ACB Quinoa Protein
Moisturizing + Film-Forming + Nourishing + Conditioning

Tomorrow’s Vision... Today!®
ACB Quinoa Protein

Technical Information:

Product Code: 20037

INCI Name: Hydrolyzed Quinoa

INCI Status: Conforms

Suggested Use Levels: 1.0 - 10.0%

Suggested Applications: Moisturizing, Film-Forming, Nourishing, Conditioning
History of Quinoa

• The Quinoa plant is a perennial

• Can grow as tall as twelve feet high

• Leaves are dull and triangular, while the seeds are enclosed in a hard, shiny husk

• Seeds are typically a pale yellow color, but the color can vary from shades of orange, pink, red, purple, and black

• Quinoa (*Chenopodium quinoa*) has been cultivated in the Andes Mountains of South America for over 5,000 years

• Called the “Mother Grain” by Incas who considered it a sacred plant
  o High nutritional value
  o Ability to flourish at high altitudes in cold, dry climates
ACB Quinoa Protein

Packed with Protein:

• In comparison to other grains, Quinoa is exceptionally high in proteins resulting in a good balance of essential amino acids

• By fermenting the Quinoa seeds with the bacteria *Lactobacillus lactis* we are able to isolate and concentrate the naturally occurring proteins of the seed and thus standardize the amino acid content

• The high protein content found in quinoa, provides exceptional skin hydration, skin softening and emollient properties
ACB Quinoa Protein

Benefits:

✔ Anti-irritant

✔ Antioxidant

✔ Repairing properties

✔ Restores hydration to the skin’s epidermis or the hair’s cuticle

✔ Applications for all skin and hair types

✔ Effective for excessively dry skin or hair
ACB Quinoa Protein

Hydration Assay

Protocol

- **Equipment**: DPM 9003 Nova Impedance Meter
- **Principle of measurement**: Conductance, single frequency
- **Subjects**: 10 (m/f)
- **Test area**: Hair
- **Concentration of active used**: 2.0%
- **Frequency of application**: Single Application

### Increase in Hair Hydration

<table>
<thead>
<tr>
<th></th>
<th>Percent (%) Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Untreated Control</td>
<td></td>
</tr>
<tr>
<td>2.0% Wheat Hydrolysate</td>
<td>12</td>
</tr>
<tr>
<td>2.0% ACB Quinoa Protein</td>
<td>14</td>
</tr>
</tbody>
</table>

---

Increase in Hair Hydration
ACB Quinoa Protein

TEWL Assay

TEWL Comparison Over Time

<table>
<thead>
<tr>
<th>Percent (%) Decrease</th>
<th>t=24</th>
<th>1 week</th>
<th>2 weeks</th>
<th>3 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental vs. Untreated Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental vs. Base Lotion</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Protocol**

- **Equipment**: DermaLab Combo
- **Principle of measurement**: Ultra-sound Probe
- **Subjects**: 10 (m/f)
- **Test area**: Volar forearms
- **Concentration of active used**: 2.0%
- **Frequency of application**: Twice Daily
ACB Quinoa Protein

Cellular Viability Assay

Cellular Viability

Protocol

- Human dermal fibroblasts were seeded into 96-well tissue culture plates
- Concentrations: 1.00%, 0.10%, 0.01%
- Ten microliters of viability reagent was added to 90µL of cell culture media in culture wells
- ACB Kale Protein Blend exhibited comparable results by increasing cell metabolism
ACB Quinoa Protein

Typical Amino Acid Composition

<table>
<thead>
<tr>
<th>Amino Acid</th>
<th>mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glutamic Acid</td>
<td>29000</td>
</tr>
<tr>
<td>Arginine</td>
<td>1500</td>
</tr>
<tr>
<td>Aspartic Acid</td>
<td>1250</td>
</tr>
<tr>
<td>Glycine</td>
<td>1100</td>
</tr>
<tr>
<td>Lecine</td>
<td>1050</td>
</tr>
<tr>
<td>Lysine</td>
<td>900</td>
</tr>
<tr>
<td>Serine</td>
<td>850</td>
</tr>
<tr>
<td>Valine</td>
<td>800</td>
</tr>
<tr>
<td>Proline</td>
<td>750</td>
</tr>
<tr>
<td>Alanine</td>
<td>700</td>
</tr>
<tr>
<td>Phenylalanine</td>
<td>650</td>
</tr>
<tr>
<td>Isoleucine</td>
<td>600</td>
</tr>
<tr>
<td>Tyrosine</td>
<td>550</td>
</tr>
<tr>
<td>Threonine</td>
<td>500</td>
</tr>
<tr>
<td>Histidine</td>
<td>450</td>
</tr>
<tr>
<td>Methionine</td>
<td>400</td>
</tr>
<tr>
<td>Cystine</td>
<td>350</td>
</tr>
<tr>
<td>Tryptophan</td>
<td>300</td>
</tr>
</tbody>
</table>
ACB Quinoa Protein

Technical Information:

Product Code: 20037

INCI Name: Hydrolyzed Quinoa

INCI Status: Conforms

Suggested Use Levels: 1.0 - 10.0%

Suggested Applications: Moisturizing, Film-Forming, Nourishing, Conditioning
ACB Quinoa Protein

THANK YOU

Please visit and register to use our new website at
www.activeconceptsllc.com
When you register, you will have access to the complete product documentation available.