



SOCRATES COMENIUS I

CONSUMER EDUCATION "USE YOUR SENSES AND BE SENSIBLE"

MASTIC OF CHIOS

A MIRACLE OF THE NATURE?



6th GYMNASIUM OF NEA SMYRNI
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The Gum Mastic of Chios: a tear which delights, scents, relieves and heals!



GUM MASTIC IS THE TEAR OF A SHRUB

The mastic is a resinous, aromatic substance that comes from the trunk and the thickest branches of the **gum mastic tree (Schinos)**. The tree trunk and its branches are incised with a sharp tool. The gum mastic resin then exudes through these incisions.

The gum mastic tree *Pistacia lentiscus*, var. *Chia* (belongs to Anacardiaceae family), is a slow-growing evergreen shrub 2-3 meters high. It grows to full height after 40-50 years. From the fifth year on it begins to yield gum mastic. It can live over 100 years. It is a "dioecious tree", which means that masculine and feminine blossoms are in different plants.

The word "mastic" is most probably derived from the Greek verb "masso (μασσώ)" which means "to chew", or from the ancient Greek word "mastix" which means "whip", because in earlier times the gum mastic tree was whipped instead of incised.



THE GUM MASTIC TREE SHEDS ITS TEARS ONLY IN CHIOS.

Trees or shrubs belonging to the *Pistacia lentiscus* species are indigenous to various regions, particularly the eastern Mediterranean coast, northern Africa, but also South America, where it is mainly ornamental.

The Greek island of Chios is the only place in the world where the trunk and the branches of this tree "shed tears", which then dry and harden producing the sweet-smelling gum mastic resin. Although the trees and shrubs grow all over the island, the production of gum mastic resin is carried out only in the medieval villages in the southern region of Chios called Mastichochoia (= Gum villages). Areas only slightly north of these villages do not enjoy this privilege. It is no wonder then that Chios is virtually synonymous to the production of gum mastic.

THE PRODUCTION

A lot of sweat for a tear to become ...sweet!

The production of gum mastic takes place from June to September and, if weather conditions allow, until October. The work is divided into four categories:

a) the preparation for the harvest, b) the harvest, c) the first stage of processing carried out by the gum mastic growers, d) the second stage of processing carried out at the plant of the Chios Gum Mastic Growers Association.

Preparation for the harvest

- From mid-June to the beginning of July, the area below the trees is levelled.
- The trees (or bushes) are cleaned with tools specially designed for this purpose.
- The levelled area beneath the tree is swept with an ordinary brush or branches.
- The levelled and swept area is then strewn with a special, sifted white soil collected from neighbouring areas. The white soil is spread around under the tree and pressed down to make it smooth. When the gum mastic resin falls onto it, it becomes bright and hard.
- Then the tree trunk is incised working from the base up towards the branches. The incisions are 10-15 mm long and 4-5 mm deep. This happens twice a week and lasts for a period of 5-6 weeks.
- The gum mastic resin then starts to seep from the incisions and in 10-20 days has been coagulated.



The leveled area is strewn with white soil



The tree trunk is incised many times



The gum mastic resin starts to seep



The harvest



The tears are rinsed with a solution of soap and cold water and then are spread out in cool places within the house



The women of the house gather and clean piece- by -piece all the tears with a small knife.

The harvest

- The first harvest usually takes place in mid-August and is done with a special tool. The gum mastic is carefully placed in wicker basket or wooden crates and it is transferred from the grove to the farmers' houses and stored in a cool place.
- During the second incising process the trees are incised 10-12 times. After 15-20 days, when the resin has again hardened, all the tears are harvested one by one from the tree trunks and the ground below.

The first stage of processing

- After the final harvest, each grower sifts all the tears in order to separate them from impurities such as leaves and soil.
- The tears are then rinsed several times with a solution of soap and cold water.
- The tears are spread out in cool places within the homes until they dry through.
- When the gum mastic has dried completely, the women of the house gather and clean piece- by -piece all the tears with a small knife.
- After all the gum resin is picked clean, the growers deliver the harvest to the cooperative, which undertakes to send it to the plant of the Chios Gum Mastic Growers Association.

The second stage of processing

- At the Association's plant the gum mastic is washed many times and spread out to dry.
- When it has dried, the gum mastic is placed on tables where it is picked clean piece- by- piece with a small knife for a second time.
- A special sorting machine sorts the gum resin into categories according to size: large tears, small tears, by-products and powder.
- Then the clean gum mastic is packaged according to size or it is used to make sugar - coated chewing gum tablets, gum mastic oil and other products.

MARKETING TEARS!

After going through various processing stages carried out by the gum mastic growers and the Gum Mastic Growers Association plant, gum mastic is marketed on a Greek and international level in a wide range of packaging.

The packaging ensures the quality of the product and facilitates marketing.

The main types of gum mastic on the market are: **large tear**, **small tear**, **chewing gum** (sugar coated or plain), **gum mastic oil**.

PROPERTIES

The range of gum mastics beneficial properties has been known since antiquity. Today is used in various fields:

PHARMACEUTICALS

- ⇒ It is found that mastic gum is active against *Helicobacter pylori* (the mechanism responsible is not yet clear), which could explain its therapeutic effect to patients suffering from peptic ulcers.
- ⇒ The effects of gum mastic on diabetes, cholesterol and triglycerides are being researched by universities in Greece and abroad.
- ⇒ Gum mastic is used in ointments for burns, frostbite, external skin affections and in the preparation of plasters.

APPLICATIONS IN SURGERY

- ⇒ The gum mastic of Chios, as well as its by-product **colophon**, is used to make surgical thread for suturing (such stitches are absorbed by the skin and do not have to be removed).
- ⇒ To attach bandages, the drug **Mastisol** (made in USA) containing gum mastic is used, as this ingredient does not irritate the skin in the application of bandages and it also sterilizes the wound.

DENTISTRY

- ⇒ Gum mastic helps to ensure dental hygiene also strengthening the gums and cleansing the mouth, which is why it is an **ingredient of toothpastes and mouth washes**.
- ⇒ It is an ingredient in fillings of cavities, crowns and gaps between teeth.
- ⇒ The aromatic liquid **eugenol**, which is contained in **gum mastic oil**, is used as a dental antiseptic and analgetic.

PERFUMERY

- ⇒ Gum mastic oil is used as a **perfume** and a **stabilizer of perfumes**.

COSMETICS

- ⇒ Gum mastic oil is a basic ingredient in **facial creams** as it both cleanses the face and brightens the complexion. It is also used in other cosmetics.

CONFECTIONERY

- ⇒ Gum mastic can be served on a spoon "submerged" in a glass of cold water (called "submarine") and it also used in preparing of other **confections** such as Turkish Delight and candy as well as in glazes.

ALCOHOLIC BEVERAGE

- ⇒ The drink '**Masticha**' is consumed as an aperitif while there is also a Masticha liqueur. As an ingredient it is contained in many other alcoholic beverages.

INDUSTRIAL PRODUCTS

- ⇒ Gum mastic and its by-products are excellent **paint stabilizers** especially in artists' paints.