



**Boston BioProducts, Inc**

425 Fortune Blvd.

Milford, MA 01757

## SAFETY DATA SHEET

### **SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

- 1.1** PRODUCT NAME: Citric Acid (2 M)  
CATALOG #: BPS-356
- 1.2** RECOMMENDED USE: Research use or further manufacturing
- 1.3** COMPANY IDENTIFICATION: Boston BioProducts, Inc.  
425 Fortune Blvd. Milford, MA 01757
- 1.4** EMERGENCY CONTACT: 1-800-535-5053  
TOLL FREE NUMBER: 1-888-881-8691

### **SECTION 2 – HAZARD(S) IDENTIFICATION**

#### **2.1 Classification of the substance or mixture**

##### **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Serious eye damage/eye irritation	Category 2
Specific target organ toxicity, single exposure; Respiratory tract irritation	Category 3

#### **2.2 GHS Label elements, including Hazard and Precautionary Statement(s)**

##### **Pictogram**



**Signal word:** Warning

##### **Hazard statement(s):**

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

##### **Precautionary Statements:**

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304 + P340	IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403	Store in a well-ventilated place.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.



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**Composition:** 2 M Citric Acid Monohydrate.

Component	CAS Number	Concentration
Citric Acid Monohydrate	5949-29-1	42.03 %
WFI Water	7732-18-5	Rest

#### **SECTION 4 - FIRST-AID MEASURES**

##### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### **SECTION 5 - FIRE FIGHTING MEASURES**

##### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** Carbon oxides, Nitrogen oxides (NOx).

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

##### **5.4 Further information:**

Health	Flammability	Instability	Physical Hazards
1	0	0	0

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate



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disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

## **SECTION 7 - HANDLING AND STORAGE**

**7.1 Precautions for safe handling:** Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place.

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible.

## **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

**Components with workplace control parameters:** Contains no substances with occupational exposure limit values.

**Exposure Guidelines:** No data available

### **Legend**

**ACGIH** – American Conference of Governmental Industrial Hygienists

**OSHA** – Occupational Safety and Health Administration

**NIOSH IDLH:** NIOSH National Institute for Occupational Safety and Health

### **8.2 Exposure Controls**

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### **8.3 Personal protective equipment**

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

<b>Appearance</b>	Clear, Colorless, Liquid	<b>Vapor Pressure</b>	< 0,01 hPa at 25 °C
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<b>Odor</b>	No Data Available	<b>Vapor Density</b>	No Data Available
<b>Odor Threshold</b>	No Data Available	<b>Relative Density</b>	1,54 g/cm <sup>3</sup> at 20 °C
<b>pH</b>	No Data Available	<b>Water Solubility</b>	ca.880 g/l at 20 °C
<b>Melting / Freezing Point</b>	135-152 °C	<b>Partition Coefficient</b>	-1.72 at 20 °C
<b>Initial Boiling Point Range</b>	No Data Available	<b>Auto-Ignition Temperature</b>	No Data Available
<b>Flash Point</b>	No Data Available	<b>Decomposition Temperature</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

#### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable under recommended storage conditions

**Hazardous Decomposition Products/Hazardous Polymerization:** No data available

**Incompatibilities:** Excess heat above 170°C., strong oxidizing agents

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

##### **Acute Toxicity**

##### **Component Information**

<b>Component</b>	<b>LD50 Oral</b>	<b>LD50 Dermal</b>	<b>LC50 Inhalation</b>
Citric Acid Monohydrate	Oral - Mouse - male and female - 5.400 mg/kg	Rat - male and female - > 2.000 mg/kg	-

**Toxicologically Synergistic Products:** The environmental impact of this product has not been fully investigated

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Irritation:** Irritating to eyes

**Carcinogenicity:** No data available

#### **SECTION 12 - ECOLOGICAL INFORMATION**

**Eco Toxicity:** The environmental impact of this product has not been fully investigated

<b>Component</b>	<b>Freshwater Algae</b>	<b>Freshwater Fish</b>	<b>Microtox</b>	<b>Water Flea</b>
Citric Acid Monohydrate	NOEC - Scenedesmus quadricauda (Green algae) - 425 mg/l - 8 h	LC50 - Leuciscus idus (Golden orfe) - 440 - 760 mg/l - 96 h	-	-



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**Persistence and degradability: aerobic:** Exposure time 28 d Result: 97 % - Readily biodegradable.

**Bioaccumulative potential:** No data available

**Mobility in soil:** Will likely be mobile in soil due to its water solubility

**Results of BPT and vPvB assessment:** No data available

Component	Log Pow
Citric Acid Monohydrate	-1.72

**Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Component	RCRA – U Series Wastes	RCRA – P series Wastes
-	-	-

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

### **SECTION 14 - TRANSPORT INFORMATION**

DOT	TDG	IATA	IMDG/IMO
Not Regulated	Not Regulated	Not Regulated	Not Regulated

### **SECTION 15 - REGULATORY INFORMATION**

#### **INTERNATIONAL INVENTORIES**

TCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
-	Listed	-	-	-	Listed	Listed	Listed	-	-

#### **USA FEDERAL REGULATIONS**

##### **SARA 311/312 HAZARDOUS CATEGORIZATION**

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	No	Yes	No	No

**Clean Water Act/ Clean Air Act:** No Data Available



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**Clean Air Act:** Not Applicable

**California Proposition 65:** This product contains no Proposition 65 chemicals.

**CERCLA:** This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response and Liability Act (CERCLA) (40 CRF 302)

**HMIS Rating**

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
1	0	0	0

**NFPA Rating**

Health hazard	Fire Hazard	Reactivity Hazard
1	0	0

**STATE RIGHT TO KNOW**

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
-	Listed	Listed	-	-

**US DEPARTMENT OF TRANSPORTATION**

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
No	No	No

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**This SDS complies with the requirements of Regulation (EC).**

**SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Boston BioProducts, Inc shall not be held liable for any damage resulting from handling or from contact with the above product. This product is sold for laboratory research and development purposes use only.

**Revised: 2025**