



## SAFETY DATA SHEET

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

- |            |                         |                                                                          |
|------------|-------------------------|--------------------------------------------------------------------------|
| <b>1.1</b> | PRODUCT NAME:           | Phosphate Inhibitor Cocktail (100x, For Animal Tissue and Cell Extracts) |
|            | CATALOG #:              | BP-480                                                                   |
| <b>1.2</b> | RECOMMENDED USE:        | Research Use or Further Manufacturing                                    |
| <b>1.3</b> | COMPANY IDENTIFICATION: | Boston BioProducts, Inc.<br>425 Fortune Blvd. Milford, MA 01757          |
| <b>1.4</b> | EMERGENCY CONTACT:      | 1-800-535-5053                                                           |
|            | TOLL FREE NUMBER:       | 1-888-881-8691                                                           |

### **SECTION 2 - HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**  
**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

H301	Acute toxicity	Category 3
H302	Acute toxicity, Oral	Category 4
H315	Skin irritation	Category 2
H318	Serious eye damage	Category 1
H319	Eye irritation	Category 2A

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



**Signal word:** Danger

**Hazard statement(s):** Hazardous

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.

**Precautionary statements:**

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.



P301 + P310 + P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

**Composition:** 100 mM Sodium Fluoride, 50 mM Sodium Pyrophosphate Decahydrate, 50 mM Sodium Orthovanadate, 100 mM  $\beta$ -Glycerophosphate, Disodium Salt, Pentahydrate

<b>Component</b>	<b>CAS Number</b>	<b>Concentration</b>
Sodium Fluoride	7681-49-4	0.49%
Sodium Pyrophosphate Decahydrate	13472-36-1	2.68%
Sodium Orthovanadate	13721-39-6	0.92%
Beta-Glycerophosphate, Disodium Salt, Pentahydrate	13408-09-8	3.06%
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.

- i. If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. 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.
- iii. In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. 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:** No Data Available.

**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:** No data available

## **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 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.

### **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>	No Data Available
<b>Odor</b>	No Data Available	<b>Vapor Density</b>	No Data Available
<b>Odor Threshold</b>	No Data Available	<b>Relative Density</b>	No Data Available
<b>pH</b>	No Data Available	<b>Water Solubility</b>	No Data Available
<b>Melting/Freezing Point</b>	No Data Available	<b>Partition Coefficient</b>	No Data Available
<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:** No Data Available.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Acute Toxicity:** No Data Available.

**Sodium Fluoride**

<b>Acute toxicity</b>	<b>Skin corrosion/irritation</b>	<b>Respiratory or skin sensitization</b>	<b>Germ cell mutagenicity</b>
LD50 Oral - Rat - male and female - 148.5 mg/kg (US-EPA) Remarks: (ECHA) Inhalation: No data available Dermal: No data available	Remarks: Irritating to skin. Serious eye damage/eye irritation Eyes - Rabbit Result: Eye irritation - 24 h Remarks: Moderate eye irritation	Buehler Test - Guinea pig Result: negative Remarks: (ECHA)	Test Type: Mutagenicity (mammal cell test): Metabolic activation: without metabolic activation Result: negative Remarks: (ECHA) Test Type: Ames test Test system: Salmonella typhimurium Metabolic activation: with and without metabolic activation Result: negative Remarks: (ECHA)  Test Type: Genotoxicity in vivo Species: Mouse  Application Route: Oral  Result: negative



**Sodium Pyrophosphate Decahydrate**

<b>Acute toxicity</b>	<b>Skin corrosion/irritation</b>	<b>Serious eye damage/eye irritation</b>	<b>Germ cell mutagenicity</b>
<p>LD50 Oral - Rat - female - &gt; 300 - &lt; 2,000 mg/kg (OECD Test Guideline 420) Remarks: The value is given in analogy to the following substances: tetrasodium diphosphate LC50 Inhalation - Rat - male and female - 4 h - &gt; 0.58 mg/l - dust/mist  (OECD Test Guideline 403) Remarks: (highest concentration to be prepared) The value is given in analogy to the following substances: Disodium pyrophosphate LD50 Dermal - Rabbit - male and female - &gt; 2,000 mg/kg (US-EPA) Remarks: The value is given in analogy to the following substances: tetrasodium Diphosphate</p>	<p>Skin - Rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404) Remarks: The value is given in analogy to the following substances: tetrasodium Diphosphate</p>	<p>Eyes - Rabbit Result: Irreversible effects on the eye - 4 h (OECD Test Guideline 405) Remarks: The value is given in analogy to the following substances: tetrasodium Diphosphate</p>	<p>Test Type: gene mutation test Test system: Mouse lymphoma test Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 490 Result: negative Remarks: The value is given in analogy to the following substances: tetrasodium diphosphate Test Type: Micronucleus test Test system: lymphocyte Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 487 Result: negative Remarks: The value is given in analogy to the following substances: tetrasodium Diphosphate</p>

**SECTION 12 - ECOLOGICAL INFORMATION**

**Ecotoxicity:**

**Sodium Fluoride**

<b>Toxicity to Fish</b>	<b>Toxicity to daphnia and other aquatic invertebrates</b>	<b>Toxicity to algae</b>	<b>Toxicity to bacteria</b>
<p>mortality NOEC - Cyprinodon variegatus (sheepshead minnow) - 500 mg/l - 96 h LC50 - Gambusia affinis (Mosquito fish) - 925 mg/l - 96 h Remarks: (IUCLID) LC50 - Oncorhynchus mykiss (rainbow trout) - 200 mg/l - 96 h</p>	<p>EC50 - Daphnia magna (Water flea) - 338 mg/l - 48 h Remarks: (IUCLID)</p>	<p>IC50 - Desmodesmus subspicatus (green algae) - 850 mg/l - 72 h Remarks: (IUCLID)</p>	<p>EC0 - Pseudomonas putida - 231 mg/l - 16 h Remarks: (referred to the anion) (maximum permissible toxic concentration) (IUCLID)  EC50 - activated sludge - 2,930 mg/l - 3 h (ISO 8192) Remarks: (IUCLID)</p>



**Sodium Pyrophosphate Decahydrate**

Toxicity to Fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae	Toxicity to bacteria
semi-static test LC50 - Oncorhynchus mykiss (rainbow trout) - > 100 mg/l - 96 h (OECD Test Guideline 203) Remarks: The value is given in analogy to the following substances: tetrasodium diphosphate	static test EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (US-EPA) Remarks: The value is given in analogy to the following substances: Tetrapotassium diphosphate	static test ErC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: tetrasodium diphosphate  static test NOEC - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201) Remarks: The value is given in analogy to the following substances: tetrasodium diphosphate	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209) Remarks: The value is given in analogy to the following substances: dipotassium hydrogen phosphate

**Persistence and degradability/Bioaccumulative potential/ Mobility in soil:** No data available

**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**

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**

**USA Federal Regulation**

**SARA 313/SARA 311/312 HAZARDOUS CATEGORIZATION:** Not Applicable

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

**Clean Air Act:** Not Applicable

**TSCA 12(b)/ OSHA/ CERCLA:** Not Applicable

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.



**Boston BioProducts, Inc**

425 Fortune Blvd.

Milford, MA 01757

**STATE RIGHT TO KNOW**

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

**HMIS Rating**

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
3		0	0

**NFPA Rating**

Health Hazard	Fire Hazard	Reactivity Hazard
3	0	0

**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: 2024**