

Cosme-phytamis®

New generation of plant actives for efficient and natural cosmetics

By Alexandra Jeanneau*



Nowadays consumers are seeking simple, efficient, natural cosmetics as well as a greater transparency regarding the composition of their products.

Alban Muller Company, leader in plant extraction since 1978, has designed Cosme-Phytamis® 100% natural plant extracts with the objective to get the highest level of active molecules while limiting the impact on Man and the environment. In order to achieve this, the Company has developed a specific plant extraction. Each step of the manufacturing process is monitored to guarantee it is Man and Environment-friendly. The solvents used are recycled; the plant residues obtained are biodegradable and composted before being returned to the fields. The manufacturing processes are low-energy, fully preserving the integrity of the actives, and guaranteeing top-quality extracts.

1. The first step for high quality extract is the quality of the plant

Alban Muller carefully monitors the plant supply thanks to partnerships with local expert farmers following the Guideline of Good Agricultural and Collection Practices (GACP) from EMA



(European Medical Agency) guaranteeing a quality assurance as well as full traceability for plant materials destined to become raw materials for cosmetics manufacture. Indeed, these procedures lead to improve the quality, innocuousness and effectiveness of plant-based finished products.

GACP also aim to encourage and support sustainable cultivation and harvesting of high-quality medicinal plants using methods that promote the conservation of plants and the environment in general.

Indeed, this procedure allows target species identification and to manage the risk of unwanted contamination, cultivation permits varietal selection to breed plants that exhibit favourable agronomic characteristics (productivity, acclimation to the environment and resistance to disease) in addition to optimised concentrations of active molecules.

With the current focus on reducing carbon footprints, a not to be underestimated advantage is that most of crops are harvested close to the industrial processing site.



2. An efficient, eco-responsible and innovative manufacturing process to get the highest concentration in actives

Alban Muller's expertise in plant extraction has highlighted that conventional extraction processes are no longer efficient enough to get the highest concentration in actives. Indeed, glycolic solvents, besides the fact that most of them are from petroleum origin, are not selective towards active principles which lead to extracts with poor level of actives of secondary metabolites such as phenolic compounds.

Therefore, the company has identified that an adapted proportion of water-ethanol was the most efficient solvents to target the highest level of actives. Moreover, these solvents are from natural and plant-based origin which enables composting the plant residues after filtration of liquid extracts.

This clear liquid extract obtained from maceration of plant with solvents is then going through three steps to remove the solvents and destroy the microorganisms. These steps are actually often

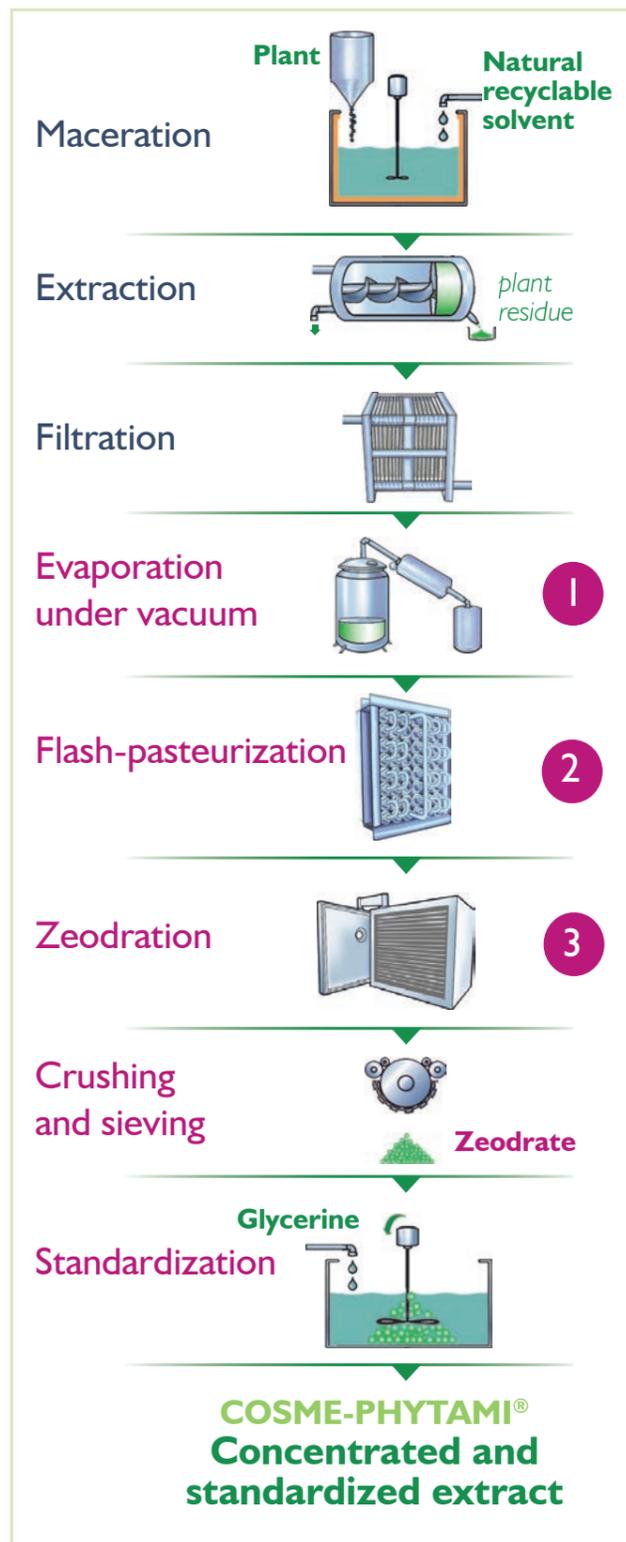


the most critical steps of the process with the risks of losing actives.

These steps are a concentration under vacuum and low temperature to remove ethanol (which is recycled), a flash pasteurization to eliminate microorganisms, and finally zeodration, a unique drying technology to get a powder concentrated in active molecules only.

**AZ Kahlwax
1/2 Seite quer**

* Scientific Communication Manager, Alban Muller International



Indeed, Zeodration is an innovative and exclusive eco-friendly drying technique respecting the integrity of active molecules, preserving the organoleptic qualities of extracts and insuring their best possible solubility. It is a smart energy-saving technology using zeolites which adsorb water and release heat by exothermic reaction ensuring a gentle drying at low temperature (40°C) adapted to plant extract. Indeed, it is an eco-responsible alternative to conventional techniques that are very demanding in energy such as freeze-drying.

This highly concentrated dried product obtained from zeodration is called “zeodrate”. It is then grinded into a powder and solubilized in a glycerin carrier from plant origin for best skin biocompatibility.

The final extract “Cosme-Phytami®” is standardized and therefore reproducible in terms of concentration thanks to a systematic titration in actives of the zeodrate by HPLC before its solubilization in glycerin. Furthermore, Cosme-Phytamis® are chemically identified extracts allowing a compliance of both substances to REACH regulation.

3. Cosme-phytami®, the perfect solution for cosmetic market expectations

Cosme-phytami® match the requirements of the cosmetic industry in terms of quality, safety and regulation.

Indeed, this new generation of plant extracts offers a concentration in active molecules five to ten times higher than market extracts guaranteed by titration and standardization to ensure a reproducible quality as well as cosmetic activities related to the knowledge of active principles.

Over 90% of the phytochemical composition of Cosme-phytami® can be identified which is an essential data for toxicologists.

The whole process is monitored and guarantees a full traceability from the plant seed to the extract. Moreover, it is even possible to trace Cosme-Phytami® in formulated products by specific analytical methods.

Finally, Cosme-phytami® are globally compliant and meet Ecocert Natural Standards. They are manufactured in a factory according to Good Manufacturing Practices for cosmetic ingredients (EFfCI). Technical and administrative information are collected in an exhaustive file replying the requirements of the European legislation. The existing range of Cosme-Phytami® covers over one hundred plants with new references being constantly added. ■