be inspired

DICHTYOPTERIS OIL
PLUMPS LIPS AND BREASTS
**Dictyopteris membranacea**, called the Sea Fern, is a brown alga of the European Atlantic coasts belonging to the Dictyoptales family.

Because of the difficulty of harvesting it by diving, its wide dispersion in the Channel and the protection of the species in the Mediterranean, CODIF Recherche et Nature laboratories have developed methods for growing it in the sea in order to ensure a regular supply without impoverishing natural resources.

The algae, collected in the sea are placed in hatcheries where they produce the spores which ensure their perpetual reproduction. The germination stage gives rise to small algae which are then transferred to the open sea in areas where there are grown on a longline system. One year after placing in the hatchery, the algae are collected for extraction.

The aromatic note of Dictyopteris membranacea is very characteristic and gives to certain bays (Hawaii) a sea odour due to the presence of dictyopterene pheromones. These very highly odorous compounds have been used in perfumery, and Dictyopteris membranacea has been called Parfum d’Antheé.

**OBSERVE**

CODIF Recherche et Nature has developed Dictyopteris Oil to impart a fuller and more generous beauty. This Adiponutrine booster promotes adipocyte nourishing action for restructuring volumes. The volumes are captured, the lips are replumped and the surrounding roughness and lines disappear.

Dictyopteris Oil is obtained by a process of extraction with supercritical CO2 that maintains intact the molecules responsible for its success: the dictyopterenes. Dictyopterenes are true plant pheromones, and disseminate an intoxicating “ocean beach” fragrance in the surrounding air.

**BE INSPIRED**

Dictyopteris membranacea is a brown alga of the European Atlantic coasts belonging to the Dictyoptales family.

**Derived by an innovative algal culture process and rich in plant pheromones, Dictyopteris Oil combines scientific research and cosmetic glamour. This new active substance acts on lipidic nutrition and captures the volumes to give a repulping and volume-enhancing effect on the lips and the breasts.**

The aromatic note of Dictyopteris membranacea is very characteristic and gives to certain bays (Hawaii) a sea odour due to the presence of dictyopterene pheromones. These very highly odorous compounds have been used in perfumery, and Dictyopteris membranacea has been called Parfum d’Antheé.

**OBSERVE**

Dictyopteris Oil stimulates 3 essential proteins involved in the nutrition of adipocytes

- **Fatty Acid Transferase (FAT):** expressed on the surface of adipocytes, it facilitates the transport of fatty acids inside the cell.
- **Adiponutrin:** this adipokine promotes the storage of triglycerides by adipocytes.
- **Perilipin:** this protects the lipid droplets contained in adipocytes from lipolysis.

The stimulation of these 3 proteins promotes the capture of lipids by adipocytes for a tissues nourishing action and restores the volumes.
In-vitro test: Effect of Dictyopteris Oil on adipocytes nutrition

Protocol:
Induction of differentiation of human pre-adipocytes in the presence or absence of Dictyopteris Oil. After culture, the proteins of interest are demonstrated by the minichips method and the triglycerides stored in the adipocytes are detected by staining with red oil and measuring the intensity from the optical density at 540nm.

**Stimulating effect of 0.05% Dictyopteris Oil on the synthesis of proteins responsible for lipidic nutrition.**

![Graph showing level of expression of Adiponutrin, Perilipin, and FAT](image1)

By stimulating the synthesis of adiponutrin, perilipin and FAT, Dictyopteris Oil improves the capture of lipids by adipocytes for a tissues nourishing action and restores the volumes.

Clinical test: Volume-enhancing effect of Dictyopteris Oil tested at 1% on the lips and breasts.

Protocol:
17 volunteers aged from 25 to 40 years / 2 applications per day for 28 days on the lips and breasts

Evaluation of the volume-enhancing effect by fringe projection

**Repulping and smoothing effect of Dictyopteris Oil tested at 1% on the lips:**

After one month of treatment, 77% of volunteers observed a volume-enhancing effect. An average increase of +0.9% was observed with up to +3.4% for the volume of the lips.

![Image showing before and after of lips](image2)

A significant fall (p<0.05, Student t test) of -11.2% in the roughness of the lips was observed after 28 days of treatment.

**Volume-enhancing effect of Dictyopteris Oil tested at 1% on the breasts:**

After one month of treatment, 69% of volunteers observed a volume-enhancing effect.
There was a significant mean increase (p<0.1, Student t test) of +1.5%, with an increase of up to +11.4% in breast volume.

![Image showing before and after of breasts](image3)

Used at 1% for 28 days, Dictyopteris Oil smooths and captures the volumes for a visible replumping effect on the lips and the bust.
**DICETOPTERIS OIL: REPLUMPING LIPS AND BUST**

<table>
<thead>
<tr>
<th>Cosmetic activities</th>
<th>STIMULATES LIPIDIC NUTRITION AND CAPTURES THE VOLUMES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▶ Lips replumping effect</td>
</tr>
<tr>
<td></td>
<td>▶ Lips smoothing effect</td>
</tr>
<tr>
<td></td>
<td>▶ Bust volume-enhancing effect</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INCI</th>
<th>Caprylic/capric triglyceride (and) Dictyopteris membranacea extract</th>
</tr>
</thead>
</table>

| Recommended % use    | 1%                                                                |

---

**CODIF R & N**

Technical department: infotech@codif-recherche-et-nature.com  
Commercial department: commercial@codif-recherche-et-nature.com  
70, rue du Commandant l’Hermier - BP11709 - 35417 Saint-Malo cedex - FRANCE  
Tel: +33-2-23-18-31-07  Fax: +33-2-23-18-31-01

www.codif-recherche-et-nature.com

---

CODIF Recherche et Nature is committed to sustainable development.  
All our wastewater is processed and purified using filtrating gardens.  
A succession of airtight horizontal and vertical filters is used to depollute wastewater by the roots of plant species chosen for their draining properties.

Iris, water mint, flowering rush, willows etc… now form part of the image of the brand which is recognized for its commitment to the preservation of natural resources.