<table>
<thead>
<tr>
<th><strong>Product Portfolio</strong></th>
<th><strong>Sustainable Active Solutions for Global Personal Care</strong></th>
</tr>
</thead>
</table>
| **ProBiocin™ V**     | **INCI:** Lactobacillus Ferment Lysate  
Captures an optimized production method to isolate bacteriocin peptides from the probiotic bacterium Lactobacillus acidophilus. This active system provides gentle benefits to the skin and scalp, limits disruption to the microbiome and offers a new global approach to alternative preservative technologies for use in personal care.  
Standardized Content: 5 - 10% Bacteriocins |
| **Use Level:** 2.0 - 4.0%  
**Benefits:** Antimicrobial / Moisturizing / Scalp Care |
| **Code:** M14005 |
| **Leucidal® Liquid** | **INCI:** Leuconostoc/Radish Root Ferment Filtrate  
Derived from Leuconostoc kimchii, a bacterium inoculated from Kimchi. Cultured in a defined growth medium containing radish root with cell lysis catalyzed by a willow bark extract. This specific manufacturing process yields unique peptides with broad spectrum antimicrobial and conditioning properties.  
Standardized Content: 18 - 22% Natural Salicylates & 0.1 - 0.5% Bacteriocins |
| **Use Level:** 2.0 - 4.0%  
**Patent:** US 10,159,708  
**Benefits:** Antimicrobial / Moisturizing / Postbiotic |
| **Code:** M15008 |
| **Leucidal® SF Max** | **INCI:** Lactobacillus Ferment  
Derived from Lactobacillus acidophilus, a probiotic bacterium. Cultured in a defined growth medium with cell lysis catalyzed by an enzyme. This specific manufacturing process yields unique peptides with broad spectrum, antimicrobial and conditioning properties. This ferment is salicylate free.  
Standardized Content: 5 - 10% Bacteriocins |
| **Use Level:** 2.0 - 4.0%  
**Patent:** US 10,232,197  
**Benefits:** Antimicrobial / Moisturizing / Postbiotic |
| **Code:** M15019MAX |
| **AMTicide® Coconut** | **INCI:** Lactobacillus & Cocos Nucifera (Coconut) Fruit Extract  
Intended to be coupled with one of our broad-spectrum antimicrobials or any preservative package that is lacking in protection against yeast and mold. Created by fermenting Cocos nucifera (coconut) fruit with Lactobacillus to deliver a non-irritating, anti-fungal and effective multifunctional product.  
Standardized Content: 0.5% minimum Lipopeptides |
| **Use Level:** 2.0 - 4.0%  
**Benefits:** Anti-fungal / Moisturizing / Postbiotic |
| **Code:** M14003 |

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<table>
<thead>
<tr>
<th>Product Name</th>
<th>Code</th>
<th>Use Level</th>
<th>Benefits</th>
<th>INCI</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMTicide® VAF</td>
<td>M14004</td>
<td>1.0% Maximum</td>
<td>Anti-fungal / Moisturizing / Volatile</td>
<td>Bacillus Ferment &amp; Saccharomyces Ferment Filtrate</td>
<td>A natural, volatile anti-fungal solution to prevent microbial growth associated with packaging. Developed by co-fermenting bacteria and yeast in a defined growth media to deliver a non-irritating multifunctional product capable of inhibiting the growth of fungus in packaging head-space.</td>
</tr>
<tr>
<td>Leucidal® Liquid Complete</td>
<td>M15024</td>
<td>2.0 - 4.0%</td>
<td>Antimicrobial / Moisturizing / Postbiotic</td>
<td>Leuconostoc/Radish Root Ferment Filtrate &amp; Lactobacillus &amp; Cocos Nucifera (Coconut) Fruit Extract</td>
<td>A 75/25 blend of Leucidal® Liquid with AMTicide® Coconut to offer a broad-spectrum antimicrobial in one product. This complex offers moisturizing and conditioning benefits in skin and hair care applications as well as protection to any formulation. Standardized Content: 14 - 17% Natural Salicylates &amp; 0.1 - 0.5% Bacteriocins</td>
</tr>
<tr>
<td>Leucidal® SF Complete</td>
<td>M15025</td>
<td>2.0 - 4.0%</td>
<td>Antimicrobial / Moisturizing / Postbiotic</td>
<td>Lactobacillus Ferment &amp; Lactobacillus &amp; Cocos Nucifera (Coconut) Fruit Extract</td>
<td>A 75/25 blend of Leucidal® Liquid SF with AMTicide® Coconut to offer a broad-spectrum antimicrobial in one product. This complex offers moisturizing and conditioning benefits in skin and hair care applications as well as protection to any formulation. Standardized Content: 1 - 10% Bacteriocins</td>
</tr>
<tr>
<td>Leucidal® Liquid PT</td>
<td>M15021</td>
<td>2.0%</td>
<td>Antimicrobial / Moisturizing</td>
<td>Lactobacillus Ferment</td>
<td>A fermentation product of Lactobacillus acidophilus in the presence of sustainable castor oil. The biotransformation of castor oil generates water soluble undecylenates, enhancing anti-fungal activity. Designed for use in pressed powder applications</td>
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</tbody>
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### Arborcidé® OC

**Code:** M15010  
**Use Level:** 2.0 - 4.0%  
**Benefits:** Antimicrobial / Moisturizing  
**USDA NOP Organic Compliant**

InCI: Leuconostoc Ferment Filtrate  
Derived from Leuconostoc kimchii, a bacterium inoculated from Kimchi. Cultured in a defined growth medium with cell lysis catalyzed by a willow bark extract. This specific manufacturing process yields unique peptides with broad spectrum antimicrobial and conditioning properties.  
**Standardized Content:** 18 - 22% Natural Salicylates

### PhytoCide Elderberry OS

**Code:** M16003  
**Use Level:** 1.0 - 5.0%  
**Benefits:** Antimicrobial / Antioxidant / Conditioning

InCI: Sambucus Nigra Fruit Extract  
Elderberries are known to be rich in undecylenic acid and flavonoids. These phytochemicals provide effective antimicrobial and antioxidant benefits. This natural oil-soluble extract can be used to enhance both antimicrobial and conditioning properties in oil-based formulations, such as lipsticks, which may be at risk of microbial contamination during their life in use.

### PhytoCide Black Currant Powder

**Code:** M16001  
**Use Level:** 1.0 - 3.0%  
**Benefits:** Antimicrobial / Conditioning

InCI: Ribes Nigrum (Black Currant) Fruit Extract  
Black currants are known to be rich in ellagitannins and anthocyanins. These phytochemicals provide effective antimicrobial, antioxidant, and anti-inflammatory benefits. This natural, multifunctional, spray dried powder can be used to enhance both antimicrobial and conditioning properties within a formulation.  
**Standardized Content:** 1.5 – 4% Citric Acid

### PhytoCide Aspen Bark Extract Powder

**Code:** M16002  
**Use Level:** 0.2 - 3.0%  
**Benefits:** Antimicrobial / Moisturizing / Problem Skin

InCI: Populus Tremuloides Bark Extract  
Aspen Bark is known to be rich in natural salicylates. These can provide effective antimicrobial activity as well as improving cellular renewal for a smooth and even skin texture. This natural, multifunctional, spray dried powder can be used to enhance both antimicrobial and conditioning properties within a formulation.  
**Standardized Content:** 54 - 60% Natural Salicylates
### SynerCide Asian Fusion

**Code:** M17001  
**Use Level:** 1.0 - 2.0%  
**Benefits:** Antimicrobial/Moisturizing  

**INCI:** Hexylene Glycol & Caprylyl Glycol & Wasabia Japonica Root Extract & Zingiber Officinale (Ginger) Root Extract & Allium Sativum (Garlic) Bulb Extract  

A synergistic blend of wasabi, ginger and garlic. These traditional Asian botanicals can provide potent anti-ageing, conditioning and antimicrobial benefits.