

## SAFETY DATA SHEET

### 1. SUBSTANCE AND SOURCE IDENTIFICATION

**Product Identifier**

**SRM Number:** 3287  
**SRM Name:** Blueberry (Fruit)  
**Other Means of Identification:** Not applicable.

**Recommended Use of This Material and Restrictions of Use**

This Standard Reference Material (SRM) is intended primarily for use in validating analytical methods for the determination of organic acids in the fruit of blueberries and similar matrices. This SRM can also be used for quality assurance when assigning values to in-house control materials. A unit of SRM 3287 consists of five packets, each containing approximately 5 g of freeze-dried, powdered fruit.

**Company Information**

National Institute of Standards and Technology  
 Standard Reference Materials Program  
 100 Bureau Drive, Stop 2300  
 Gaithersburg, Maryland 20899-2300

Telephone: 301-975-2200  
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 1-800-424-9300 (North America)  
 +1-703-527-3887 (International)

### 2. HAZARDS IDENTIFICATION

**Note:** This processed material is intended for research use; not for human consumption.

**Classification**

**Physical Hazard:** Not classified.  
**Health Hazard:** Not classified.

**Label Elements**

**Symbol**  
 No Symbol

**Signal Word**  
 No Signal Word

**Hazard Statement(s):** Not applicable.

**Precautionary Statement(s):** Not applicable.

**Hazards Not Otherwise Classified:** Not applicable.

**Ingredients(s) with Unknown Acute Toxicity:** Not applicable.

### 3. COMPOSITION AND INFORMATION ON HAZARDOUS INGREDIENTS

**Substance:** Blueberry (Fruit)

**Other Designations:** Not applicable.

Components are listed in compliance with OSHA's 29 CFR 1910.1200; for the actual values see the Certificate of Analysis.

| Hazardous Component(s) | CAS Number     | EC Number (EINECS) | Nominal Mass Concentration (%) |
|------------------------|----------------|--------------------|--------------------------------|
| Blueberry (Fruit)      | not applicable | not applicable     | 100                            |

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## 4. FIRST AID MEASURES

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### Description of First Aid Measures:

**Inhalation:** If adverse effects occur, remove to uncontaminated area. If not breathing, give artificial respiration or oxygen by qualified personnel. Seek immediate medical attention.

**Skin Contact:** Wash skin with soap and water for at least 15 minutes. Thoroughly clean and dry contaminated clothing before reuse.

**Eye Contact:** Flush eyes with water for at least 15 minutes. If necessary, seek medical attention.

**Ingestion:** If adverse effects occur after ingestion, seek medical treatment.

**Most Important Symptoms/Effects, Acute and Delayed:** Skin or eye mechanical irritation.

**Indication of any immediate medical attention and special treatment needed, if necessary:** If any of the above symptoms are present, seek medical attention if needed.

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## 5. FIRE FIGHTING MEASURES

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**Fire and Explosion Hazards:** Avoid generating dust. See Section 9, "Physical and Chemical Properties" for flammability properties.

### Extinguishing Media:

Suitable: Use extinguishing media appropriate for surrounding fire.

Unsuitable: None listed.

**Specific Hazards Arising from the Chemical:** None listed.

**Special Protective Equipment and Precautions for Fire-Fighters:** Avoid inhalation of material or combustion byproducts. Wear full protective clothing and NIOSH approved self-contained breathing apparatus (SCBA).

**NFPA Ratings** (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health = 0

Fire = 0

Reactivity = 0

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal Precautions, Protective Equipment and Emergency Procedures:** Any accumulated material on surfaces should be removed and properly disposed of. Use suitable protective equipment; see Section 8, "Exposure Controls and Personal Protection".

**Methods and Materials for Containment and Clean up:** Do not touch spilled material. Notify safety personnel of spills. Collect spilled material in appropriate container for disposal. Isolate hazard area and deny entry.

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## 7. HANDLING AND STORAGE

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**Safe Handling Precautions:** Minimize dust generation and accumulation on surfaces. See Section 8, "Exposure Controls and Personal Protection".

**Storage:** Store and handle in accordance with all current regulations and standards.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

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**Exposure Limits:** This material is a particulate matter and adequate inhalation/respiratory protection should be used to minimize exposure. No occupational exposure limits have been established for blueberry (fruit). The exposure limits for Particulates Not Otherwise Regulated are applicable.

OSHA (PEL): 15 mg/m<sup>3</sup> (TWA, total particulates)  
5 mg/m<sup>3</sup> (TWA, respirable particulates)

NIOSH (REL): 15 mg/m<sup>3</sup> (TWA, total particulates)  
5 mg/m<sup>3</sup> (TWA, respirable particulates)

**Engineering Controls:** Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

**Personal Protection:** In accordance with OSHA 29 CFR 1910.132, subpart I, wear appropriate Personal Protective Equipment (PPE) to minimize exposure to this material.

**Respiratory Protection:** If workplace conditions warrant a respirator, a respiratory protection program that meets OSHA 29CFR 1910.134 must be followed. Refer to NIOSH 42 CFR 84 for applicable certified respirators.

**Eye/Face Protection:** Wear splash resistant safety goggles with a face shield. An eye wash station should be readily available near areas of use.

**Skin and Body Protection:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Chemical-resistant gloves should be worn at all times when handling chemicals.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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| <b>Descriptive Properties:</b>                       | <b>Blueberry (Fruit)</b> |
|--|--------------------------|
| <b>Appearance</b><br>(physical state, color, etc.):  | powder                   |
| <b>Molecular Formula:</b>                            | not applicable           |
| <b>Molar Mass (g/mol):</b>                           | not applicable           |
| <b>Odor:</b>   | not available            |
| <b>Odor threshold:</b>                               | not available            |
| <b>pH:</b>   | not available            |
| <b>Evaporation rate:</b>                             | not applicable           |
| <b>Melting point/freezing point (°C):</b>            | not available            |
| <b>Relative Density (g/L):</b>                       | not available            |
| <b>Vapor Pressure (mmHg):</b>                        | not applicable           |
| <b>Vapor Density (air = 1):</b>                      | not applicable           |
| <b>Viscosity (cP):</b>                               | not applicable           |
| <b>Solubility(ies):</b>                              | not available            |
| <b>Partition coefficient (n-octanol/water):</b>      | not available            |
| <b>Particle Size:</b>                                | 400 µm (40 mesh)         |
| <b>Thermal Stability Properties:</b>                 |                          |
| <b>Autoignition Temperature (°C):</b>                | not available            |
| <b>Thermal Decomposition (°C):</b>                   | not available            |
| <b>Initial boiling point and boiling range (°C):</b> | not available            |
| <b>Explosive Limits, LEL (Volume %):</b>             | not available            |
| <b>Explosive Limits, UEL (Volume %):</b>             | not available            |
| <b>Flash Point (°C):</b>                             | not available            |
| <b>Flammability (solid, gas):</b>                    | not available            |

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** Stable at normal temperatures and pressure.

**Stability:**   X   Stable        Unstable

**Possible Hazardous Reactions:** None listed.

**Conditions to Avoid:** Avoid generating dust. Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

**Incompatible Materials:** No data available.

**Fire/Explosion Information:** See Section 5, "Fire Fighting Measures".

**Hazardous Decomposition:** Thermal decomposition will produce oxides of carbon.

**Hazardous Polymerization:**        Will Occur   X   Will Not Occur

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## 11. TOXICOLOGICAL INFORMATION

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**Route of Exposure:**  X  Inhalation  X  Skin  X  Ingestion

**Symptoms Related to the Physical, Chemical and Toxicological Characteristics:** No data available.

**Potential Health Effects (Acute, Chronic and Delayed):**

**Inhalation:** No data available.

**Skin Contact:** No data available; skin exposure may result in mechanical irritation.

**Eye Contact:** No data available; may cause mechanical irritation.

**Ingestion:** No data available.

**Numerical Measures of Toxicity:**

**Acute Toxicity:** Not classified; no data available.

**Skin Corrosion/Irritation:** Not classified; no data available.

**Serious Eye Damage/Irritation:** Not classified; no data available.

**Respiratory Sensitization:** Not classified; no data available.

**Skin Sensitization:** Not classified; no data available.

**Germ Cell Mutagenicity:** Not classified; no data available.

**Carcinogenicity:** Not classified.

**Listed as a Carcinogen/Potential Carcinogen**   Yes  X  No  
Blueberry (fruit) are not listed by NTP, IARC or OSHA as a carcinogen.

**Reproductive Toxicity:** Not classified; no data available.

**Specific Target Organ Toxicity, Single Exposure:** Not classified; no data available.

**Specific Target Organ Toxicity, Repeated Exposure:** Not classified; no data available.

**Aspiration Hazard:** Not classified; no data available.

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## 12. ECOLOGICAL INFORMATION

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**Ecotoxicity Data:** No data available.

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

**Other Adverse effects:** No data available.

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## 13. DISPOSAL CONSIDERATIONS

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**Waste Disposal:** Dispose of waste in accordance with all applicable federal, state, and local regulations.

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## 14. TRANSPORTATION INFORMATION

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**U.S. DOT and IATA:** Not regulated by DOT or IATA.

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## 15. REGULATORY INFORMATION

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### U.S. Regulations:

CERCLA Sections 102a/103 (40 CFR 302.4): Not regulated.

SARA Title III Section 302 (40 CFR 355.30): Not regulated.

SARA Title III Section 304 (40 CFR 355.40): Not regulated.

SARA Title III Section 313 (40 CFR 372.65): Not regulated.

OSHA Process Safety (29 CFR 1910.119): Not regulated.

SARA Title III Sections 311/312 Hazardous Categories (40 CFR 370.21):

|                 |     |
|-----------------|-----|
| ACUTE HEALTH:   | No. |
| CHRONIC HEALTH: | No. |
| FIRE:           | No. |
| REACTIVE:       | No. |
| PRESSURE:       | No. |

### State Regulations:

California Proposition 65: Not listed.

U.S. TSCA Inventory: Not listed.

TSCA 12(b), Export Notification: Not listed.

### Canadian Regulations:

WHMIS Information: Not provided for this material.

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## 16. OTHER INFORMATION

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Issue Date: 22 February 2019

Sources: CDC; NIOSH; *NIOSH Pocket Guide to Chemical Hazards*; Department of Health and Human Services (DHHS), Centers for Disease Control and Prevention (CDC), National Institute for Safety and Health; *Particulates Not Otherwise Regulated*, 29 November 2018; available at <https://www.cdc.gov/niosh/npng/npgd0480.html> (accessed Feb 2019).

### Key of Acronyms:

|        |   |       |  |
|--------|---|-------|--|
| ACGIH  | American Conference of Governmental Industrial Hygienists             | NRC   | Nuclear Regulatory Commission                    |
| ALI    | Annual Limit on Intake  | NTP   | National Toxicology Program                      |
| CAS    | Chemical Abstracts Service  | OSHA  | Occupational Safety and Health Administration    |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL   | Permissible Exposure Limit                       |
| CFR    | Code of Federal Regulations   | RCRA  | Resource Conservation and Recovery Act           |
| DOT    | Department of Transportation  | REL   | Recommended Exposure Limit                       |
| EC50   | Effective Concentration, 50 %   | RM    | Reference Material                               |
| EINECS | European Inventory of Existing Commercial Chemical Substances         | RQ    | Reportable Quantity                              |
| EPCRA  | Emergency Planning and Community Right-to-Know Act                    | RTECS | Registry of Toxic Effects of Chemical Substances |
| IARC   | International Agency for Research on Cancer                           | SARA  | Superfund Amendments and Reauthorization Act     |
| IATA   | International Air Transport Association                               | SCBA  | Self-Contained Breathing Apparatus               |
| IDLH   | Immediately Dangerous to Life and Health                              | SRM   | Standard Reference Material                      |
| LC50   | Lethal Concentration, 50 %  | STEL  | Short Term Exposure Limit                        |
| LD50   | Lethal Dose, 50 %   | TLV   | Threshold Limit Value                            |
| LEL    | Lower Explosive Limit   | TPQ   | Threshold Planning Quantity                      |
| MSDS   | Material Safety Data Sheet  | TSCA  | Toxic Substances Control Act                     |
| NFPA   | National Fire Protection Association                                  | TWA   | Time Weighted Average                            |
| NIOSH  | National Institute for Occupational Safety and Health                 | UEL   | Upper Explosive Limit                            |
| NIST   | National Institute of Standards and Technology                        | WHMIS | Workplace Hazardous Materials Information System |

**Disclaimer:** Physical and chemical data contained in this SDS are provided only for use in assessing the hazardous nature of the material. The SDS was prepared carefully, using current references; however, NIST does not certify the data in the SDS. The certified values for this material are given in the NIST Certificate of Analysis.

Users of this SRM should ensure that the SDS in their possession is current. This can be accomplished by contacting the SRM Program: telephone (301) 975-2200; fax (301) 948-3730; e-mail [srmmsds@nist.gov](mailto:srmmsds@nist.gov); or via the Internet at <https://www.nist.gov/srm>.