

PRANARŌM

SCIENTIFIC
AROMATHERAPY



Aromatherapy

100% Pure & Natural
Chemotyped Essential Oils

For professional use only

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SCIENTIFIC AROMATHERAPY



Pranarōm is a laboratory specialized in scientific and medical aromatherapy. It was founded in 1991 by Dominique Baudoux, a well-known pharmacist and aromatologist, very much appreciated for his books on aromatherapy. Dominique Baudoux is a pharmacist as were his father and grandfather. In the 1980s, he was one of the first pharmacists in Belgium to focus on essential oils for healthcare purposes. Dominique has given Pranarōm its international outlook whilst retaining the initial aim of developing aromatherapy with the scientific rigour that the discipline deserves.

Pranarōm is a human-sized company that is based on its employees' talents. From the farmer to the sales agent, from the distiller to the sales rep, all members of the Pranarōm team share a vision of aromatherapy that is both ambitious and ecoresponsible.

Quality criteria of chemotyped essential oils

1. Botanical certification:

The plant name must indicate the genus, the species, the sub-species, and the variety in order to avoid any error stemming from common names. Ex.: *Aniba rosaeodora* var. *amazonica* – *Helichrysum italicum* ssp. *Serotinum*.

2. Geographical origin:

The name of the country or region provides interesting information about the biotype (environment) of the aromatic plant and characterizes its specific biochemical composition.

3. Cultivation type:

This detail indicated whether the plant is wild or cultivated, and whether it was grown using organic farming methods (ORGANIC label) or not.

4. Level of botanical development:

Chemotype characteristics sometimes depend on the level of development: harvest before, during or after flowering, etc.

5. The distilled organ (or expressed organ, for example Lemon zest):

The biochemical composition of Chemotyped Essential Oils varies according to the part or organ of the distilled plant.

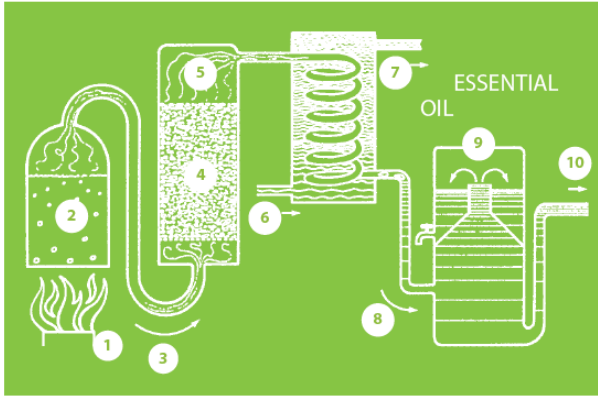
6. Extraction method:

The composition of CTEOs can vary according to the method of extraction used: distillation, steam distillation, percolation, expression.

7. The chemotype:

Analysis using gas chromatography and mass spectrometry indicates the basic molecules for the correct use of CTEOs.

Distillation process



- 1 Fire
- 2 Water
- 3 Steam
- 4 Aromatic plants
- 5 Steam
- 6 Cold water
- 7 Hot water
- 8 Water + Essential Oil
- 9 Essential Oil
- 10 Hydrosol or Hydrolat

DEFINITION:

An essential oil is the extracted volatile essence of aromatic plants by distillation with steam as the drive element.

PROCEDURES:

Many methods are used for the extraction of aromatic substances. This is a task more difficult and more delicate since it aims to capture the most subtle and most fragile products produced by the plant, without compromising quality.

EXPRESSION:

Expression, also referred to as cold pressing, is a method of extraction specific to citrus essential oils, such as tangerine, lemon, bergamot, sweet orange, and lime. The simplest method but unfortunately more limited. It involves mechanically breaking the "cavities" of the fresh citrus zest to collect the essence. The resulting product is called "essence" and not "essential oil" because no chemical modification related to solvent or water vapour has

occurred (for all citrus).

Because of the important use of insecticides on citrus, all species of Citrus destined for consumption are certified organic.

DISTILLATION:

Most essential oils are obtained by distillation through the passage of steam under low pressure. The process consists of making steam pass through a tank filled with aromatic plants.

At the distillation tank outlet and under controlled pressure, the steam enriched with essential oil goes through a coil, where it condenses. At the outlet, an essence jar (formerly known as a Florentine vase) receives the water and the essential oil. The difference in the densities of the two liquids allows easy separation by spill over of the collected essence.

Another procedure reserved for Citrus zests (tangerine, orange, lemon, etc.), consists of scraping the fresh zest to collect the essence on a natural sponge, which is then

squeezed to retrieve the essential oil.

Other methods of extraction (by enfleurage, by solvent) will not be detailed here as they cannot be used for treatment with essential oils worthy of the Pranarôm name.

The cost and rarity of certain oils, as well as the use of long and delicate procedures for obtaining them, have spurred some unscrupulous producers and middlemen to use falsified, sometimes even totally synthesized essential oils. This is why therapeutic quality essential oil must undergo regular and thorough checks – gas chromatography along with mass spectrometry for each of the batches. Only reputable laboratories use this sophisticated equipment to ensure the quality of their raw materials systematically.



AROMATHERAPY IS A DISCIPLINE CLOSE TO NATURE AND MEN

It is in this light that Pranarôm engages with farmers in Madagascar in order to develop with them a responsible cultivation of aromatic plants and traditional distillation as respectful to the environment as well as to the industrial quality.

In 2009, Pranarôm initiated an extensive local development project in Madagascar that provides stable and equitable employment to over a hundred people all the while preserving the essential oil supplies to the laboratory.



Pranarôm International invests in planting endangered species. In collaboration with local producers, this planting allows for the survival of wild endangered plants to survive and ensures the continuous supply of essential oils with unique properties.

Pranarôm providers are present on all four continents, but mainly in France, Madagascar, Morocco, Vietnam, Australia, Canada, Brazil and Slovenia ... because of specific habitats of these countries.



The close relationship of trust and partnership that unites Pranarôm with its growers/producers of aromatic plants allows for regular monitoring to ensure optimal cultivation on selected grounds.



Another **important point** to ensure the quality of essential oils is the testing for pesticides: it is imperative to perform the necessary analyses to systematically control the presence of pesticides; essential oils that are not in compliance with the cosmetics and food laws should be automatically excluded.

Extraction methods

QUALITY CONTROL OF THE FINISHED PRODUCT:

Many essential oils sold as 100% pure and natural are often cut, elongated, diluted and denatured with vegetable or mineral oils, low price synthetic molecules, chemical emulsifiers, turpentine, alcohol. These profound changes are likely to make essential oils allergenic and toxic.

They can also contain other essential oil relatives, for example, the super lavender, containing less camphor, of lesser price, included in the lavender. Some are discoloured or artificially coloured. Others are amputated of certain molecules. The only way to provide the highest quality essential oils is to control laboratory quality from start to finish.

THE RESOURCES USED:

Physical control:

Organoleptic control: from an aroma library consisting of certified essential oils, we control the colour, smell and, in some cases, the flavour of essential oils analyzed.

Study of the physical constants at a given temperature: density, solubility in alcohol, melting and boiling points, freezing points, optical rotation of the polarized light, refractive index.

Chemical control:

These checks are performed by gas chromatography; we compare the chromatography of samples to be analyzed with chromatography authentic essential oils that

are used as absolute reference.

QUALITY CRITERIAS FOR ESSENTIAL OILS:

Industrial quality standard

An essential oils is obtained from a plant that is not botanically defined, which is grown industrially and whose harvest is not done at precisely the right time. Distillation is often incomplete or the essential oil is rectified even chemically reconstituted.

Chemotyped quality, 100% pure and 100% natural

All Pranarôm's chemotyped essential oils (CTEO) are guaranteed 100% pure and natural. They have not been denatured, rectified or "lengthened" in order to increase their output. Pranarôm controls every production stage of its essential oils.

In partnership with farmers, Pranarôm selects the plants cultivated in natural or biological quality. Certain plants cannot be cultivated or gathered in the wild in compliance with local regulations. The distillation is rigorously controlled: it must meet the most demanding quality standards (water quality, tool quality, steam pressure and distillation period control).

The essential oil's biochemical composition is analysed in the laboratory by chromatography.

ORGANIC OR NOT?

Organic essential oils originate from organic farming and have been certified organic by an independent body according to the regulations in force. By choosing an organic essential oil, you discriminate in favour of this agricultural mode and are guaranteed a total absence of controversial chemical agents.

Organic essential oils are not inevitably "better" than the others from a therapeutic point of view. Moreover, it should not be forgotten that certain plants are collected in the wild and cannot be certified organic, but they are no less 100% pure and natural.

The choice of organic is therefore above all an ethical choice. In order to enable you to make this choice, Pranarôm offers you a wide assortment of essential oils of conventional, wild, natural or organic quality.

The organic quality of an aromatherapy product is verified by an independent body that puts its logo on products that comply with strict criteria in terms of choice of ingredients and traceability.

100% pure, natural and chemotyped



You should always have this information indicated on the product in order to know which essential oil is indicated for which use.

ESSENTIAL OILS

LABELS:

ORGANIC =



The organic quality of an aromatherapy product is verified by an independent body that puts its logo on products that comply with strict criteria in terms of choice of ingredients and traceability.



ECOGARANTIE (contrôle CERTISYS) is an international mark for ecological products. Consumers can rely on the fact that products with the ECOGARANTIE label, meet strict requirements whose goal it is to guarantee quality, safety and durability.



CHEMOTYPED ESSENTIAL OILS (CTEO):

CTEO LABEL YOUR GUARANTEE OF SAFETY AND EFFICACY

- The distilled plant is botanically defined.
- The part of the distilled plant is specified (eg: leaf, flower, root, ...).
- The chemotype (or the biochemical race) is defined.
- Steam distillation is the extraction method recommended.

Example

- **Thymus vulgaris CT thujanol** this essential oil contains mainly thujanol, with bactericidal, viricidal and neurotonic properties;
- **Thymus vulgaris CT thymol** this essential oil contains mainly thymol, with major anti-infectious properties.

QUALITY CRITERIA OF ESSENTIAL OILS:

Botanically certified species
The essential oils of quality must come from botanically certified plants, that is to say, identified by two latin names, Latin being the universally recognized botanical language. The first name is the genus, for example Cupressus; the second, the species: sempervirens, evergreen cypress.

Distilled part of the plant
The various parts of the same plant (flower, leaf, stem, bark, root, etc.) can produce different oils. It is therefore important to specify the plant organ.