



# BALTIC AMBER HANDBOOK

SECRETS, STORIES AND FACTS



AmberPieces   
BALTIC AMBER GATEWAY

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## *Preface*

Dear Reader,

Since the ancient times *Amber* has been *a* mysterious substance - always alive and constantly changing, similar to our human existence. In a way the theory tends to lag behind the processes of nature, for a long time we felt a lack of literature on Baltic Amber. Most of the existing books written on Amber subject were dedicated to scientific research, geology or history while a short, simple and up-to-date handbook did not exist.

Altruistic goal to spread the word and educate people has generously rewarded us since the process of writing this book has enriched our own knowledge and delivered a joy of creation. We hope this handbook will become a source of information not only for eternal amber admirers, but also an interesting reading for the novices.

Sincerely ours,

Amber Pieces – Baltic Amber Gateway  
[www.amberpieces.com](http://www.amberpieces.com)

## Introduction

Kurt Vonnegut once said: *“Here we are, trapped in the amber of the moment.”*



Perhaps he was right, because *Amber* has a certain mystery surrounding it. Obviously, there are different types of stones such as *Baltic Amber* - a beautiful fossil resin resulting from trees, with an origin dating from 50 million years ago. It is believed that this gem is the result of a Northern European pine tree that produced large amounts of resin during extremely warm climate changes. Another interesting fact beside age, history and diversity is that *Baltic Amber* is one of the rarest types in the *Amber* family. The

world's finest *Amber* is considered to be *Baltic Amber* from the Baltic Sea.



Amber can be found practically anywhere, underwater or underground. The European places where large quantities of *Amber* are found are Russia, specifically Kaliningrad, holding over 90% of the world's *Amber* resources; the Baltic States – Lithuania, Latvia and Estonia, where it can be found along the coasts; Poland, where it is washed up on the shores and Ukraine, where the Ukrainian *Amber* is extracted, although it is not as valuable as *Baltic Amber*.

*Baltic Amber* is fascinating not only for the reasons above. It is truly a wonder of nature. For example, it can float on salt water, but it sinks in fresh. When it interacts with fire, *Amber* stones produce a soft burning-pine aroma, the main reason to why it is often used in Aromatherapies and in Medicine. In Aromatherapy, *Baltic Amber* is

used for its calming effects. It is seen as a soft material, with an exquisite variety of shades and colors, tones and hues. And above all, each stone is unique and never the same another. These beautiful, mysterious features are the result of chemical reactions and nature's wonders.



It is important to know that *Baltic Amber* is found in solid formula, as it is a hard stone. Its hardness measures approximately 2.0 to 2.5 on the Mohs scale, with a density varying from 0.96 to 1.096 g/cm<sup>3</sup>.

By far the most fascinating fact about *Baltic amber* is that this stone is still alive, due to its negative electrifying and a continuous internal metamorphosis.

## Amber Properties

*Amber* is a fascinating semi-precious stone used in jewelry making, treatments, cures, ornaments, art and many more. *Amber properties* are extremely beneficial to people around the world, this being the main reason why people want to make the best of it.



*Amber* is warm to the touch and when held in the hands it gives out a relaxing faint scent of tree resin. It is also the only fossilized resin that contains up to eight per cent succinic acid, commonly known as *amber acid*. This acid is practically a multi-purpose substance very efficient when used in a therapeutic manner. The majority of this substance is located in the *amber* cortex and in its surface layers.

*Amber properties* also include color variety. *Amber* can be found in various colors such as yellowish-brown, blue, green, red, black, white or clear. Some of these colors are very rare, while others are



very common. The color of each *amber* stone also decides the stone's price and value.

Other physical *amber properties* include the fact that it sinks in fresh clear water but floats on the surface of salt water, making it very easy to determine if the *amber* gemstone is fake or real. In general, *amber* has a density oscillating between 0.96g/cm<sup>3</sup> and 1.096g/cm<sup>3</sup>.



When it interacts with fire, *amber* burns and generates a pleasant resinous smell and an aromatic smoke used as incense in Christian churches. Plinus once said that “*amber* shavings immersed in olive oil burn lighter and longer than linen fiber” and we can definitely agree with him on that.

Other *amber properties* include the fact that *amber* electrifies negatively, meaning it is “alive”, as its inner transformations are still active and in a continuous metamorphosis. It also has a hardness measuring between 2.0 and 2.5 on the Mohs scale.

*Amber* has been used as an antibiotic since ancient times, when it would heal cuts and ease the pain of wounds.. Later on, modern medicine would use this fossilized resin in order to develop cut healing balms, wound dressing plasters and others. Today, it is used in the composition of other treatments and in aromatherapies.



*Amber properties* are the reason why amber is so useful and wonderful, and why humanity has managed to make the best of it by using it in different ways to ease our lives and make them more beautiful.

## *Formation of Amber*

The *formation of amber* began millions of years ago, involving nature's elements and climate changes. Back in prehistoric times, in a geographical zone known as Northern Europe today, sudden

subtropical climate changes formed the perfect environment for the growing of conifers. Baltic amber originates from the tree resin of these conifers.



When the ice ages struck, Baltic amber was transported in the process of bed deposits formation, mainly because amber is light and weighs little. Many of today's amber stones actually relocated quite a lot during these natural environmental changes. It is important to know that amber was formed around 50 million years ago from coniferous trees, known as *Pinites Succinitera* in scientific works.

During the Palaegone period, south-western valleys originating from the Fenoskandivanian continent were the homes of many trees and coniferous forests. The ambient temperature grew warmer, generating high amounts of moisture, high air temperatures and over-secretion of tree resin, all due to changes in

the climatic conditions, sea transgression and the influence of the Gulf Stream. Also during these extremely warm periods, forests were supplanted by tropical leaf trees, suitable to this warm climate. We know that the tree resin went into various stages of transformation before becoming amber. These stages include the polymerization, the oxidation, the isomerization, the fermentation and the ripening process in alkaline soil originating from the Sambian peninsula.



Volatile terpenes evaporated from the secreted tree resin, resulting in a quick hardening process. In time floods and rains washed away the hardened tree resin along with forest soils into river streams and seas. There, the tree resin became “blue soil”, which is deposited glauconitic sea sand sediment. Amber was born below the sea surface in a soil formation known as “blue earth” and extracted by humans with the help of mining techniques. Of course,

“blue earth” is but a generic name, as the formation actually has a greenish color generated by the amount of glauconite. Glauconite is a geologically marker clay, found only in saline marine climate, formed under anaerobic non-oxygenic conditions. Without any doubt, the tree resin was affected by physical and chemical factors and climate changes on a time span of millions of years. The climate changes altered the land and sea’s maps, so amber was influenced many times by sea actions, deposits of sediments and geographical relocation.

Today, the largest amounts of extracted Baltic amber deposits are found in the Samland Peninsula, the home of an ancient forest, and also a 400 square mile area situated near the Baltic Sea. The world’s largest amber deposits reside in the Peninsula of Sambia, in Kaliningrad, Russia, where blue soil is located 25-40 meters below ground level.

## *The Origin of Amber's Name*

Baltic amber is a fossilized coniferous tree resin that contains high values of succinic acid – up to 8%. Succinate gives Baltic amber the status of being one of the world's finest amber gems, because of the other 100 fossil resins, none contains more than 3% succinic acid. However, some of them can be worked as amber.

Amber is found underwater or underground in natural deformed forms such as stalactites, drops, fillings in the crevices of resinous trees. The revealing forms of internal natural casts of amber show the proof of prehistoric trees of unimaginable sizes. Some amber pieces weigh 2 to 3 kg, while the biggest known amber piece weighs 9.75 kg. Due to climate changes, amber can be found in different shapes and sizes from boulders to rounded grains.



Natural weathering adds more beauty to the amber stone, compared to the pieces found underwater or underground. That is

why the Polish Baltic amber is more beautiful than the Sambian amber found in mines that has been below sea level for 40 million years, in the “blue earth” environment.



So what is the *origin of amber's name*? The English “amber” derives from the Arabic word of “anbar”, also known as “ambar” in Medieval Latin or “ambre” in Old French, and at first described a precious type of oil derived from sperm whales, which is now known as “ambergris”. After the year 1400, it was used to describe fossil resins and it has stayed that way until the present day. Both ambergris and amber were confusing, because they would be found in the same places, washed on shores. While ambergris is less dense than water and floats on it, amber is less dense than a stone, but denser than water, so it sinks. The “ambar” word was brought by the Crusaders. The French gave a bit of help in distinguishing the two substances: ambre gris (gray amber) became ambergris and ambre jaune (yellow amber) became “amber”, the fossil resin known today.

In the 4<sup>th</sup> century BC, Theophrastus makes his first historical mention of amber. The Greeks called it “electron” or “formed by the sun” and it was strongly linked to the Greek mythology of the Sun God Helios, also known as Elector or the Awakener. The Greek legends speak of the murder of Phaeton, Helios’ son and how his mother and sisters grieved his death, their tears turning into amber stones.

Electricity and electron derive from the Greek word for amber, when William Gilbert showed how amber could attract other substances. The first analysis of elementary charges of amber was in 1891, by Irish physicist George Stoney.

The first mention of amber inclusions was found in Pliny the Elder’s work, *Naturalis Historia*, where he correctly theorized that somewhere in the beginning, amber was in a liquid state so the insects became trapped in it. He named it succinum or gum-stone, so later on the name was used to describe the succinic acid or the succinite, a term describing a particular kind of amber by James Dwight Dana.

When heated, amber softens and eventually burns, leading Germanic civilizations to call it “burn stone” or “barnsteen”, “Bernstein”. Later on, the Polish named it “bursztyn” and the Hungarians, “borostyan”. Heated in temperatures above 200°C, amber is decomposed into amber oil. What remains is a black residue called amber colophony or amber pitch. If dissolved in turpentine oil or linseed oil, it turns into amber varnish or amber lac.

Amber from the Baltic shores has been traded since ancient times, forming the Amber Road, while on the mainland was traded 2000 years ago. The natives here called it “glaes”, similar to glass. The



Baltic Lithuanian name for amber is “gintaras”, while the Latvian is “dzintars”. Along with the Slavic term of “jantar” and the Hungarian gyanta (meaning resin) this originates from the Phoenician “jainitar” – sea resin. Today, the Slavic languages of Russian and Czech use the old Slavic name, while the Polish people rarely use “jantar”, although correct, but instead refer to amber as “bursztyn”, the German term.

## *Amber Stones- General Facts*

*Amber stones* are known worldwide as semi-precious gemstones, formed over 50 million years ago. But there is more to them than meets the eye.

For example, a large amount of *Amber stones* can be found underwater, due to rivers that carried the resin into oceans, seas and other water supplies. A significant amount of *amber stone* is found underground, as a result of ground modifications, earthquakes, natural disasters and climate changes.



*Amber* powder was used to fumigate people's homes. It also saved a lot of people during the time of the bubonic plague, an epidemic that killed a significant proportion of Europe's inhabitants. *Amber jewelry* was used to cure headaches, back pains, arthritis, rheumatism and fatigue. It is said that Martin Luther carried *amber stones* in his pocket as a pain reliever.

Not only Europeans used *amber* in medicine, but also Egyptians. An interesting fact is that Egyptians placed *amber stones* under the skin of their mummies, as they believed in its power of preventing decay or destruction. Other ancient civilizations such as the Romans and Greeks believed the stones had magical powers. Hippocrates himself mentioned the benefits of *amber* in his early writings. The Greeks saw amber not only as a medicinal stone, but also as a symbol of social status, beauty, power and influence. The Chinese used to bury *amber* in the ground during their traditional festivals, honoring both hosts and guests.



It is also fascinating how *amber* reacts when combined with other chemicals and how the reaction benefits the human body. For

example, balms and *amber* infusions, combined with alcohol, were highly recommended for external use. Concoctions containing *amber stones* as a main ingredient were used for heart disorders, respiratory complaints such as asthma and bronchitis, and blood circulation problems for both young and old.

Above all, *amber* is used in jewelry and art. Craftsmen and jewelers are fascinated with the flexibility of this stone and its beautiful warm composition.

*Amber stones* are mysterious gems, always alive and constantly changing, similar in a way to our human existence.

## *Natural Amber Colors*

Amber stone colors vary one from another. Contrary to common belief, the amber stones used in jewelry do not only have a natural yellowish color. Basically, amber already comes in different natural colors, and there is no need for jewelers to treat the stones artificially in order to create colorful jewelry.

Amber stone colors are influenced by the environment, water, soil and resin. Climate changes and chemical reactions or residuals trapped inside the tree resin contribute to the color palette of amber as well.



Green Amber jewelry is made using green amber stones, which are extremely rare. A deep shade of green means the amber stone is very rare and it is worth a lot more than the common amber color. Treated with heat, the green amber stone draws out an even more vivid beautiful green hue. Related to this color, there are also light-

green and yellow-green amber stones, which of course tend to be less prized.

Even harder to find than green is the Blue Amber stone, which is rarely used in making Amber jewelry. Even though the stone appears blue under one type of light, under others it can look similar to a standard yellowish amber. But combined with the right jewelry and metal, blue amber jewelry can really be unique and become one of the most interesting and wonderful amber stones that can ever exist.



There is also the white-colored amber with milky-white hues. These white amber stones are extremely appreciated among jewelers

around the world, even though it is not as popular as other colors. It is extremely hard to find pure white amber stones and most of them contain impurities. Altogether, white amber stones account for less than 2% of the global amber supply.

Red amber stones are as rare as blue ones, yet more commonly used in amber jewelry. The colors are vivid and extraordinary in deep, eye-catching hues. There is also brown amber, black amber and clear amber used in the making of amber jewelry. Clear amber is extremely appreciated and prized among jewelers for reasons such as preservation of insects, feathers, prehistoric organisms, bugs and many more. Few clear amber jewelry pieces exist and most of them form the center of attention for amber collectors.

Brown amber stones are similar to standard yellow ones, only darker in terms of hues and tones. They are of course extremely common and inexpensive, but they look great on silver jewelry, adding a rich, deeply defined look.

Last but not least, black amber stones are the darkest of all. Statistics show that less than 15% of the global amber stone supply is made of black amber. The dark amber color is the result of the large amount of impurities and plant matter found inside the tree resin. Black amber jewelry is one of the most elegant, deep and impressive forms of amber accessories. Held in poor light, the amber stones look jet black, while held up to the light, black amber gains tones and hues of dark red or dark brown.

With so much color, history, evolution, transformation and warmth, the amber stone colors and amber jewelry itself are a true wonder of nature, a wonder that people treasure and admire.

## Amber Chemistry

As with many other semi-precious stones, *Amber* is the result of nature's power - millions of years of constant change and a process that we can refer to as *amber chemistry*.



*Amber* is the result of tree resin and residual life forms such as plants, insects and small tree pieces that were buried underground or underwater for over 50 million years.

Some *amber* stones also contain inclusions; these are extremely rare and usually found only in museums and private collections. It is interesting how inclusions can stay unaffected throughout millions of years without decay distortions of the fossilized animal. How this is still possible remains a mystery, and most people believe it has something to do with *amber chemistry*. Some believe that this process involves compounds called “terpenes”, a substance that is supposed to dehydrate the inclusions, and stop the process of



natural decay. Of course, it is obviously due to the fact that tree resin is not the same as tree sap, mainly because not all trees can exude resin. *Amber* is nothing but a fossilized resin of coniferous trees and some angiospermous trees that lived millions of years ago on Earth.

*Amber chemistry* is a fascinating process that creates what people believe to be one of the most intriguing and mysterious semi-precious stones found in the entire world. And most of the world's *amber* resource is found along the Baltic coast. Baltic *amber* is thought to be one of the most famous and finest in the world.

It is worth mentioning that Baltic *amber* contains succinic acid, an acid traced to a certain species of tree which is not widespread around the globe. *Amber* is basically a form of hydrocarbon and has the same chemical origin as the tree itself. This chemical bonding between the tree and the stone significantly changes over time in accordance with climate changes, temperature influences, pressure and other factors.



Under certain analyses, *amber chemistry* does not follow the traditional, general rules of chemical interactions and modifications. For example, advanced analyses show that even within the same fragment, there are different variations in the chemical concentration due to a variety of hydrocarbon components. This is why numerous chemical formulas are attributed to *amber*, such as  $C_{10}H_{16}O$  -  $C_{13}H_{40}O_{14}$  -  $C_{12}H_{20}O$ .

These wide variations are the result of *amber* itself. The main reason is simply because *amber* is not itself a true mineral in its solid form, but more of a plastic organic stone with a variety of mixtures, therefore precise qualifications cannot be made with any exactitude.

To conclude, *amber chemistry* is extremely complex and difficult to classify exactly - another reason why *amber* is such an intriguing and mysterious stone.

## *Amber Classification*

In terms of *amber classification*, there is a wide variety of *amber* products and gemstones that directly depend on the degree of process and the initial raw *amber* resin material.



CIBJO, which is the International Confederation of Jewelry, Diamonds, Pearls and Stones (in French, la Confederation Internationale de la Bijouterie, Joaillerie, Orfeviere des Diamantes, Perles et Pierres) recommends precious and semi-precious stone classifications. Even so, *amber classification* is not uniformly defined as a source material. The name of *amber* was previously attributed solely to the succinum acid. An example is the Baltic *amber* and fossilized resin products which came from the same deposits, such as gedanite, beckerite or stantienite.

During the 1950s, each *amber* piece received its name in accordance to age and geographic specification. This change took place due to the introduction of fossil resin found in the eastern part of islands such as the Island of Hispaniola, found under the property of the Dominican Republic and under the name of

Dominican *amber*. *Amber* older than 1 million years was named differently according to geographic location.

Some *amber classification* relates to regions such as Sicily, Mexico, Burma, Canada or Borneo. Sicilian *amber* became known in the *amber jewelry* industry as simetite, derived from the name of Simeto River in Sicily, while Mexican *amber* derives from the Chiapas state in the Gulf of Mexico. Burman *amber* is currently known as burmite, while on the other hand Canadian *amber* is named cedarite, a name deriving from the Lake Cedar region where it was found. Borneo *amber* originates from Sarawak, part of the Malaysian island. These are only a few of the many *amber classification* names currently wandering around in the *amber* gemstones and the *amber jewelry* industry.



Also notable is the following interesting fact: products originating from fossil resins that do not belong to succinum are not considered to be playing a major role. This is characteristic of the sales structures in the market business. These other products made

of fossil resins gather less than 2% of the sales structure in comparison, for example, with Baltic *amber*, which is one the finest *amber* resin products in the whole world. The other fossil resin products are not usually big players in what concerns the global market.

These are the reasons why *amber classification* is important in the *amber jewelry* industry and why it directly depends on the degree of *amber* processing and the initial raw *amber* resin material.

## *Inclusions in Amber*

The *inclusions in amber* are more than just mere ordinary insects and they surely are a lot different to modern insects. Most of these ancient insects are extinct species, extremely rare and one of a kind, that make your amber stone unique. Imagine that amber inclusions also appeared in the film Jurassic Park, which is proof of how fascinating are these organic residuals and insects trapped inside.



Those pieces that contain insects similar to those in our present day are usually embalmed inclusions in modern fake resin, such as copal or other surrogate materials. They do not even compare with the real inclusions found in real amber. It is extremely exciting to find

something trapped inside an amber fossil resin, because these small creatures are proof of a distant past.

*Inclusions in amber* are not related to insects solely. Many other organic residuals that were trapped inside are worthy of this name. We can include in this category plants and rare flowers, larger insects and even small animals such as frogs. As you may know, or may be just finding out now, amber is a fossilized tree resin, with a history of millions of years and many formation processes. During its formation process, while the tree resin was still fresh, many small creatures were trapped in the sticky substance. Fifty million years later, the insects are preserved within the amber stone. The bigger the animals found inside, the rare the amber piece becomes.



So what insect species are found inside amber? You can find various species such as ants, bees, wasps, flies and gnats and sometimes exotic species such as grasshoppers, moths and butterflies, termites, beetles and praying mantises. Inclusions can contain other

non-insect animals such as spiders and centipedes, scorpions or even larger ones such as frogs and lizards. However, you will not find *inclusions in amber* of large-scale animals such as mammals and birds, although feathers and fur may be found in some cases. Plant remains include flowers, mushroom pieces, seeds, pine needles and cones, leaves and stems.

In terms of Paleontology, *inclusions in amber* are the proof of fauna and flora changes, of animals and plants that co-existed millions of years ago, but are extinct today. They provide increased knowledge in plant and animal species' evolution.

Going back to our modern day, people see amber as a promising business, as collectors world-wide invest money in the purchase of unique *inclusions in amber*. They believe these pieces will cost a fortune in the future. Also, in Western Europe amber gains more and more interest and admiration. For example, Germany has established an Amber Union of over one hundred scientists, collectors, business reps and people from the art world who spend hours discussing all there is to know about this wonderful semi-precious stone.



## *Life in Amber*

Amber is the result of fossilized tree resin formed through millions of years of exposure to nature's elements and climatic changes. During prehistoric times and from the beginning of humanity, people always thought of amber as having magical powers. Perhaps amber does have magical powers, if we were to relate to all the well-preserved fossils and organic residuals found inside the resin.



*Life in amber* is various indeed. You can find different species of insects and arachnids or even larger animals forever trapped inside these beautiful gems. Larger organisms, such as scorpions and lizards, were also found in amber, along with full 3D details such as mouth parts, antennae and hairs. Not only were animals preserved, but also plants. Take for example various species of fragile organisms such as nematodes, mushrooms and prehistoric plants that have been so well preserved in amber, but would have been impossible under normal processes of fossilization.

Moving on to ancient times, amber was used in both adornment and merchandise trading. We can even compare amber's road in

ancient history with the silk road in ancient China because it had that much significance to people around the Globe. Ancient grave excavation findings show amber amulets dating from 35 000 to 1 800 B.C. Ancient civilizations were also familiar with plant resin's preservative qualities. Take for example the Egyptians. They used resins in the embalming process of their dead. Meanwhile, ancient Greeks used them in wine preservation, while others used amber in fine art and sculpture. Amber was also used for its medical values, and during World War II people used it as a conductor in rockets.

Current times provide a set of different interests in amber. Modern research offers proof that the DNA persisting in amber-trapped organisms can be of good use. George Poinar, for example, provides information regarding what *life in amber* was like millions of years ago and shows how important the information provided by this wonderful gem is. He managed **YEAR** ago to extract 130-million-year-old DNA samples from insect specimens, and even though the samples were damaged, enough sequences were provided to identify the species.



So amber lets us know more about the ancient past, its climate, flora and fauna. And for the scientific world, we can say that *life in amber* gives us a view of the past that was never seen before.

## *Amber in Ancient History*

*Amber* has been popular among writers since the B.C. era, so here are some of the most important records concerning *amber in Ancient History*.

The earliest written record dates from 883 B.C. and was discovered in the geographical zone of Egypt, in obelisk stone carvings. It states that Ashur-Nasir-Apal, an Assyrian ruler, sent his country's people to "the land of *amber*", a land where seas wash the *amber* shores "like copper". The inscription is found in the British Museum.



In what concerns the electric properties of *amber*, Thales (of Miletus) was the one to first mention them and to compare them with a magnet's attraction force. Aristotle is the first to highlight

explicitly the resinous origins of *amber*. He also detailed *amber* and natural magnetic experiments in 600 B.C. and believed, just like Anaxagoras, that *amber* is made of soul. In 32 B.C., Theophrastus also experimented with *amber*.

Moving on to other examples of *amber in Ancient History*, the following civilizations found great significance in *amber*: Assyrians and Egyptians, Greeks and Romans, Phoenicians and Etruscans. Legends in Ovid mention the story of when Phaeton, the son of the Sun god Phoebus, convinced his father to let him drive the Sun's chariot. But one day he drove it across the sky too close to Earth and the chariot was set on fire. In order to save the world, Jupiter struck Phaeton, who was hit out of the sky with thunderbolts and died. His mother and sisters were turned into trees because of their grief and their tears were dried by the sun into *amber* pieces.



Other ancient writers, such as Nicias, believed that *amber* is the very essence of the setting sun. In his writings, *amber* was congealed in the seas and washed up on the shores. The electrical properties of the stone gave it other names. For example, *amber in the Ancient History of Greece* is recorded as “Elektra”. The ancient poet Homer also used *amber* as an inspiration in his writing. To be precise, he was probably thinking about it when describing “a brilliant electron” on the shields of his heroic characters. The Greek traveler called Pytheus of Massilia is the first to describe washed-ashore *amber* that was later on found by natives and sold to the Teutons. The latter delivered it to Gallia and later on to its final destination: Massilia. Pytheus traveled in ancient times from the Mediterranean Sea all the way to the Scandinavian coasts.

Euripides (480-406 B.C.) was a leading Greek figure in drama and an important disciple of the sophists who frequently mentioned various *amber* features, including the fact that the gemstone has a transparent gleam. Plato (427-347 B.C.), who was an outstanding philosopher, also gained an interest in *amber* and analyzed the similarities between *amber* and magnetic properties, described in *Timaeus*, one of his famous works. Another great Greek philosopher, Aristotle (384-322 B.C.) was the one to launch valuable ideas concerning the origin of *amber*. He also mentioned a resinous origin of *amber* in the *Meteorologica* treatise. This happened in an interesting circle of events: Aristotle’s methodological start to the study of nature was of course physiology and the exploration of emergence of life, evolution and the decay process of a natural body, along with all of nature’s laws. He proved that *amber* was nothing more than hardened tree resin.



It is notable how *amber in Ancient History* was the center of attention in writings, experiments and philosophies. For example, Pausanias, a Greek author and traveler from the 2<sup>nd</sup> century B.C., was fascinated with the description of a great number of Greek cultural monuments, extremely famous at that time. He also mentioned in his work how rare *amber* is, how valuable it becomes to people and how fascinating it is in comparison with different metal electrons such as gold and silver alloy.

Arabian scientists such as Al Rasius (864-925) and Ibn Sina (980-1037) made good use of the pieces of information gathered up by the ancient authors and included them in the presentation of new medical recipes, such as advice on how to clean an eye after a blade gets in it with the help of a rubbed plate of *amber*.

It is fascinating to see how often there are mentions of amber in Ancient History and how much significance this stone had in medical recipes, writings, experiments and everyday life.

## *Amber Myths and Legends*

*Amber myths and legends* have been around since ancient times and people have constantly indulged their interest in this gemstone's mysterious history.



Humanity has always had a soft spot for love stories, romantic tragedies and dramas. Based on these facts, one of the most beautiful, and at the same time tragic, love stories of all time comes from Lithuania.

### *The tale is about Perkunas*

Perkunas, the God of Thunde, had a beautiful daughter named Jurate who lived in an underwater palace completely built of *amber*. The palace was located in the Baltic Sea area. Around the area also lived a fisherman, Kastytis, who used to cast his fishing nets within the underwater kingdom. Jurate sent her many handmaids to ban Kastytis and prohibit him from fishing in her



kingdom, which was forbidden. The fisherman ignored the maids' warnings and kept on enjoying the successful poaching. Jurate realized she had to tell him in person, as he was quite impervious to her wishes and orders. So she personally delivered him a message to cease immediately all fishing activities in those waters. But as soon as she laid eyes on him, Jurate fell in love. As with all love stories, this became a major turning point for both of their lives, so she brought the fisherman back to the *amber* palace with her.

Unfortunately, it was a short, tragic and dramatic love affair. Perkunas, Jurate's father, betrothed his daughter to Patrimpas, the God of Water. He was incensed to see that his own daughter would commit to having a relationship with a mere mortal. So in an act of rage, the God of Thunder destroyed the beautiful mystic *amber* palace with a lightning bolt. In the process, Kastytis was killed and Jurate was imprisoned within its ruins for eternity.



The *amber myths and legends* say that once in a while when storms occur in the Baltic Sea, the soft fragments of that heavenly underwater palace are washed up on the Baltic shores and coasts. Many of these small pieces and fragments are tear-shaped, and are said to be the tears of grieving Jurate who still cries for her lost lover.

*Other amber myths and legends refer to birth from fire and water*

This particular story was mentioned in Ovid's poems and writings; he described the myth of Phaeton, "the shining one".



He was the son of Helios, the Greek Sun God, and Klymene, the daughter of Okeanos – the child of fire and water’s archetypal union. Phaeton grew up with his mother. In his childhood, he was teased by kids of the same age about his unclear descent. So he decided to prove to everyone that he was worthy of his origin and that the Sun God Helios was his real father. He managed to persuade Helios to let him drive the sun-carriage across the sky for a one day period. But Phaeton was young and lacked experience, so he didn’t quite manage to tame the horses and this led to a tragedy. When half the earth had been burned by the sun, Jupiter sent a thunderbolt at him. Phaeton fell into the river of Eridanus and drowned. While his mother and sisters grieved for him, they froze and became trees, and their tears were transformed into *amber* stones. This explains the epithets of “tears of the Gods” and “tears of the Daughters of the Sun”.

These are only two of the most beautiful *amber myths and legends* written by writers and poets throughout history, showing how much people worshipped *amber*.

## *Amber in Religion*

It may seem hard to believe, but *amber* has an interesting history and a tale worth telling from generation to generation. Today's tale is *amber in religion*.



In the Paleolithic times known as the Early Stone Age, *amber* was already seen as a valuable raw material. It was also of great significant value in ornamental goods production in major civilizations across Europe, the Middle East, Asia and even the Far East for many centuries.

*Amber in religion* was a key point in people's beliefs. Research and excavation sites have revealed different types of *amber* shapes and forms. It is believed that each of them had a different significance in various cultures. Take, for example, the solar cult, a cult directly

linked to fertility. As a basic attribute of this cult, the people used flat round discs made of *amber*. They would decorate the discs with different series of dot applications in shapes of crosses and religious symbols. Also used in fertility tribes was the symbol of the “mother-goddess”, a schematic representation found in anthropomorphic female figurines. Male figurines or phalluses were commonly associated with ancestor cults, becoming representative symbols of power, heroes and gods. All these figurines were made of *amber* or at least contained small fragments of the gemstone.



Other cults, such as the battle-axe cult, would use amulets made of or containing fragments of *amber* in shapes such as double-headed or small axe-headed miniatures. Hunting cults would use zoomorphic figures and figurines which served as protective charms for the safe-guarding of their warriors and wearers against common

dangers encountered in their hunting expeditions, such as attacks by wild animals or other tribes.

*Amber in religion* was also present in Ancient Greece and Ancient Rome. For example, both Romans and Greeks thought of *amber* as having magical powers due to the stone's electrostatic energy. They also believed that this gave it the power to draw all misfortune away from people. And in Ancient Egypt, people also trusted in *amber's* magical powers. Recent findings show that among other burial habits, Egyptians would place pieces of *amber* beneath the hand skin of mummies. They saw it as a way of protecting the mummy from decay and destruction.

*Amber* amulets buried in ancient graves were placed to protect the dead in their afterlives. For example, the Zuni Indians produce to this day various *amber* amulets, occasionally combined with other semi-precious stones such as turquoise, for both ritual purposes and artistic effect. These talismans would also have a protective power over the Indian tribes. These beliefs of the safeguarding and protective qualities of *amber* are becoming more popular in other societies as well, such as Japan and Germany. *Amber in religion* is found in many different cultures and forms.



People introduced into local folklore their convictions that *amber* possesses wonderful properties. These convictions lasted for centuries and are still present in some cultures today. Take, for example, the Kurpie region. Here, each bride has to wear a necklace that contains at least one *amber* bead with organic inclusions. The bead is both a meddler and an amulet. These necklaces are handed down from grandmothers to granddaughters, from one generation to another, in great festivities and ceremonies. This is characteristic of Kurpie and Cashubian families.

We can conclude that *amber* has a significant value and importance, and that *amber in religion has taken* many forms and interpretations.



## Amber and Art

*Amber* is an extremely flexible stone, so many jewelers and craftsmen have tried to combine *amber and art* in their creations. Not everyone can create art using *amber*, due to the fact that it is a challenging stone, requiring creativity, imagination and dedication.

Dating back thousands of years, people used their religious beliefs and craftsmen not only to create jewelry, but also to carve beads and charms or any other type of symbolic object which would be used in healing rituals, therapies, festivals or home decorating. This was their way of combining *amber and art* at the same time. The Etruscans used *amber* each time they depicted gods and divine entities, while the Greeks believed that *amber* is the substance of the sun, calling it “elektron”. There are also Greek myths about *amber* and the stone’s power. It is interesting how the Romans were fascinated by this stone and how their legions were dispatched in the Baltic area just to search for *amber*.

The oldest amber artifact excavated from ruins underground is a hewn bead dating back to approximately 11,000–9000 B.C. These findings give *amber* an important cultural significance. Following the years 3400 to 3100 B.C., large-scale productions begin to occur, using objects carved in *amber*. Soon after, between 3100 and 2500 B.C., *amber* trade began in the Baltic region, where large deposits of transparent *amber* were found. We can say that *amber and art* share a lot of history together.

During the Middle Ages and focusing especially on the 14<sup>th</sup> century, *amber* guild establishments appeared in the Baltic area and along the Baltic coast. These guilds’ artisans and craftsmen made good use of *amber*’s beautiful features such as delicacy, flexibility, colors

and transparency. An impressive number of decorative objects for religious or court use were created using this fascinating stone.



The 16<sup>th</sup> and 17<sup>th</sup> centuries brought a new perspective for craftsmen interested in combining *amber and art*. Artisans perfected the old methods of *amber* sculpting and relief carving, turning these traditional techniques into new skills. One of them is the “encrustation”, referring to the gluing intricate *amber* mosaics that were previously pieced together onto a piece of wood. The other one is the “verre églomisée”, a technique that focused on engraving ornaments and designs such as landscapes or phrases onto the back of clear and transparent *amber* pieces. The details were often highlighted using gold foils or pieces of ivory. This led to surpassing the previous centuries’ creations and combinations of *amber and art* in terms of size, intricacy, beauty and mastery.



Some objects created from *amber* would also be used as boxes to store other *amber* objects. For example, the rich would use a so-called Knight's Set – a case containing clothes brushes, toothbrushes, jars, ointments, snuff boxes and other *amber* objects. Some of them can be found in the Ekaterininskaya Palace, Saint Petersburg.

These are only a few examples and reasons why *amber and art* are an amazing combination and why craftsmen all around the world enjoy working with this semi-precious stone to create wonderful, amazing things.

## *Superstitious Beliefs about Baltic Amber*

Baltic amber is considered to be the world's finest amber, and because people believed it had magical powers, it is only natural that superstitious beliefs developed. Even our ancestral mothers believed that healing amber had special connections with women. Following is a series of superstitions believed by people back in the days.

1. If you were a woman trying to get pregnant, the best way to do it is to wear amber stones placed low on a belt around the waist or carry them in a pocket to ensure conception.
2. The small plants and animals trapped inside the amber resin create a direct link between us and the Universal Life Force.
3. Carve amber stones into shapes such as rabbits, frogs and fish and send them as a gift for those who wish to get pregnant. Apart from amber's ability to help in conception, the combination of these three animals would produce even more offspring.



4. Amber helps in drawing out the body's negative energy and so the body heals itself by turning it into positive energy that will purify body, soul, heart and spirit.
5. There are ways to bring luck into your life using amber. Amber stones worn in pockets, purses or around the neck are the perfect good luck charms.
6. Amber stones help you in making decisions, when they become the hardest thing you have to face. Simply hold one in your hands and place it over your heart. This way, the amber will make your decision process much easier.
7. Everyone dreams and hopes of a brighter, beautiful future and these dreams come in all shapes and sizes, so it is difficult to make them come true. But dreams can come true if you sleep near amber stones, because they help you in making the correct choices.

8. Amber has a metaphysical property to attract love in the life of its owner.
9. A talisman is an artifact charged with positive energies that are transmitted to the wearer. If the talisman contains natural objects with similar powers, then it becomes extremely powerful and strong. So because people have empowered amber stones since ancient times, the gem can be used as a protective talisman.
10. Since ancient times, wearing a string of amber beads around the neck has brought inner peace and a sunny disposition to the wearer. So if you see someone wearing this sunshine-frozen-in-time stone who is always bright and cheerful, even in the darkest of days, you know the reason for her sunny disposition.
11. Egyptians used amber for protecting their dead against destruction and decay. Amulets made of amber were placed inside the mummy's tomb in order to offer protection in the afterlife.
12. You can make your own beauty elixir by simply soaking an amber stone in a glass of water and leaving it overnight in the moonlight, then use it to wash your face or in other skin products.



13. Back in the early times, doctors suggested to their patients that they should take a small amber piece internally to cure headaches, heart problems and arthritis.
14. While performing meditation for improving significant life aspects, place an amber stone on top of your head. This helps cleanse the crown chakra and adds extra concentration, making you get the most from your meditation.
15. The world poisons our mind, body and soul with negative energies. It is everywhere: where we eat, sleep, work. It is in hundreds of machines and equipment that give off radiation doses, so this is why our bodies are so weak. In order to detoxify the body and remove negative energies, try passing large amber stones through a person's aura or sleep with amber stones at night and receive their energy.

16. Whenever you have the opportunity, take 3 to 5 minutes and hold an amber stone to your solar plexus chakra. This helps in balancing both body and soul and eases your mind, bringing clarity.
17. Knee and joint problems are very often encountered in America, but amber stones can relieve the pain. Simply wrap the knee with a bandage and place a few amber stones under, close to the skin. Amber has healing properties, so the pain will go away.
18. If you have had a bad, exhausting day, prepare a warm bath, place a couple of amber stones in the bath tub and simply sink with them, allowing their healing powers to remove stress, tension and fatigue.



19. During The Middle Ages, amber was used in large amounts in the creation of Rosary Beads.
20. Amber is also called “sunshine frozen in time”, so when your body turns cold for unknown reasons, simply hold an amber stone in your hand while visualizing its warmth and let it



spread throughout your body. You will soon feel much warmer.

21. If you have friends or family who are sick, offer them an amber stone as a present. Amber has the ability to connect with the Universal Life Force and so it will help spread healing.

These are only few of the many *superstitious beliefs about Baltic amber*.

## *The Amber Route*

As a mystical stone, *amber* has traveled through time and space from ancient times to the present, a journey we can refer to as the *amber route*.



In ancient times, the boat was the main form of transportation and most of the trading routes ran along major river banks. The 5<sup>th</sup> century river routes linked Mediterranean countries and the Baltic coast. As people began to realize amber's value, they started to trade with it. In some ways, *amber* became the gateway of improved commercial relations between countries and cultures. It also advanced international economic relations. The Southern Baltic zone slowly became known as the *Amber Coast*.

But the *amber route* did not stop there. Egyptians and Arabians started traveling by land in the form of caravans. They took the route of the *amber* tracks to reach the rich *amber* coasts. As in any ancient route, there were also thieves, so these journeys were

considered dangerous. Travelers would often encounter problems and robberies along the way, but they willingly took the risks for the sake of *amber*. So *amber* slowly gained the names of sacred stone, gold of the North and even Baltic gold.



The *amber route* continued, as *amber* became a widely traded ornamental artifact and a semi-precious stone used in almost any art object. The name of the route comes from the routes used to transport it to different parts of the world. It traversed various cultures and geographical zones and acquired many different names. It became known as Tiger's Soul, Petrified Light, Sun Tears, Sea Gold, Elektron, Captured Sunshine or Hardened Honey. Others named it Succinum, Sun Stone, Freja's Tears or Tears of the Heliades. The names were given depending on religions, cultures or symbols.

The *amber route* is proof that people have been fascinated by this mysterious stone ever since ancient times. And this still applies to today's societies. The only difference is that the *amber route* is now safer, easier and more industrialized.

## *The Amber Industry in Lithuania*

*Amber* has been around on this earth for millions and millions of years, and we know that it is one of the world's most fascinating semi-precious stones, with a long historical background. Then something happened in a European country in the 19<sup>th</sup> century, something that generated a chain of events which led to the establishing of the *amber industry* and more precisely, the *amber industry in Lithuania*.



*Amber* deposits were found in 1854, during the dredging of a ship channel, in the Juodkrante, a coastal resort. W.Stantien, who was a famous businessman originating from Klaipeda, manifested an interest and set up a firm known as "Stantien and Becker". His company obtained good quality raw *amber* by performing dredges and dives between 1860 and 1890. Reports say that approximately

75,000 kilograms of *amber* would be recovered annually. In the good years, the company's production would rise to 500,000 kilograms. This was all done with the help of special ships, machines and equipment and, of course, a large number of employees. Reports say that up to 500 people were engaged in this work.

By the end of the 19<sup>th</sup> century, there were significant discoveries in the Courish Lagoon. Large deposits of *amber* were found in the area and this led to important growth in the *amber industry in Lithuania*. Jewelers, artisans and craftsmen from the two *amber* centers of Palanga and Klaipeda were at that time in great competition with those of "Koenigsberg" – now known as Kaliningrad – and "Gdansk" – known as "German" Danzig. The 500 workers involved in the two *amber* centers would each process approximately 20,000 kilograms of raw *amber* material before World War I.



World War I meant almost absolute destruction of the *amber industry in Lithuania*. Palanga and Klaipeda were destroyed almost entirely. Fortunately, the industry recovered after the war, between 1918 and 1939 – the Lithuanian Independence period. Ten artisan shops found in Palanga, Klaipeda and Kretinga used to satisfy the domestic and foreign demand of *amber*. Hundreds of people were employed in order to process approximately 10.000 kilograms of raw *amber* annually. It is notable that almost half of it was imported from Germany. Also worth mentioning is that the remnants of the craftsmen's work equaled the amount imported and was later on exported back to Germany for chemical use in plants and other facilities.

It is interesting how World War II almost destroyed the *amber industry in Lithuania* for the second time. And again, the industry managed to recover, by gradually reopening shops for *amber* processing. The first reopened shops were found in Palanga, Kaunas, Klaipeda, Plunge and Vilnius. Again, hundreds of craftsmen were employed and again, the annual processing of raw *amber* grew to 10,000 kilograms.



During 1963, *amber* pits and mines from Palvininkai – “German” Palmnicken; Russian *lantarnyi* – were incorporated in the *amber industry in Lithuania*. Those mines generate the large quantities of raw *amber*, but only 20% of it is good for making fine jewelry and artistic objects. For example, pressed *amber*, also referred to as “amberoid”, can be made from good *amber* pieces and dust. It is used in manufacturing inexpensive items such as costume jewelry, smoking articles or electrical insulation. Also, dark and impure pieces are used in chemical power plants and factories for *amber* oil production, *amber* acid and other products.

In conclusion, the *amber industry in Lithuania* has had its ups and downs, but has always managed to get back on track and continued to process raw *amber* material for various uses.



## Interesting Facts about Amber

Below are 10 of the most *interesting facts about amber* that people are not usually familiar with.

1. The Romans used to pay much more for small amber amulets than for a healthy workforce such as slaves.
2. In 79 AD, Plinius wrote about how Italian women from the north of the country were wearing amber beads and amber necklaces.
3. In order to protect himself against kidney stones, Martin Luther used to carry an amber piece in his pocket.



4. In ancient China, amber was burnt during festivities and ceremonies in order to honor the guests and as a symbol of the host's wealth.
5. Mohammed believed that a true believer would make his praying beads from amber.

6. Hippocrates, considered to be the father of healing, used amber against various ailments such as delirium tremens.
7. Thales from Milet discovered amber's electricity by rubbing a piece of amber against cloth. The rubbing resulted in sparks caused by amber's attraction force of husks and small wooden splinters. That is why Greeks called it Elektra or Electron..
8. Ancient civilizations such as Greeks, Romans and Stone Age sun worshippers all believed in amber's healing and rejuvenating effects.

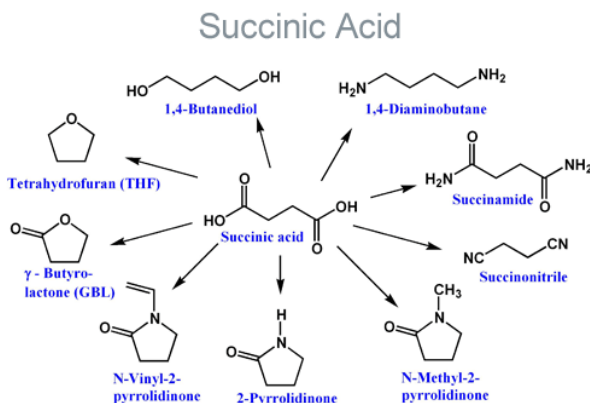


9. Amber has been an ornamental stone since ancient times, due to its background, electric properties, warmth and aroma, color and luster.
10. Ancient Greeks named amber Elektra, because of its electrical properties, and even the great Homer had amber in mind when describing the beautiful golden electron on his warrior characters' shields.

So now you know 10 of the most *interesting facts about amber*, but no doubt there are many more to be discovered because amber is simply fascinating.

## Succinic Acid and Baltic Amber in Modern Science

Succinic acid is a natural constituent of organic tissue. It is also known as amber acid, mainly because Baltic amber contains up to 8% of it in its surface and it is the only type of amber with such high concentration.



Amber acid has great significance to the human body as it is used in the Krebs cycle, alias the Citric Acid cycle, an important element in the metabolic process. It has anti-oxidants and so it helps your body fight back against free radicals or cardiac disruptions. It also has a proven record in stimulating the neural system recovery, plus it is great for the immune system and combats infections, even after a person is exposed to industrial accident radiation, as European military doctors and scientists discovered. Another interesting fact is that succinic acid compensates for body energy leaks, boosting awareness and helping in stress reduction. It also adds a significant

growth to reflexes and concentration and it cures hangovers, while working against different body toxins.



In what concerns *Succinic acid and Baltic amber in modern science*, recent research in Germany's Hamburg University confirms the traditional beliefs about Succinic and Fumaric acids in the human metabolism, showing that they truly have safe positive effects. Currently is it commercially produced and approved by the US Food & Drugs Administration.

Researchers at the RAS' Institute of Pharmacology at Tomsk Scientific Center, such as Dr. Veniamin Khazanov, show proven records of Succinic acid being indispensable, especially for elderly people, as it restores the energy balance in the cellular system which is usually affected by age and helps the patient regain his youthful energy.

So Succinic acid found in amber is better and less expensive than commercial drugs.

## Amber Use in Medicine

*Amber* is used not only in the jewelry industry, but also in others. Doctors recommend it as a natural antibiotic and anti-inflammatory treatment.



Baltic *amber* is attested in historical reports since prehistoric times. Since then, it has been used in various ways. For example, in Ancient times, small *amber* pieces were placed under the Egyptian mummies' skin to protect the dead from decay and destruction. The Egyptian people believed that *amber* had mystical powers. Both the Ancient Roman and the Greeks thought of *amber* as a stone with magical powers. It was also a symbol of influence and power, so people were buried wearing *amber* necklaces.

Hippocrates was the first to write about *amber use in medicine*. Of course, his works are related to ancient times. He documented how *amber* could help in neck, head and throat complaints if a short string of *amber* beads were worn on the neck against the skin. It was demonstrated to be efficient even in severe pain.

*Amber* bracelets were worn by those who suffered from bone diseases such as rheumatism and arthritis. It was thought to be beneficial also in reducing fatigue and general weariness. In some cases, fairly large pieces of *amber* would be rubbed on the body of the sick. This would have a calming effect and relieve the pain, and various creams and balms, and even *amber* infusions in alcohol, were made to cure pains and help the suffering



*Amber* became the main ingredient in creams and concoctions along with other medical herbs and the mixture was used as a remedy against respiratory pains, asthma or bronchitis, and against bowel or bladder disorders. It was even used for heart and circulation problems with effective results.

Baltic *amber*, for example, is known as an excellent natural antibiotic. Women who suffer from goiter often use it to help calm the pain by simply wearing natural and unpolished raw *amber* pieces around the neck. Over the years and through many centuries, *amber* has also been used for the kidneys, the nervous system and the heart, due to the fact that it had positive effects on internal organs and helped people relax by reducing anxiety.

Another thing that draws the attention to why *amber use in medicine* is extremely beneficial is the succinic acid it contains. Not all fossilized resins have it but *amber* has up to eight per cent of this acid in the surface layer. Making up a large part of natural Baltic *amber*, this is one of the reasons why succinic acid is also commonly known as *amber* acid. It is also a constituent of animal and plant tissue, and Europeans have been using it for centuries to cure the sick and ill.





*Amber acid* is good for both body and mind. For the body, it is used in the Krebs cycle, also known as the Citric Acid cycle, involved in the intermediary metabolic processes. It is also a powerful antioxidant fighting the free radicals which are extremely toxic for the human body. It also helps fight disruptions of the cardiac rhythm. For the mind, research has shown that *amber acid* stimulates neural system recovery. It helps the immune system, compensates for energy drain in both body and brain, and reduces stress, while boosting awareness, concentration and reflexes.

These are the most important reasons why *amber use in medicine* is beneficial for both the human body and the mind. *Amber* never ceases to amaze both modern and traditional medicine.

## *Amber as a Traditional Remedy*

Besides accepting it as a semi-precious gem and a wonderful accessory to wear as jewelry, we should also accept *amber as a traditional remedy*.



People have been using *amber* in aromatherapies and rituals to cure diseases and epidemics since ancient times. It is not only a gem, but also a healing stone used to calm certain areas of the human body where pain is present. The easiest way to use *amber as a traditional remedy* is to wear it in direct contact with the skin. People used to place it in the area of the stomach, the spleen, the liver, the kidneys or any other internal organ where they felt pain or discomfort. It was also used for nervous disorders and for kidney stones; the best example in history is Duke Albrecht giving Martin Luther white amber as remedy for the pain from his kidney stone.

People who wore amber as jewelry had a more “sunny nature”, strength, flexibility and creativity, helping to preserve positive

traditional values. Ancient aromatherapy also used *amber as a traditional remedy*. The petrified resin pieces were burnt down and the smoke had proven purifying effects on people. It helped psychologically when sufferers of stomach complaints or heart anxiety inhaled its smoke. It was also beneficial for paralysis, gout and rheumatism.

Plinius the Older (deceased 79 AD) used to recommend *amber as a traditional remedy* for all kinds of ailments such as eye disease, throat pains, fever and even mental disorders. Sick people would simply have to wear an *amber* necklace to fight back against pains and complaints.



Hildegard von Bingen (1098-1178) recommended the ingestion of *amber* where there was stomach or intestinal pain, problems with urination or even against the “Black Death”. He believed that mixing it with wine would be the ideal, universal remedy. Later on in the history of humanity, *amber* powder became popular in treating war wounds, bandages and healing salves. The best example for that is

during the Middle Ages, when people used *amber as a traditional remedy*.

Georgius Agricola (1494-1555) was a famous doctor, alchemist and pharmacist in Joachimsthal and Chemnitz. He discovered while performing different experiments on *amber* that extracting amber acid in distillation is of great importance in color production. Centuries later his discoveries were used in the production of colors. Also, as a pharmacist and doctor, he believed in *amber as a traditional remedy* and argued that it “*possesses the ability to spread, [...] therefore stops the bleeding everywhere it appears*”. He also believed that *amber* could inhibit vomiting, diarrhea, ulcers and catarrhs of the head, offering significant help against tonsillitis and sore throats. *Amber* was also good for the heart and heart palpitations, while white amber chased away epilepsy.



During the 17<sup>th</sup> and the 18<sup>th</sup> centuries, doctors recommended the use of *amber* remedies for rheumatic and heart diseases, skin tone and convulsions, neuropathic disorders, ailments of the lungs, kidneys and other internal organs, and for curing ulcers. Another

recommendation of *amber as a traditional remedy* was the use of it against common coughs or stiff-neck pains. A mixture of rose oil and honey amber would heal all types of ear complaints and would also strengthen the stomach from old moistures. The mixture would also benefit the heart, take away jaundice, soothe pain and stop blood in the urine.

As you can see, time itself proves how people have seen *amber as a traditional remedy* from ancient times until the present day.

## *Baby Teething and Amber*

Many of us know *amber* as being great and stylish for jewelry. But *amber* is also a traditional remedy used in different combinations to relieve pain. It has great effects on both adults and children. So it may sound hard to believe, but *baby teething and amber* work great together. This semi-precious stone is practically a natural analgesic, a pain reliever and an anti-inflammatory known to reduce acidity in the human body with long history use in Europe.

The *amber* stone is a healing stone present in the life of women. It works with body heat to produce its famous calming and relaxing effects. And having it near your baby's skin can calm the little one's inflamed gums, fevers, redness and teething. Going back to European traditions, babies and small children with teething problems often wear *amber* necklaces close to their skins to help fight the pain away, to gain a stronger immunity and to generate wellbeing.



Mothers should also take extra precautions and make sure the baby wears the necklace and does not chew it. *Baby teething amber necklaces* are not for chewing and they also are not recommended to be worn during night time. They are recommended for babies who are between three months and two years old, so your child can't wear it under the age of 3 months.

He or she can wear it even when older, as there is no need to take extra precautions for children who have developed their first language acquisition process. And it looks great on both girls and boys, adding more charm to their already adorable faces.

Handmade *amber teething necklaces* come in various unique shapes and sizes and glow nicely, mainly because they are made from *Baltic Amber*, one of the world's finest *amber* stones. These are fascinating stones, with bubbles and natural particles inside the fossilized tree resin and various colors. The most common color used for *baby teething amber necklaces* is cognac – brown.



So *baby teething and amber* work great together. If you wonder how, the answer is simple: *amber* is a natural remedy that must be worn against the skin in order to release succinic acid into the human body. *Amber teething necklaces* are used as a pain reliever for babies and toddlers and all it takes for its effects to be visible is to wear them next to the skin during the day.



## *Amber Nursing Necklaces*

*Amber nursing necklaces* are used in child nursing, usually to retain the baby's attention and keep him occupied. In the first 12 months, the child becomes increasingly interested in everything that surrounds him: objects, people, colors, stimuli and everything related to mother's comfort and feeding.



*Amber nursing necklaces* will be recognized in time by the child as an object related to his mother. Just because a woman becomes a mother it does not mean she has to give up her sense of style or reconsider wearing stylish jewelry. Mothers with babies can wear stylish and funky *amber nursing necklaces* made of beautiful gemstones. They can also be worn by others who spend a lot of time around babies, for example, grandparents, child carers, nannies.

Most of these necklaces are made of Baltic *amber* and are comfortable, lightweight and easy to wear. *Amber* also has healing energies that improve both body and mind. *It* is a mystical, beautiful gemstone, radiating with positive energy. It gives the wearer a sense of peace and calm thanks to its therapeutic qualities and natural pain relieving characteristics. For those who do not know, Baltic *amber* is also considered a great anti-depression and anti-anxiety remedy, helping the wearer by reducing fatigue or weariness.



*Amber nursing necklaces* induce self confidence and create a traditional bond between mothers, grandmothers and daughters, due to the fact that *amber* jewelry is usually passed from one generation to another. This is a common practice in Europe.

Another great thing about *amber* is that it can be used as a remedy for baby teething and other inflammations if worn close to the skin.. As a natural analgesic it is claimed to calm babies who cry. So *amber nursing necklaces* offer a double dose of comfort - both nursing and *soothing* at the same time.



Made from fossilized tree resin, *amber's* beauty and mystery can captivate anyone. Each piece is unique, with various shades, forms and colors. *Amber nursing necklaces* are strung using fiber ten times stronger than steel, ideal for both strength and ease of washing, so baby drooling can be easily removed, and are made with well-rounded chips to reduce the choking risk even further. The necklaces are fastened during normal use, but have a safety clasp which is easily released if snagged.

Thanks to their amazing benefits for both mother and baby, *amber nursing necklaces* make a unique and thoughtful baby shower gift.

## *Amber Oil*

*Amber oil* is considered to be one of the most priceless possessions and one of the most valued extracts of pure natural Baltic *amber*.



It is considered to be something of a fortune for those who know where to find it. It is also extremely easy to prepare if you are short on time. *Amber oil* applied on skin has miraculous effects and it has been highly prized by Europeans for thousands of years. Used on skin, it has a regenerating effect and is one of the earliest treatments used in anti-aging techniques. *Amber* cures usually include *amber oil* recipes.

*Amber oil* is made using pure natural Baltic *amber* as a basic ingredient. The *amber* is heated in a closed container, free of oxygen, which helps to ensure the *amber* does not burn. The process itself is known as dry distillation, and is easily done on the stove in cottages. The most common geographical locations where *amber oil* is created include the Eastern European zones along the Baltic Coasts where *amber* is found in abundant proportions.



When the *amber* is heated and not burnt, it can break down into three substances: *amber acid*, *amber oil* or *amber rosin*. Every product obtained in this manner is priceless and valuable in its own way. For example, the value of the sum of these three products is much higher than the raw *amber* used in their creation.

A fast way to distill the oil out of the *amber* is considered to be using *amber powder*. If you first make *amber powder* and distill it the process is quicker due to the large surface areas. And it is important to use only raw, pure and natural Baltic *amber*.

Either way, the process of making *amber oil* is easy and the product is extremely beneficial for skin, different types of cures and certain treatments.

## *Amber Powder*

*Amber powder* is a derivate made from pure natural Baltic *amber* and it is considered one of nature's most prized cures.

The reason for that is the succinic acid, also known in common terms as *amber* acid. There are proven records of it being a very effective cure.



Modern medicine has also discovered the benefits of *amber powder*. Doctors spotted some effective therapeutic results by using it in remedies. In a chain of experimental settings, *amber powder* was used on a variety of patients, each with different complaints and pains.

For example, it was applied on patients who suffered from headaches, spinal pains, problems with their thyroid gland, chest pain and even limb complaints. *Amber powder* showed visible and noticeable results when applied to the face.

A general use of *amber powder* is in herbal medications, which call for the tremendous benefits of the natural Baltic *amber*.



If you wonder why Baltic *amber*, the answer is simple: it is the only type of *amber* which has a remarkably high level of succinic acid, otherwise known as *amber acid*. It is also the only medically active ingredient.

*Amber powder* is universally used in both medical and cosmetic procedures. For example, it is an effective scrub when combined with shower gels. It is also used in hair growth treatments; to be more precise, dry powder helps in hair regeneration when massaged into the scalp. Mixing it with natural oils will have great results on body and skin. It is also recommended in body massage therapies.

But people also use it in Eastern European homes as an efficient anti-hangover treatment. A pinch of *amber powder* downed with a glass of beer is the most effective way to get past the after effects of excessive alcohol consumption.

People find it extremely economical, so *amber powder* is usually made by crushing raw *amber* using a mortar and a pestle. You can do it yourself at home or buy it in an alternative medicine store in Europe.

Either way, *amber powder* is great for treatment and therapies, massage sessions, hair growth, a healthy skin and for just about anything else that involves our health and wellbeing.



## *Amber Aromatherapy*

People have been using *amber aromatherapy* in their therapies and rituals to cure diseases and epidemics since ancient times. As you will see, *amber* is not only used for art or jewelry, but is also considered an important healing stone, a natural analgesic for pain in the internal organs. *Amber* worn directly on human skin generates a chemical reaction which frees oil into the human body and improves the bloodstream.



*Amber Aromatherapy* uses *amber* as the main ingredient. It is frequently practiced in Eastern Europe, using natural stones from the Baltic coast.

The *amber* stone has a history of over 50 million years and a proven track record as a natural medicine, extremely valuable in curing illnesses, pains, complaints and disorders. Its listing as top of the six most effective natural medicines goes way back to the year 1193. During the Middle Ages, *amber aromatherapy* cured and saved a significant number of people from death, including from the bubonic plague. Europeans were among the first to recognize and

credit *amber's* miraculous benefits for both mental and physical wellbeing. They were also among the first civilizations to have used *amber* resin in their own homes. A common use of *amber* was to burn it and fumigate the rooms, letting its smoke fill the entire house.



*Amber* has a warm and exotic fragrance and when heated it fills the entire room with a subtle euphoric aroma. There is no such thing as *amber* essential oil, but rather an extract of various tree resins, found in both solid and semi-solid formula. The *amber* oil generated varies in aroma and quality. It is obtained as a result of combining beeswax with essential oils and carriers.

*Amber aromatherapy* focuses on burning *amber* resin along with *amber* oil.. The secret is to blend *amber* powder with sunflower oil, wood oil and other exotic oils. Sometimes pieces of *amber* can also be added in the blending. The other oils will enhance the *amber* in the oil itself.

*Amber aromatherapy*, when properly prepared and applied, has intense psychological effects used in altering brain waves, increasing sensual pleasure, heart energy and positive vibes. *Amber* resin found in ancient times, both underwater and underground, can be refined into a strong pleasant aroma. Different colored *amber* generates different perfumes and aromas used in aromatherapy. A mix of *amber* stones with different colors has an even more intense perfume, whether fumigated in the room or transformed into oil and used as perfume, mixed for a massage or blended with other essential oils.



Nowadays, modern science has finally started to recognize the calming and relaxing effects of *amber aromatherapy*. Not only that, but also that *amber* holds important active ingredients, due to the

fact that the resin is in a continuous metamorphosis. Science now recognizes the existence of succinic acid, an active ingredient found in *amber*, which is now in mass production worldwide.

The benefits of *amber aromatherapy* have been recognized around the world. It is truly a fantastic synergy of botanicals and tree resins, with astonishing results in treating heart problems, anxiety and stress, and a really good way for people to keep calmed and relaxed.

## Carving Amber

*Amber* is a semi-precious stone made from fossilized tree resin and organic residuals in a process that lasted for over 50 million years. Craftsmen and artisans find this stone very appealing, because it is flexible and easy to work with.

When it comes to *carving amber*, it is ideal for compact carvings only, due to its fragility and heat sensitivity. *Amber* collects static electricity, so it is found in an ongoing metamorphosis process. The unfortunate thing is that *carving amber* with large collections of static energy can cause cracks to the new product when polishing, so it is highly recommended to do this in small steps.



Valuable pieces such as those with insects and organic inclusions require a lot more time in removing the material by hand with files and sandpaper. The good part is that you can have increased control of the stone surface and it is easier to deal with heat scars. A good sandpaper ideal for using in *carving amber* is silicon carbide paper. You can start for example with a coarse grade like 180 and then proceed to 220 and later on to 600. Don't forget to remove

any trace of coarser compound before doing the sanding. Also, use wet-or-dry sandpaper because it will load up less in the finer grits.



Also important is not to rush the process of stone polishing, because pieces of *amber* carvings can easily fly apart. So in order to avoid a build-up of heat and to rest a bit your eyes, it is best to take short breaks from crafting the *amber* piece. The polishing of *amber stones* can also be done using a tripoli compound gently and carefully rubbed with a piece of cloth or leather. Crevices will not be a problem, because they can be polished using an appropriately shaped stick. A professional high polish can be achieved with white rouge or proprietary compounds used for plastic.



*Carving amber has been* an activity since ancient times using different methods. The easiest one is by far is removing the material with a sharp carbide bur in a flexible shaft tool. It is preferable to use a new one and not used ones. Another way used in *carving amber* is the coarse rifflers made of metal. When drilling and piercing *amber* pieces, it is best to go slowly with care and use some industrial lubrication. *Amber* also erodes cleanly before it starts burning, following a gummy and opaque look. If it turns gummy before burning, it's a sign of *fakeness*, so it is best to opt for natural *amber stones*.

These are the points to remember before engaging in *carving amber* activities.

## Amber Jewelry

George Eliot once said about jewelry that “*these gems have life in them: their colors speak, say what words fail of*”. All this literally applies to amber jewelry especially, because *amber* stones have life in them.



For those who do not know, *amber* stones are alive themselves, due to the fact that they electrify negatively and have been in a continuous metamorphosis for over 50 million years. Not only that, but *amber* stones usually contain plant or insect residuals. The most fascinating thing about *amber* is what you can find inside the fossilized tree resin. A wide variety of small insects and arachnids can be found inside *amber* stones - small termites, flies, butterflies,



spiders, ants, beetles, bees – that probably flew into the resin and remained stuck in there or were buried along with it underground. Plant residuals, pieces of other stones, leaves, flowers and many more items are also found.

All these make *amber* jewels unique, attractive and mysterious at the same time, a reason why people have been captivated by their natural beauty, their interesting color combinations and different hues and tones. Jewelers decided to make good use of this variety and so hand-crafted *amber* stones began to expand. Jewelers extract the *amber* from the soil and then refine each piece into a smooth stone, with elegant shapes, placed in pieces of jewelry such as silver, stainless steel and many more.



Another great thing about *amber* stones is that they are not as expensive as others, so *amber* jewelry does not cost much. It is affordable, extremely stylish and unique. The most common forms

of *amber* jewelry are rings, earrings, bracelets, pendants, necklaces and brooches, all made with *amber* stones and a metal of the jeweler's choice. Each jewelry piece varies in complexity, design, price, metal used, customized look and other details.

*Amber* necklaces and bracelets worn against the skin have wonderful healing properties, mainly because the *amber* stone's innate oils are being released into the human bloodstream when they come in contact with the skin. This can soothe the skin and balance body fluids.

*Amber* jewelry also releases innate warmth and can help the wearer lift their mood and relax each time they feel pressure and anxiety. In addition, if you have a baby, then *amber* jewelry will help ease the little one's teething pains. When an *amber* jewelry necklace or bracelet is placed on the baby's skin, it reacts with it and releases natural oil compounds into the bloodstream, thus reducing cheek inflammation and redness.



Moving on to style, amber jewelry looks great in both daywear and nightwear, thanks to the variety of shapes, colors, designs and forms. Women can wear it with any type of outfit. For a more elegant look, *amber* jewelry in Sterling Silver will always be a good choice. It comes not only in a variety of designs and styles, but also colors.

The most common *amber* stone used in jewelry has a rounded, natural yellowish-colored form. It is important to know that *amber* comes in different natural colors and that the jewelers usually do not artificially treat *amber* in order to attain a certain color. *Amber* stones change colors accordingly to the environment they come from: water, soil, resin. It depends on temperature changes, chemical reactions and of course, residual plants and insects trapped inside the tree resin.

*Amber* jewelry reflects clarity, light and energy, and it teaches people how natural, simple things can turn into beautifully crafted accessories.

## *The Healing and Mitigating Effect of Amber Jewelry*

Before talking about *the healing and mitigating effect of amber jewelry*, first are some facts related to what people believe about amber.

1. The ancients believed that amber necklaces, rings and bracelets, when worn against the skin, produce massive beneficial effects.
2. Thyroid illnesses can be healed by wearing amber necklaces close to the body and neck.
3. Amber acid found in rough natural amber, along with rough amber elements, have stronger beneficial effects on the human body.



4. Cut and polished amber does not only have beneficial effects, but it is also pleasant to the touch and is easier for the negative electric ionization to be transmitted to the human body.
5. Some ancient civilizations believed in the amber's power to retain negative energies, providing the wearer protection. For those with a sensitive temperament, amber would ground them to the earth plane.
6. Some believed that amber purifies the human body, aids the digestive tract and helps the body release toxic fluids.



7. Avicenna, a famous physician during The Middle Ages, believed in the effectiveness of Baltic amber and wrote that amber necklaces are beneficial in the treatment of goiters, an advance state of thyroid illness, where the neck swells.

8. Albert Bogdasarov, a Belorussian mineralogist, recommends amber necklaces for children in areas of high radiation values caused by the Chernobyl disaster.

So here you have 8 facts about people's beliefs and discoveries related to *the healing and mitigating effect of amber jewelry*. Let's move on to other findings and amber researches.

People started discovering that amber had certain medicinal properties, the earliest accounts of these discovering dating from Hippocrates' time: 460-377 BC. Hippocrates, also known as the father of medicine, was the first to mention them in a written source. Later on Pliny the Elder also wrote about amber's medical properties in his works.

Callistratus is another ancient writer who stated that amber necklaces worn around the neck relieves the wearer's pains, such as severe head, neck and throat complaints. Amber bracelets were used in healing rheumatism, arthritis, general weariness and fatigue. Similar effects were achieved not only by wearing amber, but also by rubbing it on the body. Creams and concoctions with amber as the main ingredient were used as a remedy in respiratory system complaints such as asthma and bronchitis or in blood circulation and heart problems.



In 19<sup>th</sup> century literature and in Haczewski's works we find proof that amber was used for all illnesses and it became one of the six most efficient medical substances and the only stone with such great use in medicine.

Today, there is an increasing trend suggesting that everything natural is beneficial for the human body. Homeopathic chemists use amber as a main ingredient in their medicines and the cosmetic industry supports the use of amber in creams, tonics and treatments easily absorbed into the human skin.

## *Amber Will Always Be in Fashion*

From jewelry to art, *amber will always be in fashion* simply because no one can escape the magic of this stone.

*Baltic amber* is ageless, unique and universal. It makes its wearer feel special whenever and wherever it is worn. *Baltic amber* jewelry will make anyone feel great for wearing exceptional, unique necklaces and the much adorned pendants or bracelets. The magic of *amber* comes in every fashion, style and color combination possible with enviously stunning looks and fashionable settings.



*Amber will always be in fashion* thanks to its allurement and glow. *Amber* earrings, for example, come in all patterns, colors and styles and are available in awe inspiring designs. Some earring pieces combine *amber* with turquoise and fantastically polished sterling silver bases. Not only that, but you can also find honey *amber*



earrings and multi-hued *Baltic amber* gemstones which flatter every woman's beauty.



When it comes to *Baltic amber* there is more to it than meets the eye: not only necklaces, pendants and bracelets, but also alluring and magical brooches which will surely add a touch of style to every outfit. Honey-yellow and multi-colored brooches can be found in the shapes of leaves, hearts and butterflies. And most importantly, they can “steal the show” when a woman goes out in public wearing them. They are the best way to capture anyone's attention and receive compliments about your looks and general appearance. *Baltic amber* looks are sure to last a lifetime.

*Baltic amber* gems do not only cast a spell on men, but allow a woman to go out in the world with that glowing magic, surrounded by world class fashion and style, making her the attraction of the event.

*Baltic rings* also make a worthy gift for your partner or fiancé and *amber* cufflinks add a perfect touch. That kind of style is surely enough to conquer anyone's heart and make their possessor feel proud and special. Some lovers opt for heart-shaped *amber* rings made with sterling silver as proof of their eternal love.

*Amber will always be in fashion* and generate a life-lasting moment of happiness for those who possess beautiful *Baltic amber* jewelry.

## *Amber Intaglios and Cameos*

Throughout history and time, people have used *amber* in almost any kind of creative artwork possible and from that point of view, *amber intaglios and cameos* are no exceptions.

For those who do not know, intaglios are basically art works with incised pictures, similar to *amber* engravings. They are made on the backs of transparent lenses and tiles. On the other hand, cameos are more of a raised design. Both of them can portray faces, images of animals or even mythological scenes.



*Amber intaglios and cameos* can be made in stones that have dual colors, usually found among different types of *amber* stones. These

two-color stones are great material for artisans and artists due to the fact that the craftsmen can obtain a multi-layered effect with a light bas-relief placed on a dark background.

*Amber intaglios and cameos* created in this manner turn into miniature works of art. They are unique, fine and exclusive jewelry items. The creation of *amber intaglios and cameos* is a delicate process that requires skillful knowledge of the structure of this brittle material.



The use of tools on the material has to be delicate. And of course, the artist needs an extremely precise and expert eye for the perfect nugget. Important positions are held by objects originating from old

traditions such as *amber* necklaces and pendants, *amber* bracelets and rings.

Jewelry standards are constantly increasing and the *amber* jewelry industry is part of a constantly modernized circle. For example, each necklace's beauty and uniqueness may be the result of precise surface finishing. The uniformity of color in each nugget influences the jewelry's beauty. Shapes and multi-layer cuts showing special light plays of the *amber* stone contribute to the very uniqueness of each piece. These details also apply to bracelets and rings or *amber* pendants.

So it is important to know that the more variety the *amber intaglios and cameos* show, the more the jewelry pieces become appreciated by the buyer.

## *Assemble Your Own Amber jewelry*

If you feel like being creative, it is not difficult to *assemble your own amber jewelry*.

*Amber* is extremely flexible, with translucency features and other characteristics similar to other gems, so it makes for an excellent jewelry material.



The stone's composition can bring the light in or reflect it out, and the impurities give the *amber* uniqueness and that fresh look that everyone loves. Impurities also make the price of each amber piece. The more impurities and inclusions of plants, insects and other organic material, the pricier the *amber* stone is. Knowing all that, you can start following these steps on how to *assemble your own amber jewelry*.

Step 1: Finding *amber*. Find the best prices and the best areas where *amber* is commonly found, for example the Baltic Sea coast or the Kaliningrad mines. Once this is done, you can move on to the next step.

Step 2: Deciding the type of jewelry you would like to create. *Amber* can be used in the making of pendants, necklaces, rings, earrings, bracelets, brooches and other types of jewelry. The sooner you decide on what type of jewelry you want to create, the better it is. It is also recommended that you estimate the size of the *amber* piece before going into the creation process.



Step 3: Attaching the *amber*. Complete all the steps above and prepare all other materials, such as wires or leather strings. Once you have the perfect *amber* piece, it is up to you to decide which materials to combine. You can drill the stone and create holes from the wires, although this is not advisable because it can cause fractures in the stone and damage it. Or you can encase it with a wire mesh or leather cradle. Either way, it is entirely up to you to decide.

Let us say you also completed this step. What is next depends on you. You can leave the jewelry created as it is or you can add more

to its beauty. You can keep it, sell it or offer it as a gift to a dear friend.. Either way, if you want your jewelry to stand out or to help start a conversation, here is a final step.

Step 4: adding adornments to the final creation. When you *assemble your own amber jewelry*, you can also add glass beads or other elements bought from craft stores or artisans. The tricky part is in deciding if these adornments will make your *amber* jewelry stand out or not. It is recommended that you use complementary colors that suit the common yellowish-brown *amber* look.



Always keep in mind these simple four steps in how to *assemble your own amber jewelry*. They are important, because they can simplify the creation process for anyone fond of handmade jewelry.



## *How to Process and Polish Baltic Amber*

There are various ways to *process and polish Baltic amber*, such as cutting, carving, filling, sanding, drilling, sawing or scraping it, but if you are new to amber crafting, then you should first start with rough chunks before moving on to valuable amber pieces. Amber stones are alive, so working with them requires passion, feeling and dedication in order to generate great results. And remember that crafting goes both ways: you work with the material and the material works with you.



So let's see how to process Baltic Amber. Take for example how sawing is done. First off, you must mount a diamond-tipped saw, preferably circular, on a small bench motor. Hold the piece and feed it gently and firmly into the circular saw, this way achieving a straight cut. Alternative methods include fine-toothed jeweler saws for those who want to do the work by hand. The problem with these is that you almost never get a straight cut. Secondly, use a belt or a sanding wheel in order to do a basic shaping of a desired

size. For a rapid material removal, use coarse grades - 80 to 160 grit. Last but not least, for a final touch use finer grades and work closer to tolerances.

Sanding and filling processes can be done manually or automatically. We agree that manually-sanded and filled pieces are more interesting, but they involve a slower making process. Carvings are made using a Dremel-type tool, dental-type saws and burrs. Basically, after you shape the piece to the desired size, the surface is still rough from these processes, so the piece needs a final polish. This can be done using a cotton buffing wheel and also using the proper polishing compounds applied frequently for loading the wheel. Don't use strongly colored compounds, as this will affect the amber's surface.



And don't forget to get a good grip of the stone, because the wheel's force can grab the amber from your hand and throw it all over the place. Because of this, small pieces are hard to handle, but those with insects inside are not to be ignored. So if you wish to work on smaller amber pieces, place double-sided Scotch tape on your fingertips, press the amber on it and be extremely cautious when working the piece down to 2-3 millimeters thickness.

You can also use Dremel tools for drilling amber pieces. For example, you can use a twist drill for partial or total perforation of a piece before inserting a screw-eye or passing bead cords through the piece. Perfect alignment is required. As a tip, insert the drill a second time inside the piece, but only after moistening it in vegetable and mineral oils, to improve the perforation. When performing sanding and buffing on amber, remember that the piece might warm up to some degree, but this is harmless to the stone if the material is of good quality. You can work with "dry" pieces or apply water as a coolant on younger amber that may run on the sanding wheel.

Let's move on to how to care for and polish Baltic Amber. As you know, amber is an organic fossilized tree resin. The substance is not a mineral, so the stone is soft and can be easily scratched or damaged, with a value of 2 to 3 on the Mohs scale. But because of this, amber is also easy to polish in case of accidents. You should avoid dropping amber on ceramic or concrete floors, as it may result in breaking, chipping or shattering of the stone. However, if dropped on wooden or asphalt tile floors, there should be no major damages.



Amber is also soluble in chemical-alcohols, chloroforms and acetone. It is best to keep the amber stone in a soft-lined container and not expose it to air or direct sunlight for long periods of time. Long exposures may result in the evaporation of volatile substances found in amber's surface and in cracks after 2-3 years. For example, if exposed to strong UV light in laboratory conditions, a piece of amber is reduced to powder in one week. So keep it away from long sunlight exposures of any kind, and remember to apply silicone-based wax every 6 months to restore the stone's shine and reduce evaporation or oxidation.

These are some of the ways *to process and polish Baltic amber* and it is important to know them if you wish to become more than an amber wearer.

## *Thermal Treatment of Amber*

Since ancient times, people have used heating to correct the external appearance of handmade amber products inspired by the natural phenomena which generated the clear intense hue of this stone.



During Ancient Roman times, the production center found in Aquileia used to clarify and tint amber nuggets, and the technique was later promoted in workshops of amber artists near the Baltic Sea. Their skills and artistic ingenuity is still unrivalled. Each craftsman had his own recipe for improving amber's colors, hues and aspects. The process itself was mild and achieved through slow heating in liquids, oils and loose materials such as sand and salt. All that changed in the second half of the 20<sup>th</sup> century, when an effective, yet risky tool appeared and eased the process: the pressure furnace of inert gas such as nitrogen and argon. In the

heating chamber of the furnace, amber's bubbly structure can quickly change into clear material. The bad news is that it loses the natural golden color and develops a cold watery tint so it may be below customer's expectations.

So what happens inside the furnace chamber? The autoclave, which is the gas found in the chamber, gets into the amber's structure, with the help of pressure measuring 300 atmospheres and a temperature of 300°C. The amber's appearance and natural scent is altered in the process. The result is a clear uniform material which can be given a nice color vibe to the surface's scales and cracks with extra roasting with oxygen. Also processed in the autoclaves are raw materials with weathered layers. The weathered layer can be roasted with nitrogen in order to obtain that greenish tint through the bottom of cabochons. In some cases where blue saturation is applied on the weathered layer, an intense green color is obtained when viewing the piece through the yellowish layer. Some sellers believe this is an artificial effect, others deny it.



Even though the benefits of using autoclaves include good clarity of the piece, permanent binding of layers in the splice, increased hardness and decreased cleavage, the majority of Polish amber manufacturers do not use this technique. They believe that the detrimental effects of autoclaves such as discoloring and scent deterioration alter too much the very essence of amber. And so they use old methods such as liquid and oil roasting, sand, salt and air-access furnaces that use slow heating techniques and subsequent cooling. Even though the final piece will have lesser degrees of clarity, it will retain the natural color of the entire amber structure.



While other organizations agree with both the roasting and pressing methods, the International Amber Association is against reconstructed amber or pressed amber, but permits manufacturers to sell products of roasted amber. Their basic principle is to preserve the initial form of the amber nugget and roasting methods do that, while pressing techniques destroy the initial amber form.

In terms of Baltic amber identification methods, the IRS – infra-red absorptive spectroscopy - is the most reliable, but it does not state the differences between natural, improved or pressed amber stones, because all the particles remain unchanged. So when the time comes and the world runs out of raw material, this statement could become a key discussion point as to what concerns the purposefulness of using other processing methods in the future.

However, researchers say that the geological amber deposits are abundant and amber supplies will last for thousands of years, so the solution is to intensify the amber exploitation.



## *Ten Rules for caring for Amber*

*Amber* is one of nature's true wonders, resulting from tree resin and residual life forms buried underground for over 50 million years. Today, it is one of the world's most beautiful semi-precious stones and, as with many other semi-precious stones, there are *rules for caring for amber* that need to be followed.

This is to make sure the stone does not suffer from degradation and is kept in perfect shape.



People around the globe have become extremely fond of *amber jewelry* because of its delicacy, elegance, mystery, warmth and calming effects. And because this stone is extremely delicate, it must be treated with special care, respect and attention so it will always remain in a perfect state and condition, along with its mysteries and beauty. Here are *10 rules for caring for amber* that

should be followed in order to preserve amber stones and amber jewelry.

1. **Protection from sunlight.** It is important to know that direct sunlight can damage *amber*. Over-exposure to sun radiation can alter any kind of gem. *Amber* is in a continuous metamorphosis, so keeping it away from too much sunlight is the first step in preventing degradation.
2. **Not too hot, not too cold.** In short, keep *amber jewelry* away from sources of extreme cold or extreme heat which may damage the *amber* stone's quality and delicacy.
3. **Keep *amber* jewelry away from body perfume.** It is important to protect *amber* stones from body perfume and hairspray. If you use any of these substances apply them first on your skin or hair and after that put on the jewelry.



4. **Avoid exposure to detergents.** It is better not to wear *amber jewelry* when washing dishes or doing the laundry. A continuous exposure of *amber* to detergents and cleaning substances can damage the stone's surface and composition.
5. **Avoid cooking and cleaning while wearing *amber*.** Not only can detergents and cleaning substances harm your *amber jewelry*, but also cooking or other household activities. *Amber* is a delicate stone, so it is highly recommended that you protect it as much as you can.

These five *rules for caring for amber* will help you preserve the quality and delicacy of *amber* and *amber jewelry*. Following just these five will surely improve the preservation of the gem and prevent degradation. For full protection of *amber* stones, here are five additional *rules for caring for amber*:

6. **Do not place *amber jewelry* along with other materials.** *Amber* is best kept in separate jewelry boxes. It is recommended that you keep it away from other jewelry and gems or other materials.
7. **Permanent cleaning.** *Amber jewelry* should be cleaned after each use. So every time you wear it, make sure to clean it with warm water and dry it with a soft material.
8. **Keep *amber* away from cleaners such as ultrasonic or steam cleaners.** Not all jewelry cleaners are suitable for cleaning *amber*. *Amber jewelry* is extremely delicate and needs special care.



9. **Clean *amber* like you would clean your skin.** Imagine that *amber jewelry* is as delicate as your skin, and clean it using a mild solution of warm, soapy water. Of course, not too warm, nor too cold. And dry it with a flannel cloth.
10. **Polish your *amber* jewelry from time to time.** Just like any other gem, *amber* needs to be polished once in a while. For a safe polishing, use natural oils such as olive oil and a soft cloth. It will make it look shiny and stay healthy.

These were the most important *rules of caring for amber* that any owner of *amber jewelry* and *amber* stones should take into consideration for preventing gem deterioration.

## *Aspects to Consider While Buying Baltic Amber Jewelry*

Baltic Amber stones are brilliant gems ideal for making extremely wonderful jewelry pieces that can be worn for a lifetime and passed down from one generation to another, so there are various *important aspects to consider while buying Baltic amber jewelry.*



When you enter a jewelry shop in order to buy a piece of jewelry, it is not like going in to your local corner shop. It is an experience itself, because you are searching for an item to remember, a significant purchase made with care and concentration. Baltic amber is a gentle, soft, semi-precious stone, so not every jeweler can handle it. It also has physical and psychological benefits for the human body, so extra care should be taken when buying amber jewelry.

Baltic amber also comes in various shapes and colors which are absolutely brilliant, so as a buyer you must be subjective in choosing the best piece of jewelry according to your taste, budget and requirements. It can be hard to choose the right type of amber jewelry, so take your time on deciding and do not make a quick decision based solely on the gem's value. There are various other factors to be considered as well.

Take, for example, the metal base of the jewelry pieces. It is up to you to decide which type of metal you want for your amber jewelry. Notable and not to ignore is the fact that amber, as the soft stone it is, needs a tough metal base. So something like steel or silver is highly recommended.



Also think about the size of the stone and jewelry piece you wish to buy. The bigger sizes of amber stone provide the artisan with the

possibility to experiment more and create exquisite designs, while smaller sizes limit the designer's freedom a bit. But after all, this depends on your tastes.

*Other important aspects to consider while buying Baltic amber jewelry* are stone shape, cut and finish and of course, color. Baltic amber commonly comes in cabochon cut, but this may vary. Amber shapes are a good reference on whether you should buy pendants and necklaces or bracelets and rings. Color helps you as buyer to decide which combination works better according to your needs, your outfits and other details related to the jewelry piece. Amber comes in various colors such as red, yellow, brown, green, blue, black, transparent, white etc.

After you've taken care of every detail, you can shop for your jewelry online or in a jewelry store.

## *Amber Care*

For those who have Baltic *amber jewelry* in their possession, it is important to know a few tips about *amber care* and what you should do to protect your jewelry. This is a quick guide to keep *amber* in an excellent condition.



*Amber* stones are still alive, as they are in continuous metamorphosis while also interacting with the environment. *Amber care* is important because these gems' colors change over time, making them even more wonderful and unique. Each *amber* piece ages in a different way, each has a different composition of resin, plant and animal fossils. *Amber* keeps its mystery and still fascinates science, as the scientific world replicates *amber's* chemical signature in laboratories and experiments.

*Amber jewelry* has been a symbol of social status, of tribal affiliation, a gift with personal significance. Even today, it is desired



and worn worldwide, and people claim it for use in human protection as well as beauty.

*Amber* may have a hard, solid composition, but it is also fragile so *amber care* is extremely important if you wish to maintain the beauty and mystery of your *amber jewelry*. Nevertheless, taking care of *amber* is an easy process. *Amber* is brittle, so it is better to keep the stones from interacting with sharp hard surfaces. It is better to place it carefully onto a hard surface rather than tossing it down. Carved pieces, cameos and intaglio jewelry forms require special attention, so it is best to be mindful when handling these pieces. However, as *amber* cameos are passed down from one generation to another as heirlooms, they have been through a lot; there is no need to be extremely careful when handling them, just make sure these designs are treated with care.



*Amber jewelry* and *amber* itself is soft and can easily be scratched, due to the fact that it is indeed one of the softest and lightest of all semi-precious stones and gems. It is highly recommended to keep *amber* away from solvents, perfumes and hairsprays, as an

important step in *amber care*. Nobody says you cannot use perfume or hairspray at all, but it is better to apply them first on skin and hair and then put the jewelry on afterwards. Specifically with *amber*, it is better to avoid introducing any dull whitish film that may react chemically with the gem, as these stones are alive, porous and still interacting with the environment.

Another important thing in *amber care* is to avoid ultrasonic or steam cleaners that may eventually shatter the stone. It is also highly recommended never to allow *amber* to come into contact with chemical solutions, detergents, or commercial jewelry cleaners. Keep *amber jewelry* away from kitchen substances, excessive heat, burners, butter and oil.



As far as dust and perspiration removal is concerned, this can easily be done with clean, warm water and a soft flannel cloth. *Amber* can be dried and rubbed using clean olive oil and a soft cloth ideal for polishing the gem. *Amber* is best kept away from extreme heat and direct sunlight, but if this can't be avoided the best solution is to

properly ventilate the room and avoid long exposure to sudden climate changes and variations of temperature. Women with a passion for gardening should avoid wearing *amber jewelry at the same time, and also* during other physical activities.

And finally, what is extremely important in *amber care* is how to store your *amber* stones. The best way is to wrap your jewelry and store it away from sunlight, for reasons given above, carefully placed in jewelry boxes away from other gems. Bead necklaces should be hung when not in use, in order to avoid tangling and help retain drape.

In conclusion, by following these easy steps regarding *amber care*, both *amber* objects and *amber jewelry* will be kept safe and last a long time.

## *Fake Amber and Modern Amber Imitations*

*Fake amber and modern amber imitations* focus on the replacement of the real natural materials and products. and these imitated items are then sold at lower prices. The need for *Baltic amber* is significantly increasing and this has led to a high public demand of *amber jewelry*. Some jewelers and artisans prefer to work with fake pieces just to satisfy people's wishes.



In terms of *Baltic amber*, this particular type of stone can be found along the Baltic Sea coasts and it is considered to be the finest and most appreciated *amber* stone in the world. *Amber imitations* started to appear soon after other materials proved they could replace *Baltic amber*, mostly after the 19<sup>th</sup> century. Surrogate materials include glass, other natural resins and plastics.

Nowadays, these imitations are accepted as raw semi-finished cheaper materials, similar in appearance to the real thing, but with

different chemical properties or other physical traits. *Amber imitations* are also produced all around the world, some containing high-tech plastics known as *Baltic amber* forgeries, which are extremely difficult to differentiate from real *amber*. Still, experts have found some ways to distinguish real stones from fake ones, thanks to their professional expertise and years of experience. Simple methods include sinking the pieces in salt solution, comparing *amber*'s characteristics and critical assessments or scent tests after heating.



Complex methods include detailed examination with regard to surface cracks, internal cracks known as “scales” or stone hardness. As A. Golloch says, modern imitations are so close to perfection that simple analytical methods fail to differentiate between *real amber* and *fake amber*. Scientists developed the so-called FT-IR Spectroscopy test for the infallible identification of *Baltic amber* – succinite. Under close examination, *real amber* reveals its Baltic

curve in spectrum coupled with gas chromatography and electron microscopic features.

When it comes to *fake amber and modern amber imitations*, these come in various types. The first one is Copal, a replacement chemically similar to the real material. Copal is a very young tree resin that contains succinic acid, also found in 8% of *amber's* surface. It has a sweet, soft smell of pines, as a result of chemical substances known as terpenes. This surrogate stone is frequently used in imitating inclusions by simply inserting organic residuals inside the material.

But Copal is not the only replacement material. Artisans commonly use glass, because it can achieve the same look as *real amber*, although it is very easy to detect that the stone is a fake. The modern industry also uses fenolic resins. These are chemical substances used in *amber* beads production. It can come close to some interesting *amber* colors such as dark red, cloudy yellow or limpid and it achieves exact oval or round shapes, making the buyer believe the product was better polished or carved.



Various plastics are also used as *amber* replacements. The most common ones are celluloid, casein and modern plastic. Celluloid or cellulose nitrate has a yellowish color, similar to *real amber*, making it extremely difficult to differentiate between real and fake. The good part is that the difference can be detected with the use of heat, as celluloid is solid and not combustible, so instead of diffusing a soft smell of burnt resin, it gives off the scent of burnt plastic. Moving on to casein, this plastic is made of milk, generating a turbid yellow color, and it weights more than *real amber*. It also, it gives off a scent of burnt plastic after the heating test. And let's not forget about modern plastic such as polyester or polystyrene used in *fake amber* and fake inclusion productions. Seen with the naked eye, it is hard to differentiate between the real thing and the surrogate material, mainly because you can obtain the same clear vivid colors and limpidity. You can, however, know it is a fake because falsified inclusions are usually bigger than real ones and clearly visible in the center of the stone. Again, if heated it diffuses a scent of burnt plastic.

So although there are thousands of *fake amber and modern amber imitations* out there, there is always a smart way to distinguish between them and the *real amber* stones and inclusions, because let's face it, it's hard to compete with nature's skill and creation.

## *Fake Amber Fossil Inclusions*

In our modern times, *fake amber* and *fake amber fossil inclusions* are practically everywhere. This industry dates back to the early 1900s, having its major source in New Zealand, where large amounts of Kaori Gum are located - the prime ingredient in the fabrication of *fake amber*.



In the North Island, diggings of Kaori Gum would be performed daily, turning it into a major industry. It may be hard to imagine, but even the workers were so engaged in their activities that they formed their own newspaper called “The Gum Diggers Gazette”. If you wonder how this Kaori Gum was used as a surrogate for *real amber*, here is how it was done: the material would be melted down gently and carefully. Inclusions would then be placed into it, e.g. suitably colored insects which can easily be detected as fake fossils because true ancient *amber* fossils are colorless and monotone due to time usage. You might see beetle color in *real*



*amber* pieces, but this is only a light refraction effect, so it is usually easy to distinguish between real inclusions and fake ones.

However, the *fake amber* industry is full of smart and inventive people. A clever *fake amber fossil inclusion* method involves a section cut from one end of a real piece of *amber*. The space made this way inside the stone is then drilled into the main block, where an animal or insect is placed. Usually, the animal or insect is still alive and dies after the procedure, when it is surrounded by molten resin. The section that was removed in the first place is put back inside the stone and glued with a similar liquid resin. And so you have an externally perfect piece of *true amber* and nobody or no test can deny that.



Another scam well known is the use of copal, because copal can easily melt. So rare inclusion scams are made by

drilling a piece of *fake amber*, or a real one, and placing inside an organic residual. Finally, the hole is filled with molten copal and the resultant new piece is polished. It may look natural but it isn't. Many collectors were victims of scams such as these and bought with hard money all sorts of *amber* pieces with "rare inclusions" such as lizards, exotic insects and so on. They did not know that sometimes things are too good to be true. Meanwhile dealers sold thousands of *fake amber fossil inclusions* and made quite a fortune.

## *Simple Tests to Recognize Real Amber*

Fake amber is easy to make from surrogate materials such as colored plastic, copal and modern polymers, but some of it is also easy to identify. There are a few ways to identify fake amber and also several *simple tests to recognize real amber*.

Before you can learn to recognize whether amber is fake or real, you must learn some general facts about amber. There are few places in the world where real amber is excavated and the Baltic area is one of them. Here, millions of years ago, the climate grew warmer and pine trees or eucalyptus trees produced the resin which fossilized and became amber.



In South America, there are various species of leguminous trees, smaller plants with nodules inside their roots. Here, bacteria put nitrogen back into the soil. The resin produced by these leguminous trees can turn into amber when proper conditions are achieved, even though it is partially polymerized so it can't be considered real

amber. These resins are called copal, a surrogate material for real amber. In comparison to real amber it is less dense, with a specific gravity of 1.03 to 1.08, while real amber shows a gravity of 1.05 to 1.10. Since 1 is the same gravity as water, materials that are denser than this value will sink in fresh water.

So both amber and copal will sink in fresh water. And since salt water has a higher density, both of them will float in it. You can approximate salt water by pouring 15gr of salt in 100mL of water. You can distinguish real amber from copal by judging each piece's weight, because copal is lighter than amber. But sometimes our judgment is false, so we can use these six *simple tests to recognize real amber*.

1. *The smell test.* Amber has a piney, sweet, soft smell when burnt, which cannot be falsified. Meanwhile, copal melts at temperatures lower than 150°C and diffuses a smell of burning resin.
2. *The rubbing test.* This test is ideal in distinguishing glass from amber. While amber cannot be scratched by metal and is more solid, glass is fireproof and cold. So just rub the amber piece in your hands until it releases a soft piney smell of tree resin.
3. *The hot needle test.* You can stick a heated needle into the piece. Fake pieces will be pierced without any cracking and it will give off a scent of melted plastic. Real amber will give a scent of pine tree resin. There are two problems: a) the burning mark on the real amber piece remains; b) amber is fragile, so some cracks will appear on its surface.
4. *The acetone test.* You can use alcohol or nail polish remover for this test and drip it on the surface. Real amber will not be

harmful by solvents and will not dissolve, while fake amber will become tacky and the fluid will take on the honey color.

5. *Salt water test.* As you know, real amber can float on salt water. This is how in some places, for example the Baltic Coast, you can find it washed up on the shore after stormy weather. Begin testing it by pouring 7 to 8 spoons of salt into 300ml of water. Don't forget to stir in order to dissolve the salt. Wash the sample with pure water. The bad news is you can't detect polystyrene or copal, and amber jewelry with metal can also sink, so it is not foolproof.



6. *The artificially inserted insects test.* Remember there are hundreds of imitations out there. Some of them even include fake inclusions in amber. So if the creature inside your amber piece looks too good to be true, e.g. scorpions

or big insects, then it is a fake because this is extremely rare and there is a very small probability of finding ancient creatures inside Baltic amber, not to mention that a real amber piece with big animal inclusions would have a very high price. However, small mosquitoes can be found in real amber and not cost too much.

So these are *simple tests to recognize real amber* which you can do at home.

## FAQ Amber

There are numerous unknown facts about *amber* and owners or collectors have a lot of questions. Here are some of the frequently asked questions about *Amber*.

### 1. *What is a Baltic Amber stone?*

Baltic amber is a splendid semi-precious fossilized stone created from tree resin. Its origin dates back to over 50 million years, in Northern Europe, where pine trees and extremely high temperatures contributed to the stone's formation process. The tree resin was hardened due to nature's influence and the underground or underwater conditions.



### 2. *How can I maintain my amber jewelry in a good form?*

You can take care of amber jewelry by cleansing it using fresh clean warm water and drying it with a soft cloth. Remember not to use

chemical cleansers, as it damages the stone. Store it in a soft cloth away from other jewelry pieces.

### *3. What is referred to as amber inclusion?*

Amber inclusions are organic residuals of flora and fauna embedded inside the amber stone. You can find inside insects, arachnids, small animals, plants, oxygen bubbles and any type of organic residual that was trapped in the resin millions of years ago. These add value to your amber stone. Inclusions with small animals are extremely rare and often seen only in museums.



### *4. What is the effect of amber inclusions on jewelry?*

First of all, there is no such thing as a negative effect. Imagine how much value each inclusion adds to the amber stone. They will only affect positively your jewelry, making it a unique one of a kind piece.

*5. How can I tell the difference between real and fake amber?*

Amber became really famous among jewelers and artisans, so many people try to imitate it in order to make it into the industry. There are three simple methods you can use in order to differentiate the real amber from the fake one. The first one is to test it in salt water, because real amber floats while fake amber sinks. The second easy method is to check its scent: real amber has a sweet, piney scent and it is pleasant when burnt, while fake amber has a plastic, chemical smell. The third way is related to heat: fake amber melts when burnt, while real amber burns and gives a soft piney scent. Also, keep in mind that fake amber is made using surrogate materials such as glass, copal and plastic, so it is easy to distinguish it from the real amber resin.

*6. Can amber be used for medical purposes?*

Yes, amber has a proven record of medical qualities used since ancient times. The Romans believed that amber could protect the wearer from mental illness, infections, kidney stones and stomach diseases. Eastern countries would smoke amber for powerful human resolution and courage, while Chinese people would make amber syrup used for tranquillizers. Amber tincture mixed with vodka would provide men with sexual potency. Today, it is used in aromatherapies as a bio-stimulant for the nervous system.





### *7. Are there amber myths out there?*

Yes, there are a few amber myths, most of them in Greek mythology. The most notable one is the story of Phaeton, the son of the Sun-God Helios, who convinced his father to let him drive the sun chariot. Unfortunately, the horses were not bonded with him and felt that he was too inexperienced, resulting in the burning of Africa and blackening its people. Zeus saw everything and was so filled with anger he struck Phaeton by lightning and the boy died. His sisters and his mother grieved for him and cursed the gods. They were punished and turned into trees, but even so, they kept crying. Their tears became the resin of the tree and later on turned into amber.

### *8. Is there a more valuable amber color?*

In fact, there is. Contrary to popular belief, amber is not all yellow or brown, but also comes in red, black, blue, green, white and clear colors. The most valuable piece is the clear amber and only one in

ten pieces is crystal-clear. Clear amber allows a better view of the inclusion found inside, so it is extremely pricy compared to ordinary amber colors.



*9. Are hand-carved amber figurines and jewelry that special?*

Well, amber is special itself, but imagine how special hand-carved amber jewelry and amber art are. Inclusions and stone color add a certain air of uniqueness to the amber piece, so hand-carved art can only benefit the owner even more. They are manifestations of human creativity and talent and each possesses the artisan or craftsman's personal touch and passion. Hand-carved amber figurines and jewelry items also come in unique pieces, so they have no duplicates.

*10. What does Baltic Amber do?*

Benefits of Baltic Amber include significant inflammation reduction and thyroid gland stimulation, meaning less red cheeks or drooling for your teething baby. Amber is associated with warmth and sunlight, so it accelerates the body's natural immune system and the ability to heal wounds quickly. It also reduces other

inflammations such as those affecting the ears, throat, stomach or respiratory system.



*11. Does amber have a chemical constitution?*

Of course, since amber stones are in constant metamorphosis. Amber consists of 79% Carbon, 10.5% Hydrogen and 10.5% Oxygen.

*12. Do scientists do research on Amber?*

Amber and Baltic Amber fascinate the scientific world thanks to their high succinic acid constitution. Robert Koch, a Nobel-prize winner and also pioneer of modern bacteriology, analyzed amber in 1886, confirming its positive effects. He also discovered that succinic acid present in the human body is risk-free. More recent research shows that succinic acid contributes to the wellbeing of the human body, as it strengthens the immune system and the internal organs and generates energy and balance between human body acids. Also, micronized amber is assimilated by people with high stress levels and blocked energy-related processes in cells. Amber stimulates cell and energy renewal.



### *13. Is succinic acid found only in Amber?*

No, but most of it is found in Amber. There are some plants which contain succinic acid, but usually it is deficient in nature. Succinic acid became indispensable in certain ingredients used in food processing. Plants with succinic acids, such as rhubarb stalk and unripe gooseberries, now have 1000 times less, so amber remains its primary source.

*14. How long does an amber teething necklace last?*

Artisans and craftsmen usually create very durable teething necklaces and amber itself is a durable material. In many cases, the necklaces are handed down from one generation to another.

## FAQ: Amber Teething Necklace

People do not know much about what an *amber teething necklace* is or can do, so here are a set of frequently asked questions and responses.

### 1) How does an *amber teething necklace* work?

*Baltic amber* became a reality 50 million years ago, but still some parents do not know if it can truly relieve the pain of teething babies . This necklace has a soothing and calming effect thanks to its natural amber composition. It reduces redness in the cheeks and has anti-inflammatory properties. Of course, they might not work for all babies. Irritability caused by factors such as digestion problems, allergies and other kinds of sensitivities which are usually attributed to teething may not improve even after using an *amber teething necklace*. Either way, natural remedies such as this one are preferable compared to chemical and artificial ones. It also looks great on your child's skin and it makes for a treasured keepsake.



2) Is the *amber teething necklace* all right to use for children?

Child teething is a painful growth process so anything that calms and lessens the pain is welcome. The *amber teething necklace* has been used for decades as a natural pain reliever for children. Plus, kids love it as it looks great, it glows beautifully and captures everyone's attention. And babies do love attention. *Baltic amber* has analgesic functions, thanks to the succinic acid found in the stone's surface, so everything made from *amber* has calming and healing effects, *amber teething necklaces* included. Just make sure the necklace beads are sized properly so the little one won't choke on them or swallow them, because they are not made for chewing.



3) Is the *amber teething necklace* ok to be worn during sleep time?

Ideally, you should remove the necklace before putting your child to bed, because children tend to move around during their sleep. In order to prevent unfortunate events, do not leave the child unsupervised with a necklace around.

- 4) Will an *amber teething necklace* cure the child's teething pain completely?

Parents all over the world testify that this necklace helped a lot with their babies' teething problems. After all, *Baltic amber* has analgesic properties and helps in relieving teething pain and its side effects such as restlessness, drooling and irritability. So it is ok to presume it can reduce a large amount of pain or even completely relieve teething pain.

- 5) Children tend to put things in their mouth or to chew on the necklace. Is this a problem?

Actually, it kind of is a problem. Do not let your child chew *amber* pieces. It is best to opt for beads of the best suitable sizes. Also, place the necklace under the child's clothing so it can rest against the skin. The *amber* will reach your child's body temperature so it will soon be forgotten by the little one. And use other aids for teething, too. They can give the child something safe to chew on.

- 6) Is the *amber teething necklace* just for girls?

No, the necklace has a design suitable for both girls and boys and provides the same benefits no matter the baby's gender.

- 7) Is it safe to wear?

Safety is a priority when it comes to babies. Those who manufacture the *amber teething necklace* always have their focus on making it safe for your child. Usually, they only use synthetic plastic clasps with screw threads previously glued into the barrel of the clasp. The strings are also knotted by hand so if the necklace



breaks, the beads won't scatter across the room. Keep in mind that teething necklaces are not recommended for children under 36 months old.



8) What happens if the *amber teething necklace* breaks?

Necklace strings are unlikely to break and manufacturers keep this in mind when assembling the products. Usually, if the string breaks only one bead comes off. And that is not a problem, as necklace beads are small and weigh very little, so the baby wouldn't choke on it. Even if the child swallows an amber bead, it is not poisonous. So there is no need to worry for your child's safety.

## *Credits*

We would like to thank everyone who has helped to make this handbook a reality.

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Thanks for reading and good luck!