Technical Data Sheet
Standardized Cranberry Powder, 15% PAC (BL-DMAC)
(Vaccinium macrocarpon)

Product Code: 54264700
Date: February 2020

Product Specification

Product Description: Pure cranberry (Vaccinium macrocarpon) extract; spray-dried and standardized to a minimum proanthocyanidin content of 15% via BL-DMAC

Product Properties

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Dark reddish purple</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder, fine, free-flowing, hygroscopic</td>
</tr>
<tr>
<td>Taste</td>
<td>Characteristic of cranberry</td>
</tr>
<tr>
<td>Odor</td>
<td>Characteristic of cranberry</td>
</tr>
<tr>
<td>Excipient</td>
<td>None</td>
</tr>
<tr>
<td>Extract ratio</td>
<td>300:1</td>
</tr>
<tr>
<td>Plant part used</td>
<td>Berries (whole fruit)</td>
</tr>
</tbody>
</table>

Analytical Values

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proanthocyanidins</td>
<td>BL-DMAC ≥ 15 g/100 g</td>
</tr>
<tr>
<td>Moisture</td>
<td>Loss on drying, 100 – 105°C; 2 hours ≤ 5%</td>
</tr>
</tbody>
</table>

Microbiological Values

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yeast</td>
<td>&lt; 100 CFU/g</td>
</tr>
<tr>
<td>Molds</td>
<td>&lt; 100 CFU/g</td>
</tr>
<tr>
<td>Total plate count</td>
<td>&lt; 1,000 CFU/g</td>
</tr>
<tr>
<td>Enterobacteriaceae</td>
<td>&lt; 10 CFU/g</td>
</tr>
</tbody>
</table>

Packaging: 5 kg aluminum bag in corrugate box

Storage: The product must be stored in a dark, cool (≤ 75°F/24°C), and dry area. Keep the package well-sealed since the product is hygroscopic. Color may change at the end of shelf life. Moisture absorption may cause changes in chemical values.

Best Used By: 24 months after production date under proper storage conditions

The information contained herein is, to the best of our knowledge, correct. The data outlined and the statements made are intended only as a source of information. No warranties, expressed or implied, are made. On the basis of this information, it is suggested that you evaluate the product on a laboratory scale prior to use in a finished product.

Artemis International, Inc. | 3711 Vanguard Dr. – Ste. A | Fort Wayne, IN 46809-3301 | Tel: (260) 436-6899 | Fax: (260) 478-6900
www.artemis-international.com
Technical Data Sheet
Standardized Cranberry Powder,
15% PAC (BL-DMAC)
(Vaccinium macrocarpon)

Product Code: 54264700
Date: February 2020

Composition Statement

We hereby certify that, for the above named product, the composition is as follows:

- **Genus and species:** Vaccinium macrocarpon
- **Plant part used:** Berries (whole fruit)
- **Ingredients:** Cranberry extract (100%)
- **Country of origin:** Canada (manufacturing), US/Canada (raw material)
- **Final form:** Powder

GMO Statement

The above named product and any excipients used in the manufacturing process are not genetically engineered.

Gluten-Free Statement

The above named product is entirely of fruit/vegetable origin. It is not produced from and does not contain any gluten or gluten byproducts; therefore, it is considered gluten-free.

Vegan Statement

The above named product is entirely of fruit/vegetable origin and is not produced from any animal products or byproducts; therefore it is considered vegan-friendly.

BSE/TSE Statement

The above named product is risk free for BSE/TSE because it is not processed with any meat products or byproducts. Furthermore, no meat products or by-products are manufactured or processed on the premises.

Irradiation and Sterilization Statement

The above named product has not been irradiated during the manufacturing process, nor has any chemical sterilization method been used. We also confirm that it has not been exposed to ethylene oxide (EtO) and is considered an EtO-free product.
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Nutritional Profile

<table>
<thead>
<tr>
<th>Nutrient</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calories</td>
<td>262 kcal</td>
</tr>
<tr>
<td>Total Fat</td>
<td>1.2 g</td>
</tr>
<tr>
<td>Saturated Fat</td>
<td>0.40 g</td>
</tr>
<tr>
<td>Trans Fat</td>
<td>0 g</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0 g</td>
</tr>
<tr>
<td>Sodium</td>
<td>11 mg</td>
</tr>
<tr>
<td>Total Carbohydrates</td>
<td>60 g</td>
</tr>
<tr>
<td>Dietary Fiber</td>
<td>0 g</td>
</tr>
<tr>
<td>Sugars</td>
<td>1.5 g</td>
</tr>
<tr>
<td>Protein</td>
<td>2.3 g</td>
</tr>
<tr>
<td>Ash (minerals)</td>
<td>0.45 g</td>
</tr>
<tr>
<td>Calcium</td>
<td>47 mg</td>
</tr>
<tr>
<td>Iron</td>
<td>3.0 mg</td>
</tr>
</tbody>
</table>

As with any organic material, there may be some variation in the nutritional composition. The following values are being supplied to you to aid in your development work, but should not be used solely to determine your nutrient labeling. You may need to analyze for those nutrients as they occur in your final product as required by the Code of Federal Regulations Title 21; section 101.9.
# Technical Data Sheet

**Standardized Cranberry Powder, 15% PAC (BL-DMAC)**  
*(Vaccinium macrocarpon)*

**Product Code:** 54264700  
**Date:** February 2020

## Allergen Statement

<table>
<thead>
<tr>
<th>Description of Allergen</th>
<th>Present in the Product</th>
<th>Present in Other Products Mfg. on the Same Line</th>
<th>Present in the Same Mfg. Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Artificial colors/preservatives</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Autolyzed yeast</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Celery</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Cereal proteins (include HVP)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Corn or corn products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Cottonseed flour</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Egg or egg products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Fish or fish products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Gluten</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Milk or milk-derived products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Mustard or mustard products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Peanuts or peanut products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Seeds or seed products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sesame or sesame products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Shellfish, crustaceans (specify)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Soybeans or soybean products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Sulfites (specify level)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Tree nuts (almond, brazil nut, cashew, chestnut, hazelnut, pine nuts, pistachio, pecan, macadamia, walnut)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Wheat or wheat products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Yeast or yeast products</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Effective procedures are in place to avoid cross-contamination of the product with the allergens not present in the product but noted in columns III and IV.
**Technical Data Sheet**

Standardized Cranberry Powder, 15% PAC (BL-DMAC)  
(*Vaccinium macrocarpon*)

**Product Code:** 54264700  
**Date:** February 2020

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**Safety Data Sheet**

### Section I  
**Product and Company Identification**

| Product: | Standardized Cranberry Powder, 15% PAC | Product code: | 54264700 |
| Supplier: | Artemis International, Inc. | Phone: | 260-436-6899 |
| | 3711 Vanguard Dr. – Suite A | Fax: | 260-478-6900 |
| | Fort Wayne, IN 46809-3301 USA |

### Section II  
**Hazard Identification**

This preparation is not classified as dangerous according to Regulation (EC) No. 1272/2008 [CLP] and its amendments.

- **Physical hazards:** Not classified as a physical hazard
- **Health hazards:** Not classified as a health hazard
- **Environmental hazards:** Not classified as an environmental hazard
- **Specific hazards:** Dusts may irritate the respiratory tract, skin, and eyes. Risk of dust explosion. May form explosible dust-air mixture if dispersed.
- **Main symptoms:** Upper respiratory tract irritation, coughing, irritation of eyes and mucous membranes

### Section III  
**Composition/Ingredients**

- **Ingredients:** Cranberry extract

### Section IV  
**First Aid Measures**

- **Eye contact:** Dusting of powder may cause eye irritation. Flush eyes with water for 15 minutes. Get medical attention if symptoms develop and persist.
- **Skin contact:** Product is not irritating to skin; however, flush with water or soap and water for 15 minutes or until all traces have been removed. Seek medical attention if symptoms develop and persist.
- **Inhalation:** Product may cause irritation of the nose and throat. If inhaled, remove personnel to fresh air and, if needed, seek medical attention.
- **Ingestion:** Product is not known to result in significant adverse health effects. If swallowed, rinse mouth and throat with water. Drink water.

### Section V  
**Fire Fighting Measures**

- **Flammability:** Suspension of the dust in the air could produce an explosive atmosphere. If exposed to high temperatures, the product may release hazardous decomposition products such as carbon monoxide and carbon dioxide.
- **Extinguishing media:** Water spray with additives, chemical powder, chemical foam, carbon dioxide extinguisher
- **Special firefighting procedures:** Packaging exposed to heat or open flames should be cooled with a fine water spray. Avoid solid water jets or high pressure media which could cause the formation of potentially explosible dust-air mixtures. Prevent fire-fighting water from entering drains.
- **Unusual fire and explosion hazards:** Suspension of the dust in the air could produce an explosive atmosphere.

### Section VI  
**Accidental Release Measures**

- **Leak and spill procedures:** Prevent further spill of material, contain material already spilled. Sweep up spilled material for disposal. Flush spill area with fine water spray. CAUTION! Material on wet floor may be slippery.
- **Personal precautions:** Avoid inhalation of dust and contact with skin and eyes. Wear appropriate protective equipment and clothing during clean-up. Do not allow the material to become suspended in the air.
- **Methods for cleaning up:** To limit the production of dust or vapor, cover the product with absorbent granules (inert, non-flammable, and non-combustible). In the case of large spills, install a protective enclosure, cover the sewers. Collect absorbent/product mixture and put it in compatible packaging for subsequent disposal in accordance with the regulations in force. In the case of a large spill, inform the competent authorities if the situation cannot be rapidly and effectively controlled. The absorbent/product mixture shall be handled with the same precautions as the product itself. To clean, wash the contaminated area making
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Environmental precautions:
Avoid release into natural bodies of water, waste water, or in the soil. Contain the leak or spill from spreading if it can be done without any danger. Do not discharge to surface water or to sewers. Inform local authorities if significant leaks cannot be contained.

Section VII Handling and Storage
Handling procedures: No special equipment required. Avoid inhalation of dust. Use only with adequate ventilation. Avoid raising powdered materials into airborne dust.
Hygiene practices: Follow food GMPs. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling.

Section VIII Exposure Controls and Personal Protection
Engineering controls: Use only in a well ventilated area. Eyewash fountains and safety showers should be easily accessible.
Respiratory protection: Provide adequate ventilation. Respirator not normally required. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter.
Protective gloves: Avoid skin contact. Wear gloves for extended or repeat skin contact with powder.
Eye protection: Avoid eye contact. Wear safety goggles with lateral protection while handling powder.
Clothing: Standard work clothing; wash regularly.

Section IX Physical and Chemical Characteristics
Appearance: Dark reddish purple
Odor: Berry/fruity
Physical state: Solid
pH: 2 – 4.5
Solubility in water: Soluble
Density: Not known
Boiling point: N/A
Freezing point: N/A
Melting point: Not known
Vapor pressure: Not known
Vapor density: Not known

Section X Stability and Reactivity
Chemical stability: Stable, no decomposition
Conditions to avoid: Keep away from open flames, hot surfaces, and ignition sources. Do not allow the dust to become suspended in the air; it could produce an explosive atmosphere.
Materials to avoid: Strong oxidizing agents, strong acids, and strong bases
Hazardous decomposition or byproducts: None known.
Polymerization: Does not occur

Section XI Toxicological Information
No known toxic effects from acute or chronic exposure

Section XII Ecological Information
No known environmental impact. Product is biodegradable.

Section XIII Disposal Information

Section XIV Transportation Information
Shipping information: Non-hazardous

Section XV Regulatory Information
Contains no REACH substances with Annex XVII restrictions.
Contains no substance on the REACH candidate list.
Contains no REACH Annex XIV substances.
Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

Section XVI Other Information
Prepared: 11.1.19  Last Revision 11.1.19
All information appearing herein is based upon data obtained from the raw material manufacturer and/or recognized technical sources. While the information above is believed to be true and accurate, the author makes no representations as to its accuracy or sufficiency. Conditions of use are...
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Kosher
Non-irradiated
Not genetically engineered

beyond the producer’s control, and therefore the users are responsible to verify this data under their own particular conditions, applications, and regulations to determine whether the product is suitable for their particular purposes, and they assume all risks of their use, handling, disposal, reliance upon, publication, or use of the information contained herein. This information applies only to the product designated above and does not necessarily apply to its use in combination with other materials, products, chemical compounds, structures, or processes.

Melanie Bush
Quality Control

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