling for the musician's own weight application and the result is a tone that sounds "pressed in".

e) The effect of violin rosin – colophony serves in increasing the adhesive friction necessary. It sticks to the rough surface of the bow hairs. Without colophony the bow hair's so-called barb would not be capable of grasping the strings. This can be proved easily using a non-colophony coated bow.

Because of the increased adhesive friction, the bow (or rather its hairs) is able to bring the strings out of their resting position. The strings also move with bow's bowing direction. If the tension of the strings is greater than that of the adhesive friction they spring back.

The great speeds achieved during this phase creates heat, which liquefies the colophony in to a sliding film onto which the string springs back during the sliding phase. Where the energy is used and the heat development caused by the sliding movements is at an end, the hardening colophony causes the sealing of the string with the hair and the process can start over again.

While this is going on, alternation between adhesive and sliding friction causes short, so-called adhesive stroke impulses. This induces the entire body of the violin to vibrate and creates a detectable smell.

The described movement of the strings are not identical with those of the bow. Countless numbers of vibrational phases as described are created during one single movement of the bow.

f) Choosing the right colophony:

Colophony is available in differing qualities for violin, cello and double bass. Although some musicians do use colophony intended for a particular string instrument on an alternative stringed instrument, it is generally better to follow the application recommendations from the manufacturer. After all, producers spend several years testing and tinkering with their products before releasing them onto the market.

Individual product quality is also split into differing degrees of hardness ranging from light-coloured to dark-coloured products. Dark-coloured colophony is usually a little harder than light-coloured colophony and is preferred for use in warmer rooms.

Naturally, each producer regards his or her product as being the best. The opinion of individual musicians is often split.

The best results are achieved at ideal room temperatures and in circumstances where the available colophony harmonizes with the bow hairs and the strings. This interplay between colophony, bow hairs, stings and room temperature should also approach the musician's envisaged ideal sound.

A change to any of these factors can lead to dissatisfaction.

At the end of the day, the best advice is trial and error

Colophony is too old when the softer constituents have disappeared. The colophony becomes brittle and fractures easily and displays only limited adhesive qualities.

Melting down colophony remainders makes very little sense. Softer constituent parts disappear during the development of heat and the result is colophony that is hard and rarely usable.

One last tip: Don't leave colophony remainders on the instrument. Remove the colophony dust using a cloth and mild cleaning agent following each use of the instrument.