Biodynes™ TRF™ Improved 25 UV Stressed Yeast Lysate

INCI Name: Water & Saccharomyces lysate Extract
SAP Code#: 124650
CLS Code#: 520402-42

Key Claims
- Anti-irritant
- Soothing / Smoothing
- Cell respiration
- Line minimizing
- Moisturizing
- ECOCERT approved

Use Level
0.5 – 3.0%

Biodynes™ Tissue Respiratory Factory influences multiple cellular targets

Fig. 1
**Claims Substantiation**

**In Vitro Measuring Cellular Oxygen Respiration**

% Change in $O_2$ Respiration Human Fibroblasts

<table>
<thead>
<tr>
<th>Sample</th>
<th>% Change from Baseline set at 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25% Biodynes™ TRF™</td>
<td>117%</td>
</tr>
<tr>
<td>0.25% Unstressed Yeast</td>
<td>110%</td>
</tr>
<tr>
<td>Baseline</td>
<td>100%</td>
</tr>
</tbody>
</table>

![Graph 2](Image)

- The influence of Biodynes™ TRF™ Improved 25 on oxygen consumption was evaluated in a human fibroblast model.
- 0.25% Biodynes™ TRF™ Improved 25 resulted in a 17% increase in $O_2$ respiration over the untreated cells, conforming.
- This indicates that Biodynes™ TRF™ Improved 25 significantly increases oxygen consumption in fibroblast cells.

**In Vitro Pro-Collagen Synthesis**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Media Procollagen Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>1% Biodynes™ TRF™</td>
<td>1000 μg Sodium Ascorbate</td>
</tr>
<tr>
<td>Untreated</td>
<td></td>
</tr>
</tbody>
</table>

![Graph 3](Image)

- The culture was grown to confluence and treated with either PBS (Phosphate Buffered Saline), Untreated Control, Sodium Ascorbate, or 1.0% Biodynes™ TRF™ Improved 25.
- An extraction was taken from the culture, and using UV Spectroscopy, the amount of soluble procollagen was determined by comparing to a standardization curve.
- Results confirm that a 1% treatment of Biodynes™ TRF™ Improved 25 promotes procollagen synthesis.

**In Vitro Targets: Wound Healing**

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Wound Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 hours</td>
<td>1000</td>
</tr>
<tr>
<td>12 hours</td>
<td></td>
</tr>
<tr>
<td>24 hours</td>
<td></td>
</tr>
</tbody>
</table>

![Graph 4](Image)

- Units of measurement
- 1% Biodynes™ TRF™
- 100 ng/ml EGF
- Untreated

Fig. 2

Fig. 3

Fig. 4
The ability of Biodynes™ TRF™ Improved 25 to influence wound healing on fibroblasts was evaluated by using a “scratch model” where cells are intentionally wounded and then monitored for their ability to repair.

1% TRF

![Images showing 1% TRF at 0, 12, and 24 hours](image)

100 ng/ml EGF

![Images showing 100 ng/ml EGF at 0, 12, and 24 hours](image)