Floratech
Product Functions:
Facial Cleansers
with Floraesters®
and Floramac® 10

The Natural Solution™
Market Trends¹

• The global facial cleansing market is estimated to exceed $9 billion USD in sales by 2023 with annual growth above 4%.

• Foaming facial cleansing products are the most popular (and hold the greatest market share) in the facial cleansing category, preferred for their combination of cleaning and hydration benefits.

• Cream-based facial cleansers represent 35% of the market share.

Floraesters and Floramac 10
Facial Cleansers

Facial cleansers clear the skin of elements we’re exposed to each day:

– makeup
– excess skin surface oil and sweat
– environmental dirt, dust, and pollution

Gentle cream-based foaming cleansers with moisturizing benefits provide the best facial cleansing system.
Facial Cleansers

Many facial cleansing products can damage or irritate the skin. Aggressive surfactants and high levels of fragrance commonly induce irritation. Excessive facial cleansing can affect the natural moisturizing benefits of skin surface lipids.

Cream-based facial cleansers made with oils, esters, and butters provide gentle cleansing and moisturization.

Floratech Formula: Low Foam Face Cleanser (C038)
Clinical Study: Increased Skin Hydration & Smoothness

• Objective
  - To evaluate Floraesters K-20W Jojoba to reduce the drying effect caused by surfactants in face wash products \(i.e.,\) increase skin hydration, and increase skin smoothness in a face wash.

• Results
  - The face wash containing 0.75\% Floraesters K-20W Jojoba increased skin hydration more than the vehicle.
  - The face wash containing 0.75\% Floraesters K-20W Jojoba increased skin smoothness more than 1.5 times as much as the vehicle.
Skin Hydration

Conclusion

Combating the drying effects caused by surfactants in face wash products, the addition of 0.75% Floraesters K-20W Jojoba increased skin hydration more than the vehicle face wash without.
Skin Smoothness

Conclusion

The face wash containing 0.75% Floraesters K-20W Jojoba increased skin smoothness more than 1.5 times as much as the vehicle face wash.
Clinical Study: Improved Consumer Preference

• Objective
  - To evaluate Floraesters K-20W Jojoba for its potential to enhance consumer preference when used in a face wash.

• Results
  - More than 80% of consumers preferred the face wash containing Floraesters K-20W Jojoba overall, and for smooth, less dry skin, compared to the vehicle face wash without.
Consumer Preference

In a split-face study, more than 80% of consumers preferred a face wash containing Floraesters K-20W Jojoba overall, and for smooth, less dry skin, compared to the vehicle face wash without.

Conclusion

Statistical (**) and directional (*) significance was apparent where indicated (p<0.05 and p<0.10, respectively).
Environmental preservation practices are taking market share away from high water content, mass produced cleansing products packaged in oversized plastic containers with large transportation carbon footprints.

Water-free facial cleansing products and other anhydrous personal care product categories have become a major global trend as water scarcity awareness grows.

Water-conscious products are often made with eco-friendly ingredients and packaged with biodegradable materials.

Water-free cleansing balms and gelled cleansing oils made with oils, esters, and butters provide gentle cleansing and moisturization.

Floratech Formulas: Water-Free Cleansing Balm (C033)
Water-Free Cleansing Oil Gel (C034)
Clinical Study: Consumer Preference

• **Objective**
  - To evaluate Floraesters 30 and Floraesters 60 for their potential to enhance consumer perception when used in a water-free cleansing balm.

• **Results**
  - *88% of consumers preferred a cleansing balm containing Floraesters 30 and Floraesters 60* compared to a cleansing balm without.
Consumer Preference

Statistical (**) and directional (*) significance was apparent where indicated (p<0.05 and p<0.10, respectively).

Conclusion

88% of consumers preferred the water-free cleansing balm containing Floraesters 30 and Floraesters 60 compared to a cleansing balm without.

Softer skin
Easiest product rinse off*
Product Silkiness
Effectiveness**
Best product**
Less make-up residue**
Ease of use**
Easiest make-up rinse off**
Preferred melt point**
Easiest removal from container**
Less greasy
Applies more smoothly**
Overall product performance**

vehicle + Floraesters 30 + Floraesters 60
vehicle + petrolatum

Statistical (**) and directional (*) significance was apparent where indicated (p<0.05 and p<0.10, respectively).
Clinical Study: Consumer Preference

• Objective
  – To evaluate Floramac 10 for its potential to enhance consumer perception compared to olive oil, when incorporated into a gelled cleansing oil.

• Results
  – 83% of consumers preferred a gelled cleansing oil containing Floramac 10 compared to a gelled cleansing oil with olive oil.
Consumer Preference

83% of consumers preferred a gelled cleansing oil containing Floramac 10 compared to the gelled cleansing oil with olive oil.

Statistical (**) and directional (*) significance was apparent where indicated (p<0.05 and p<0.10, respectively).
Bar Soap

The inclusion of Floraesters K-20W Jojoba in new generation bar soaps offer consumers:

– increased % of naturally-derived ingredients (COSMOS approved) in the finished product,

– gentle cleansing systems,

– greater consumer benefits.

Floratech Formula:
Smoothing and Softening Bar Soap (C035)
Clinical Study: Decreased Skin Barrier Disruption

• **Objective**
  - To evaluate Floraesters K-20W Jojoba’s ability to reduce the skin barrier disruption caused by bar soap.

• **Results**
  - The bar soap containing *0.5% Floraesters K-20W Jojoba decreased skin barrier disruption by 56%* compared to the vehicle.
Skin Barrier Function

After repeated bar soap use (10 applications), the product containing 0.5% Floraesters K-20W Jojoba decreased skin barrier disruption by 56% compared to the vehicle.

Conclusion

A - vehicle soap + 0.5% K-20W
B - vehicle soap
Clinical Study: Increased Skin Smoothness

• **Objective**
  - To evaluate skin smoothness after use of Floraesters K-20W Jojoba in a bar soap.

• **Results**
  - The bar soap containing 0.5% *Floraesters K-20W Jojoba* increased skin smoothness more than 5 times as much as the vehicle.
Skin Smoothness

Conclusion

The bar soap containing 0.5% Floraesters K-20W Jojoba increased skin smoothness more than 5 times as much as the vehicle.
Skin Smoothness

A – vehicle + 0.5% K-20W (30 min)

B – vehicle (30 min)

Conclusion

In the Visioscan images to the left the soap containing 0.5% Floraesters K-20W Jojoba (top) resulted in skin with less white area (i.e. indicative of dry, rough skin) compared to the soap without (bottom).
Clinical Study: Consumer Preference

• Objective
  - To evaluate Floraesters K-20W Jojoba for its potential to enhance consumer preference when used in a bar soap.

• Results
  - More than 94% of consumers preferred the bar soap containing Floraesters K-20W Jojoba for smooth, soft, and moisturized skin compared to the vehicle bar soap without.
Consumers evaluated bar soaps, resulting in more than 94% of consumers preferring the bar soap with 0.5% Floraesters K-20W Jojoba for smooth, soft, and moisturized skin compared to the vehicle bar soap without.

Statistical (*) significance was apparent where indicated (p<0.05).
Applications Study: Foam

• **Objective**
  - To evaluate Floraesters K-20W Jojoba within a bar soap to improve foam (diluted in water)

• **Results**
  - The bar soap containing Floraesters K-20W Jojoba increased foam quantity and structural strength, and produced a creamier, more dense foam as compared to the vehicle bar soap
Floraesters K-20W Jojoba Increased Foam

Conclusion

The bar soap containing Floraesters K-20W Jojoba produced more foam compared to the vehicle.
Floraesters K-20W Jojoba Produced Creamier Foam

Conclusion

The bar soap containing 1% Floraesters K-20W Jojoba produced a creamier, more dense foam compared to the vehicle.
Floraesters K-20W Jojoba
Produced More Stable Foam

The bar soap containing 0.5% Floraesters K-20W Jojoba produced more stable foam with a stronger micellar structure after high shear compared to the vehicle.
### Floraesters K-20W Jojoba Produced More Compact Foam

<table>
<thead>
<tr>
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<th>Low Shear</th>
<th>High Shear</th>
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<tbody>
<tr>
<td>vehicle soap</td>
<td><img src="vehicle_soap.png" alt="Image" /></td>
<td><img src="vehicle_soap_high_shear.png" alt="Image" /></td>
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<tr>
<td>vehicle soap + 0.5% K-20W</td>
<td><img src="vehicle_soap_k20w.png" alt="Image" /></td>
<td><img src="vehicle_soap_k20w_high_shear.png" alt="Image" /></td>
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</table>

**Conclusion**

The bar soap containing 0.5% Floraesters K-20W Jojoba produced foam with more compact structure and finer bubbles compared to the vehicle.
Floraesters K-20W Jojoba
Improved Spread and Texture of Foam

Conclusion

The bar soap containing 0.5% Floraesters K-20W Jojoba produced smoother, more stable foam with better spread compared to the vehicle.
• 0.75% Floraesters K-20W Jojoba in a face wash increased skin hydration (CS19-127) and increased skin smoothness more than 1.5 times as much as the vehicle (CS19-128).

• More than 80% of consumers preferred the face wash containing 0.75% Floraesters K-20W Jojoba overall, and for smooth, less dry skin, compared to the vehicle face wash without (CS19-129).

• In a bar soap, 0.5% Floraesters K-20W Jojoba decreased skin barrier disruption by 56% (CS18-112), increased skin smoothness more than 5 times as much (CS18-113), and was preferred by more than 94% of consumers for smooth, soft, and moisturized skin compared to the vehicle bar soap without (CS18-114).

Claim Sheets are available for Facial Cleansers with Floraesters and Floramac 10
88% of consumers preferred a water-free cleansing balm containing Floraesters 30 and Floraesters 60 compared to a water-free cleansing balm without (CS16-079).

82% of consumers preferred a water-free gelled cleansing oil containing Floramac 10 compared to a water-free gelled cleansing oil with olive oil (CS16-092).
Other Relevant Documents

- **MKT 28** – Why Water-Free?
- **Formulator Reports**
  - Floraesters K-20W Jojoba Improves Bar Soap (FR-016)
  - Floramac 10 Enhances Skin Care Products (FR-012)
  - Floraesters K-20W Jojoba and Florasun 90 Improve Face Wash (FR-021)
- **Technical Reports**
  - Formulating with Floraesters K-20W Jojoba (TR028)
- **Personal Care North America article**
  - A Natural Silicone Alternative in Skin Care Products (ART26)
Cleanse ♦ Hydrate ♦ Protect

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