Biological Olive Oil

The research, in collaboration with University Center of interdisciplinary Research on Biomaterials—Medicine Department (Naples), led to the registration of Primo Fiore® brand—extracted from the fruit of *Olea Europaea*, natural tree of Mediterranean areas. It reactivates cells vitality delaying skin ageing.

After a period of unusual carelessness, cosmetics formulator and manufacturers of products for topical use (pharmaceutical companies) turn their attention to numerous vegetal oils and to their manufactures while for several years they preferred (probably because of their optimal organoleptic features) synthetic oils, in particular foreign ones.

Among natural products considered interesting by cosmetologists, beyond some traditional oils, rank includes also polyphenols, unsaponifiables and wax of vegetal oils.

Therapeutic experiences transferred in cosmetics field confirm that these polyphenols, unsaponifiables and waxes can be successfully used thanks to their emollient, elasticizing proprieties and to their photoprotective action in solar lotions. In the following paragraphs are described other characteristics that suggest the use of Primo Fiore® in cosmetics.

Cosmetic and dermo-pharmaceutical proprieties.

Primo Fiore® from Olea Europaea should be considered either an active principle and, in some cases, an excipient in the traditional cosmetic field. Clinical experiences demonstrate that the therapeutic action of vegetal oils is mainly due to polyphenols and unsaponifiables. These experiences, transferred to the cosmetic field, demonstrate that Primo Fiore® has got the capability of bringing to the skin benefits of other substances, particularly waxes with their synergical action (that the single substances doesn’t have).

Primo Fiore® is meanly used in products for topical use thanks to its emollient and softening proprieties.
Its utilize is suggested for the production of cosmetics (creams, gels, oleolites..) used in the treatment of delicate and sensitive skin, dry, chapped and senile skin. Primo Fiore® has also photoprotective action, this imply that it can be effective in the production of cosmetics and solar creams to protect the skin from sun exposure. Thanks to this propriety it can be functional also in pharmaceutical field, in the preparation of products for topical use with soothing and re-epithelising action on burns, including actinic burns.

This natural active principle is very useful also in body treatment formulations, like massage preparations, creams against stretch marks and sino rhagades. Because Primo Fiore® owns the typical characteristics of phytosterols and triterpenic alcohol (because it contains them) it has stabilizing properties that make emulsions more homogeneous. In the field of trichology, thanks to its hair conditioning and softening action, it is largely used in the preparation of conditioners, hair masks and foam compounds. Optimum results also as improver for cosmetic products (lipstick, blusher, stick and eye shadows) enhancing their softness and smoothness to the touch. After the experiments conducted times ago that confirmed the functionality of unsaponifiables in the treatment of gingivitis and in the stomatological field in general, it was anticipated a possible usage of this unsaponifiable as element of gingival-toothpastes.

The suggested dosages for several doses go generally from 2 to 10% of the total formulation, even if the product reveals to be already effective with a dose of 1% to soft the skin and to alleviate aggressive and irritative action of soaps and detergents. It has been demonstrated that the addition, even in small amount, of Olive oils unsaponifiables allows the more frequent usage of ‘syndets’ or synthetic detergents, according to professional needs, without causing annoying inconveniences for hands skin because of the surfactant. In addition, in dermo-pharmaceutical field, extemporaneous compounding containing the right amount of this unsaponifiable gave positive results in the treatment of redness and even in pressure sores performing a smoothing, cicatrizing and regenerating action.
Studies about unsaponifiables

Among natural-animal and vegetable products considered interesting by cosmetic chemist formulators, in addition to essential oils, to vegetable extracts, to lanolin and its derivatives and to traditional oils, we consider useful proposing again vegetable oils unsaponifiables. Those products do not represent an innovation: their introduction in the cosmetic filed, in general and in the topical treatments, in particular, is not recent.

The usefulness of oil unsaponifiables in the cosmetic field has become known thanks to the positive results obtained after their dermatological applications in the therapeutic treatment of arthrosis, dermato sclerosis, in case of eczematous skin, in periodontosis and gingivitis. According to the literature, first interesting therapeutic applications of vegetable oil unsaponifiables are attributable to Thiers, who in 1965 obtained satisfying results in the treatment of dermato sclerosis (a particular autoimmune disease that affects the connective tissue; fibrous connective tissue is deposited in the skin at the expense of lipid).

In 1961 Thiers and his colleagues define vegetable oil unsaponifiables as a new group of therapeutic agents.

In Italy the first studies about soya unsaponifiables and their effects on dermato sclerosis date back to 1962 and were realized by the Institute of Health Special Pathology at Genova’s University.

In medical literature it is known that vegetable oil unsaponifiable, despite its rich contents of sterols, has important positive effect on skin tropism and on mucous so that some authors anticipated and concretized its therapeutic use in collagen diseases, in dermatoclerosis and in the treatment of Esophageal ulcers.

This unsaponifiable has a different meaning on the basis of the vegetable it comes from. It was also confirmed that its activity results not only from the sterol fraction of unsaponifiable but also from several constituents or, more probably, from the synergic effect of its complex mixture.

Chemical experiments of the following years (1970 and after) mostly by French School, represented further proof about the therapeutic efficacy of different vegetable oils thanks particularly to the constituents of their unsaponifiable fraction.
These authors also suggested the therapeutic use of their unsaponifiable fraction in dermatosclerosis, in healing processes and in the improvement of collagen in the capillary basement membrane in case of diabetes, in the treatment of arthritic pain, in leg hypodermatitis and in stomatology. Unsaponifiables action, both for topical and for systemic use, is the activation of metabolic tissue implicated by the increasing rate of enzymes like protease, tissue collagenase, serum aminopeptidase. As result there is an increment in Ratio soluble Proteins/insoluble Proteins, soluble Collagen/Insoluble Collagen. Other authors evaluated the effectiveness of unsaponificables from lipid used in topical preparations; Hincky reported positive results in the treatment of dry and senescent skins and Winkler verified an increasing water rate in more superficial layers of skins treated with these active principles. Positive results obtained in the therapeutic field shifted the researchers attention to unsaponifiables possible use for topical applications in the specific cosmetic field. On the base of the researches carried out in 1962 at the University of Genova, starting from this period an Italian cosmetic firm (Vevy) manufactured substances based on vegetal oil’s unsaponifiables.

First real works about the use of unsaponifiables from vegetables in the cosmetic field emerge during the 70’s. Thiers (1971), who already had been experimented vegetable unsaponifiables as efficient therapeutic agents in different disfunctions, was the first to suppose their use even in the cosmetic field. The Bulgarian school, Angelakova and colleagues, in 1972 and in the following years, illustrates in different works the possibility to use tall oil sterols in cosmetics, explaining in particular their action on the skin. Researches demonstrate that these sterols have not only an emulsifying and stabilizing action but also a real Estrogen bioactivation confirmed by biochemical analysis.

In same years (1974-1975) this topic was resumed and developed by Rovesti and colleagues.
In their works, AA reported about experimentations made using cosmetics with unsaponifiables fractions from tall oil, that contains the 70% of phytosterols as active principles in the treatment of dry and senile skins: tests and observation of the skin after the application of creams containing these active principles confirm the validity and the effectiveness of this bioactivating action, common feature of all unsaponifiables from most vegetable oils.

During the 70’s the first compounds from lipid (unsaponifiables from soya) appeared on the market and they were addressed both to the pharamaceutical topical use and to the cosmetic field.

In that period products like Generol, phytosterols from soya unsaponifiables by Genral Mills, were particularly known.

During the period 1975-1978, characteristics, proprieties and possible uses in the cosmetic field of unsaponifiables from vegetable oils were treated by Italian authors on an Italian scientific journal and reported during conferences.

**Cosmetic comes back to natural oils**

In the last years, with the diffusion of eco-friedly concept, even the industrial production is oriented towards the use of natural materials.

The attention is so again directed to several raw materials that come from animals and plants, this also regards oils.

After a period of strange and unusual careless, cosmetic formulators and formulators of products for topical use in general are interested in several vegetable oils, in their fractions and in their compounds while for years they preferred synthetic oils, most of them foreigners, appeared on the market giving more possibilities to choose according to the formulation necessities. The big range and good organoleptical features let these foreign synthetic oils to be the first choice, so that cosmetic products manufactured using natural oils were really a few.

The concept of returning to the nature, not only in the cosmetic field but also in the food one, and the use of products not realized synthetically renewed finally the interest in natural oils, as said at the beginning of the paper.
Modern cosmetologists, without denying the real development of chemistry and the usefulness of several synthetic molecules, start to reconsider the products offered by Mother Nature, either as cosmetic foundation and as active principles.

In conclusion, we can say that, working with the formulations of these products, considered safer, formulators can satisfy both the consumers’ requirements: health safety and beauty.