Cypress (Cupressus sempervirens L.)

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Characteristics of the plant

Cupressus sempervirens L. is a woody plant of the Cupressaceae family with its origins in the Western Asia. Its diffusion in the Italian territory goes back to the time of the Romans.

It is a long-living tree with erect branches and forming a very characteristic tapered crown. The bark is fibrous, finally cracked and greyish brown. The small green leaves covering all the branches. Unisexual flowers, masculine yellow terminal, feminine grey-green present on the same plant.

The inflorescence is woody and spherical known as Galbulus and which contain many winged seeds. For some years now, the Cypress with its many varieties, of which the best known is Cupressus sempervirens was affected by fungal parasite, which threatens the lives of the plant. This has also been coupled by irreparable damage caused by aphids especially in Tuscany, where these plants are an important characteristic of the landscape.

The cypress is everywhere, in cemeteries, parks, gardens, along the roads, in the open countryside in group or isolated and it has often the function of “border”.

The Cypress cancer (Seiridium cardinale) is a small fungal parasite responsible for the disease known as cancer of the bark which creates depressed areas (called cancer) on the trunk and on the branches and from which exit a vast amount of resin.

When the cancer surrounds a branch, the part over dries out and dies. The sudden drying on the common cypress and on the silver variety were caused by cinaria cupressi aphids.
Aphids are located in the bark of a young blanches. They feed by biting the bark and sucking the lymph. Their saliva is phytotoxic and they cause phloem necrosis and then the drying of branch.

If ants consume the honeydew (produced by aphids) it spreads over the plants affected by the leaf aphids and it is then colonised by sooty mould, which consumes it. The drying caused by aphids are sudden so that the plants grow are almost or totally burned.

In ancient Egypt, the cypress is used for sarcophagi and essential oil for therapeutic use.

**Property of essential oil**

All essential oils have anti-inflammatory, antibacterial, antifungal and antiviral properties. The Egyptians used essence in the embalming of mummies, because they block the proliferation of microorganisms and then the decomposition process. Hippocrates knew and appreciated their antibacterial properties: when The plague broke out in Athens, Hippocrates recommended to burn plants and aromatic herbs to end the outbreak. The essential oil of Cypress is pale yellow and has an intense fragrance.

The chemistry analysis revealed the presence of terpenic hydrocarbons C10 (1.5%), oxygenates monoterpenes (67%), sesquiterpene hydrocarbons C15 (18.5%), oxygenates sesquiterpene (13%). The main components are carvacrol and its and methyl esters, cedrol, cuparene, cedrene. In addition, there are flavonoid glycosides (Apigenin, Rutin, Quercetin e Kamferolo) and two biflavoni (cupressoflavone ed amentoflavone). It has a vasoconstrictive and protective action for blood capillaries and it has a spasmylytic, antibacterial, antifungal and antiviral properties. The cypress is know for varicose veins, phlebitis, rheumatism, spasmodic cough and excessive transpiration. The antibacterial activity was tested by Gram- amd Gram+(Proteus vulgaris, Proteus mirabilis, Salmonella tify, Staffillococcus aureus, Enterobacter cloaceae, Enterobacter aerogenes, Pseudomonas aeruginosa) and the index MIC varied between 1 microgrammes/ml (Proteus vulgaris and Proteus mirabilis) and 15 microgrammes/ml (Pseudomonas aeruginosa e Stafilococcus aureus, Enterobacter aerogenes) instead the index MBC varied between 2 microgrammes/ml (Proteus vulgaris and Proteus mirabilis) and 30 microgrammes/ml (Enterobacter aerogenes and Enterobacter cloaceae).
Use of essential oil

The intensity of fragrance, the purifying and antimicrobial action and the fat-soluble characteristic allows essence penetrates through skin and acts on the blood and lymphatic circulation throughout the body. These elements are very important to optimise a cosmetic formulation.

In the Research & Development Laboratory ERBAGIL, the essential oil obtained by steam distillation from the fresh aerial parts of Cupressus sempervirens has been used for formulations about detergents and body deodorization.

The emulsive method employed is the most important and innovative and it has been carried out by P.I.T. method: the active ingredient is incorporated in a hyper-liquid emulsion characterised by minuscule particles.

These type of emulsion exceeds disadvantages presented by stick deodorants stick and roll-on and can be used in cans with piston and valve no gas. The micronized emulsion, obtained by obtained P.I.T. method thanks to the presence of moisturizing lipidic substances and essential oil with bacteriostatic and aromatic properties, is the most efficient and advanced in full respect of the “skin ecosystem”. The detergents and the elimination of foul odors are current problems. The continued use of detergent solutions with antimicrobials substances is harmful, because eliminates unpleasant odors but also the bacterial flora. The use of substances with antisudorific and stringent action interferes with the normal transpirations and causes skin dryness or cracking. Also the alcolic fragrance has an dehydrating effect. The essential oils have emollient action and intense fragrance thanks to their fat-soluble characteristic. Therefore, the use of them for cosmetic formulations intended for the detergent and the fragrance of our body appears to be a new path to follow and apply, with due respect to both composition and the dose to be used.