Monoï
de Tahiti
A Rigorous and Controlled Process

Technical Data

- Totally safe and hypoallergenic with remarkable cosmetic qualities
- Natural protection against external aggression
- A long-lasting moisturizer
- Smoother, firmer, more supple skin
- Repairs and restructures hair
In reo mā'ōhi (the ancient Tahitian language), the word “Monoï” simply means “scented oil.”

According to legends and traditions, Monoï de Tahiti has always been part of the Polynesian culture, whether in traditional rites, in remedies, or as a beauty care ingredient for body and hair. Long ago, during ceremonies performed at the marae (a traditional place of worship), mā'ōhi priests used Monoï de Tahiti to anoint newborns and sacred objects, and to purify offerings. Several Components of Monoï de Tahiti are also used in the traditional medicine of the Polynesian islands. The Tiare blossoms, for example, are used to cure earaches, certain types of eczema, or simply to prevent insect bites. Today, Tahitian women are still using Monoï de Tahiti as a skin moisturizer, a hair protection, and as a daily care product. It's a veritable beauty secret passed on from generation to generation.
Tokyo 9,500 km
Sydney 6,000 km
Auckland 4,000 km
Santiago 6,400 km
Los Angeles 6,600 km
Paris 20,000 km

Tahiti French Polynesia
A RIGOROUS AND CONTROLLED PROCESS

THE GUARANTEE OF ORIGIN OF MONOI DE TAHITI ENSURES AUTHENTICITY AND QUALITY FOR OUR CUSTOMERS

The Decree 92-340 passed on April 1, 1992, protects Monoi de Tahiti with a “guarantee of origin” that strictly defines the manufacturing process and ensures product authenticity and quality:

*Monoi de Tahiti is the result obtained from Tiare blossoms soaked in refined coconut oil that is extracted from ripe coconuts grown in the coral-rich soil of French Polynesia. Only the coconuts from the cocos nucifera species and the buds of the Gardenia Tahitensis “Tiare” blossoms are used in the preparation of Monoi de Tahiti.*
TECHNICAL DATA

AVERAGE FATTY ACID COMPOSITION (%)

SPECIFICATIONS
- Appearance (30°C): Clear, amber-colored oily liquid
- Scent: Distinctive
- Relative Density (g/mL): 0.920
- Freezing Point: 17 to 20°C
- Melting Point: 24 to 26°C
- Acid Value: <5 mg potassium hydroxide
- Saponification Value: 240 to 270 mg potassium hydroxide

MICROBIOLOGICAL DATA
- Total Aerobic Flora: <1000 N/g
- Pathogenic Bacteria: None

INTERNATIONAL NOMENCLATURE
CTFA: Coconut Oil (and) Tiare Flower
INCI: Cocos-Nucifera-Gardenia Tahitensis
CAS N°: 8001 – 31 – 8
**PREDICTIVE STUDY OF OCULAR TOLERABILITY**

**BIOPREDIC Laboratory Studies 1588-1 / RF1 1588-2 / RF1**

**PURPOSE**
To determine the ocular tolerability of Monoï de Tahiti using an alternative method.

**METHODOLOGICAL APPROACH**
Ocular tolerability was studied using the PREDISAFE model. Isolated fibroblasts were incubated for four hours at 37° C in the presence of pure Monoï de Tahiti.

The fibroblasts were first dyed with a vital coloring agent. After incubation, the coloring agent, still present in the living cells, was extracted and the color intensity was measured using a spectrophotometer. The irritability of the product was revealed by the resulting color intensity. The higher the intensity, the higher the number of viable cells and the lower the irritability of the tested product. A rating scale is then used to determine the irritant potential of tested products through color intensity. A mildly irritant product has a score of under 15, while a very irritant product has a score of over 50.

**CONCLUSION**
Monoï de Tahiti caused minimum change. Results obtained were high, being rated at Level I (score of <15) and is therefore only very slightly irritant.

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**SKIN TOLERANCE STUDY**

**PRELIMINARY DATA**

**BIOPREDIC Laboratory Studies 1588-1 / RF2 1588-2 / RF2**

**PURPOSE**
To examine local tolerance prior to clinical experimentation.

**METHODOLOGICAL APPROACH**
Local tolerance was studied in a reconstructed model of human skin. Episkin was incubated for 18 hours at 37° C in the presence of pure Monoï de Tahiti. After incubation, the Episkin was submitted to a histological examination to observe possible superficial or deeper lesions.

**CONCLUSION**
Under experimental conditions, the episkin showed no histological changes. Monoï de Tahiti could therefore be tested in vivo.

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**IN VIVO TEST**

**BIOPREDIC Laboratory Studies 1588-1 / RF3 1588-2 / RF3**

**PURPOSE**
To determine the cutaneous tolerance of Monoï de Tahiti in human volunteers.

**METHODOLOGICAL APPROACH**
Patch tests containing pure Monoï were applied to the backs of 10 volunteers. Forty-eight hours after application, the patch tests were removed. Thirty minutes later, possible signs of irritation were observed by a dermatologist and rated on a four-point intensity scale: none, light, moderate, and severe.

**CONCLUSION**
Under experimental conditions, volunteers showed no reaction. Monoï de Tahiti is therefore a safe product that does not cause any cutaneous reaction.

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**TOTALLY SAFE AND HYPOALLERGENIC WITH REMARKABLE COSMETIC QUALITIES**

**MONOI DE TAHITI:**

**PROVEN SAFE TO EYES AND SKIN**
EVALUATION OF MONOÏ DE TAHTI’S HYPERSENSITIVITY: HYPO-ALLERGENY TESTING

PURPOSE
To demonstrate the lack of allergenic potential of Monoï de Tahiti through epicutaneous testing

METHODOLOGICAL APPROACH
Patch tests containing pure Monoï were applied to the backs of 100 volunteers as per a two-phase protocol.

INDUCTION PHASE
Forty-eight hours after application, the patch tests were removed. Thirty minutes later, possible signs of irritation were observed and noted by a dermatologist according to precise parameters. The application / removal / reading process was repeated three times a week for three consecutive weeks.

DISCOVERY PHASE
After a rest period of two weeks, a single patch test was applied to a different area and readings were taken after 48, 72, and 96 hours.

RESULTS
Monoï de Tahiti proved to be tolerated very well by all the tested volunteers. During the induction phase, volunteers showed no signs of even minor irritation. Repeated contact did not cause any allergic reaction during the entire discovery phase. Monoï de Tahiti therefore did not present any induced or spontaneous hypersensitive reaction on skin.

EVALUATION OF MONOÏ DE TAHTI’S SENSITIZING POTENTIAL

PURPOSE
To demonstrate Monoï de Tahiti’s lack of sensitization through epicutaneous testing

METHODOLOGICAL APPROACH
Patch tests containing pure Monoï were applied to the arms of 25 volunteers as per a two-phase protocol.

INDUCTION PHASE
Forty-eight hours after application, the patch tests were removed. Thirty minutes later, possible signs of irritation were observed and noted by a dermatologist according to precise parameters. The application / removal / reading process was repeated 9 consecutive times.

DISCOVERY PHASE
After a rest period of two weeks, a single patch test was applied to a different area and readings were taken after 48, 72, and 96 hours.

RESULTS
PERCENTAGE OF ALLERGIC REACTIONS

Conclusion
Monoï de Tahiti proved to be well tolerated by most of the subjects. During the induction phase, only two volunteers showed signs of minor irritation. The others showed none. Despite repeated contact with the ingredient, no allergic reaction was observed during the discovery phase. Monoï de Tahiti presented no risk of allergy to subjects with no sensitization.

MONOÏ DE TAHITI: SAFE AND HYPO-ALLERGENIC
The observations did not reveal any signs of intolerance and all the volunteers expressed very positive reactions to the numerous Topical qualities of Monoï de Tahiti.

**Clinical Conclusion**

**(Evaluation by a Dermatologist)**

- Poor
- Average
- Good
- Very good

**Conclusion**

***(Evaluation by the Volunteers)***

- Non-irritating
- Moisturizing
- Easy to apply
- Pleasant texture
- Penetrative quality
- Long-lasting
- Non-greasy
- Pleasant scent

% of satisfied volunteers

Monoï de Tahiti is a natural ingredient with a pleasant, long-lasting texture, that is non-irritating and easy to apply.
NATURAL PROTECTION AGAINST EXTERNAL AGRESSION

EVIC Laboratory Study  Ig 513

PURPOSE
To determine the protective effect of Monoï de Tahiti after a single application to the nasolabial folds.

METHODOLOGICAL APPROACH
The ingredient was tested by 15 volunteers for skin reaction by applying a lactic acid solution to the skin. The candidates were selected according to the degree of their susceptibility to this solution (which causes redness and stinging).

On D1, the volunteers took a lactic acid test. After a 15 minute facial sauna, 2 ml of a 10% lactic acid water solution was applied to the nasolabial folds. The volunteers evaluated the stinging two to five minutes after application using a four-point scale.

On D3, two drops of Monoï de Tahiti were gently massaged into each nasolabial fold for 30 seconds. Another lactic acid test was then performed.

MONOÏ DE TAHITI: AN EFFICIENT PROTECTION AGAINST EXTERNAL ELEMENTS

CONCLUSION
Under experimental conditions, Monoï de Tahiti demonstrated an effective protective effect against the effect of lactic acid.
**CONCLUSION**

Monoï de Tahiti did not affect transepidermal water loss significantly, unlike hydration, which increased significantly by 10% 15 minutes after application. Two hours later, hydration increased 15% and remained at that level, six hours after application. After four consecutive weeks of use, hydration was still very satisfactory, showing a significant 6% increase.

**RESULTS**

**AVERAGE CHANGES IN HYDRATION INDEX**

**PROGRESSION OF THE HYDRATION INDEX COMPARED TO MONOÏ DE TAHITI**

**EVALUATION OF IMMEDIATE MOISTURIZING EFFECTS**

The volunteers underwent a 20 minute period of stabilization in controlled conditions (temperature and hygrometry). After initial measurements (T0), the ingredient was applied to a 25 cm² area on the forearm at the rate of 2 µl/cm², with the other forearm serving as a control. Capacitive reactance and transepidermal water loss were then measured 15 minutes, 2 hours, 4 hours, and 6 hours after application.

**EVALUATION OF CUMULATIVE HYDRATING EFFECTS**

The volunteers applied the oil to the same area on the forearm, in the morning and at night, for a period of four weeks. Capacitive reactance and transepidermal water loss were measured 28 days after the initial measurements and before any further application of Monoi, in order to assess the basal hydration ability of the ingredient.

**MONOÏ DE TAHITI**

**DEMONSTRATES SIGNIFICANT SKIN HYDRATING ABILITIES WITH IMMEDIATE AND LONG-LASTING EFFECTS**
MOISTURIZING ABILITY ASSESSMENT OF MONOI DE TAHITI COMPARED TO OTHER HYDRATING OILS

EVIC Laboratory Study Id 491

PURPOSE
To compare the moisturizing ability of Monoï de Tahiti to four different cosmetic oils after a single application.

CHOICE OF OILS
To evaluate the moisturizing effects of Monoï de Tahiti, we selected a number of well-known hydrating oils such as:
- Shea butter (Karite) and jojoba oil, for their well-known moisturizing properties and exotic image,
- Coconut oil, for the ambiguity of its use in relation to Monoï,
- Vaseline oil, for its traditional use as an emollient in many formulations and as a control specimen in the test.

METHODOLOGICAL APPROACH
The different oils were tested separately by 10 volunteers. Their effects were evaluated simultaneously by a corneometer and a transepidermal water loss meter in identical experimental conditions.

After initial measurements (T0), the different oils were applied to six 20 cm² areas on the forearm (one for each oil and one as a control specimen) at the rate of 2 mg/2 cm².

The volunteers underwent a 30 minute period stabilization in controlled conditions (temperature and hygrometry).

CORNEOMETRIC MEASUREMENTS
Capacitive reactance was measured with a corneometer one, two, three, and four hours after application.

CONCLUSION
Four hours after their application, all five moisturizing oils demonstrated significant results. However in the case of shea butter, jojoba, coconut and Vaseline oils, the moisturizing effect was performed mainly through partial surface occlusion of the skin. But in the case of Monoï de Tahiti the occlusive effect was so minimal that it did not affect transpidermal water loss – therefore the moisturizing effectiveness of Monoï is due to a different action that leads to a gradual result that is still evident, four hours after application.

MONOI DE TAHITI: AN IDEAL INGREDIENT FOR LONG LASTING SKIN HYDRATION
**SMOOTHER, FIRMER, MORE SUPPLE SKIN**

**EVIC Laboratory Study**

**Purpos**

To evaluate skin firmness and the condition of the skin surface after repeated applications of Monoï de Tahiti.

**Methodological Approach**

The ingredient was tested at home by 20 volunteers and applied to the forearm once a day for 28 days. On Day 1 and Day 28, an impression was taken, and cytometric measurements and computer image analysis were used to evaluate both the cutaneous microrelief and skin firmness and elasticity.

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**Cytometric Measurements**

At each reading, the skin’s biomechanical properties were shown in the form of a deformation curve based on time.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S(mm)</td>
<td>Maximum vertical distance detected between the highest peak and the lowest valley (in mm)</td>
</tr>
<tr>
<td>M1</td>
<td>Maximum extensibility (in mm), reflecting skin firmness</td>
</tr>
<tr>
<td>M2</td>
<td>Residual stretching of the skin after returning to normal pressure (in mm), reflecting skin elasticity</td>
</tr>
</tbody>
</table>

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**Impression Analysis**

The impression analysis was performed using the Skin-Visiometer, which measures the quantity of light that passes through the impression. The following skin roughness parameters could then be calculated using the system software:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RT</td>
<td>Maximum distance between the highest peak and the lowest valley detected within a basic L/5 length (L = profile length)</td>
</tr>
<tr>
<td>RM</td>
<td>Maximum distance between the highest peak and the lowest valley detected within a basic L/5 length</td>
</tr>
<tr>
<td>RZ</td>
<td>Average RM value successively detected on the basic lengths</td>
</tr>
</tbody>
</table>
**RESULTS**

**CYTOMETRIC MEASUREMENTS**

The results were expressed as a percentage of volunteers (those who registered a variation of at least 10% between D0 and D28). The decrease in parameters M1 and M2 was calculated as a percentage for each volunteer.

**IMPRESSION ANALYSIS**

The results were expressed as a percentage of volunteers (those who registered a variation of at least 7% between D0 and D28). The simultaneous decrease in parameters RT, RM, and RZ was calculated as a percentage for each volunteer.

**EFFECT ON SKIN FIRMNESS (PARAMETER M1)**

**EFFECT ON SKIN ELASTICITY (PARAMETER M2)**

**CONCLUSION**

Monoï de Tahiti improved skin firmness. On the surface, the cutaneous microrelief showed significant improvement and the skin was smoother and softer. In depth, the dermis was strengthened and the skin was firmer, more elastic, and more revitalized.
EVALUATION OF THE QUALITIES AND THE EFFECT OF MONOI DE TAHITI ON HAIR

EVIC LABORATORY Study  le 317

PURPOSE
To evaluate the qualities and the effect of Monoi de Tahiti on hair, under defined conditions of normal use.

METODOLOGICAL APPROACH
The ingredient was tested by a panel of 10 Caucasian volunteers with damaged hair, who applied it three times a week for 28 days, before the application of a neutral shampoo, according to a strict protocol established by the laboratory.

At the end of the test, the qualities and effectiveness of Monoi de Tahiti were assessed based on the following:

- Capillary state before and after use of the product between D0 and D28, in the presence of a hair stylist.

- A questionnaire was completed by subjects on the effectiveness of Monoi on the hair.

- An interpretation of the scanning electron microscopy data from the hair fibers of volunteers was done, before and after treatment. On test day, 25 hairs were removed from an area clearly identified on the scalp of each volunteer.

The effectiveness of Monoi de Tahiti was evaluated by comparing the percentage of damaged hair on D0 and D28.

COMESTIC RESULTS

- Rating

![Graph showing percentage of satisfied subjects]
REPAIRS AND RESTRUCTURES HAIR

COMESTIC RESULTS

- Volunteer self-evaluation

Clinical results

Microscope observation revealed that the condition of hair treated with Monoï de Tahiti had clearly improved in 70% of the volunteers.

Conclusion

Under the experimental conditions specifically adopted, we were led to conclude that Monoï de Tahiti improves the shine and overall look of hair. Hair fibers are revitalized and keratin scales are more compact and presenting a homogenous surface.

MONOÏ DE TAHITI IMPROVES THE CONDITION OF DRY AND DAMAGED HAIR

BEFORE TREATMENT

AFTER TREATMENT

MONOÏ DE TAHITI
ASSESSMENT OF THE QUALITIES AND THE EFFECTIVENESS OF MONOI DE TAHITI ON THE SCALP COMPARED TO TWO DIFFERENT HAIR CARE OILS

EVIC Laboratory Study Ph121

PURPOSE
To compare the qualities and the effectiveness of Monoï de Tahiti to those of two different hair care oils, under specific normal use conditions.

CHOICE OF OILS FOR MOISTURIZING ABILITY EVALUATION
In order to evaluate the effectiveness of Monoï de Tahiti on hair fibers we selected two different oils that are known for their hair care qualities:
- Shea butter that is known for its frequent usage in hair products and, more specifically in products made for African-American hair.
- Jojoba oil known for its frequent use in hair products formulations.

METHODOLOGICAL APPROACH
A panel of 18 African-American volunteers were divided into two equal groups and tested one oil on each side of their scalp (Monoï/shea butter or Monoï/jojoba). A hair stylist applied separately Monoï and the two other oils on D1, D3, D5, D8, D10, and D12, after a shampoo and according to a strict protocol established by the laboratory.

At the end of the test, the cosmetic qualities and effectiveness of Monoï de Tahiti were evaluated based on the following:
- Controlled rating performed in the presence of a hair stylist, before and after use of the Monoï. The results were evaluated according to five grades. The results for Monoï de Tahiti were compared to the various products in each group by way of a statistical test.
- A questionnaire was completed by the subjects in answer to the various features suggested by the laboratory. The volunteers answered multiple choice questions and the results were submitted for statistical analysis.

- An interpretation of the scanning electron microscopy data from three hair fibers that were removed from an area clearly identified on the scalps of two volunteers in each group. The effectiveness of Monoï was visually evaluated before and after treatment and an average hair condition rating determined.

COSMETIC RESULTS

EVALUATION BY A HAIR STYLIST

Statistical analysis of results using Student’s t test for unmatched series

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>RESULTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application</td>
<td>Monoï/sheabutter/ Jojoba Monoï/sheabutter/ Jojoba</td>
</tr>
<tr>
<td>Texture</td>
<td>++</td>
</tr>
<tr>
<td>Beautifying Effect</td>
<td>++</td>
</tr>
<tr>
<td>Protective Effect</td>
<td>++</td>
</tr>
<tr>
<td>Softening Effect</td>
<td>++</td>
</tr>
<tr>
<td>Effect on Hair Shine</td>
<td>++</td>
</tr>
<tr>
<td>Lubricating Effect</td>
<td>++</td>
</tr>
<tr>
<td>Antistatic Effect</td>
<td>++</td>
</tr>
<tr>
<td>Effect on Styling of Dry Hair</td>
<td>++</td>
</tr>
<tr>
<td>Effect on Styling of Wet Hair</td>
<td>++</td>
</tr>
<tr>
<td>Effect on Hair Condition</td>
<td>++</td>
</tr>
<tr>
<td>Effect on Hair Volume</td>
<td>++</td>
</tr>
<tr>
<td>General Evaluation</td>
<td>++</td>
</tr>
</tbody>
</table>

EVALUATION OF MONOI DE TAHITI AND REFERENCE PRODUCT NOT CALCULABLE
- Evaluation does not significantly favor Monoï de Tahiti
++ Evaluation significantly favors Monoï de Tahiti

Ratings were higher for Monoï de Tahiti than for jojoba and shea butter in both groups. Results were significant in comparison to shea butter. These evaluations indicated that the hair stylist definitely preferred Monoï de Tahiti.
Microscope observation revealed significant improvement in the condition of the hair, which had well-compacted keratin scales and a homogenous surface.

**CONCLUSION**

Under specific experimental conditions adopted and on the basis of the results observed, Monoï de Tahiti improved the general appearance of hair by protecting, strengthening and beautifying the hair fibers. As in the evaluation of its moisturizing ability, Monoï de Tahiti confirm its pervasive capillary action in comparison to jojoba oil and shea butter.
EVALUATION OF THE LONG LASTING BENEFITS OF MONOI DE TAHITI ON DRY AND DAMAGED HAIR, BEFORE AND AFTER TREATMENT

PURPOSE
To evaluate the protective effects of Monoï de Tahiti on dry and damaged hair and to observe its long lasting benefits after the treatment has been ended.

METHODOLOGICAL APPROACH
A group of nine volunteers applied Monoï de Tahiti onto their hair during two separate phases, over a duration of five weeks:

- FIRST PHASE: Monoï de Tahiti was massaged every other day into the volunteer’s hair, for a period of 28 days, before the use of a neutral shampoo. The ingredient was applied according to specific hair treatment protocols.

- LASTING EFFECTS: on D29, the application of Monoï de Tahiti was stopped but the volunteers kept using the neutral shampoo at home, every other day for one week.

The protective and the long lasting benefits of Monoï de Tahiti were evaluated based on the following:

- A rating was determined after the interpretation of a scanning electron microscopy test was performed on 10 strands of hair, before and after treatment on D1, D29, and D36.

- A multiple-choice questionnaire was completed by the subjects at the end of the test to assess the product’s effectiveness and quality.

THEREFORE MONOI DE TAHITI IS AN EFFECTIVE AND LONG LASTING HAIR CARE INGREDIENT THAT REALLY WORKS

CONCLUSION
Under the specific experimental conditions adopted and according to the results of the electron microscopic test, it would appear that Monoï de Tahiti has shown significant protective benefits on most of the volunteers’ hair. The benefits persisted for one week after the application was stopped in 44% of the volunteers.

The volunteers responded positively to the conditioning, protective, and long lasting benefits of Monoi de Tahiti, as well as to its beautifying qualities. More importantly they appreciated its easy use.
IN VITRO EVALUATION OF MONOÏ DE TAHITI AND ITS ABILITY TO IMPROVE THE APPEARANCE OF THE HAIR SHAFT AND ITS SHINE

EVIC study Ph120/1

PURPOSE
To evaluate the benefits of Monoï de Tahiti and its ability to improve the appearance of hair and its shine with specific measurement devices, according to pre-set controlled situations.

METHODOLOGICAL APPROACH
The protocol used was based upon the measurement (in units of brightness) of spectral light intensity that was obtained from hair strands exposed to a source of light directed at an oblique angle. This reflected light was then measured by a special detector according to the angle of observation.

RESULTS

MONOÏ DE TAHITI ENHANCES THE BRILLANCE AND THE SHINE OF HAIR STRANDS

Under the specific experimental conditions adopted, the application of Monoï de Tahiti on natural hair strands resulted in the improvement of the hair fiber shine by creating a thin, homogeneous film that smoothed the hair shaft.

Monoï de Tahiti was applied at a rate of 0.2 g/strand to four strands of pre-treated natural hair, according to a specific pre-established protocol. Measurements were taken at three different angles of incidence (20°, 60°, and 85°). Five readings were taken per angle with a Novo-Gloss GlossmeterÆ (Rhopoint), before and after application of Monoï de Tahiti.