



Boston BioProducts, Inc

425 Fortune Blvd.

Milford, MA 01757

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

- 1.1** PRODUCT NAME: Phosphate Inhibitor Cocktail (100x, For Animal Tissue and Cell Extracts)
CATALOG #: BP-480
- 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 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

H225	Flammable liquids	Category 2
H301	Acute toxicity, oral	Category 3
H315	Skin corrosion/irritation	Category 2
H319	Serious eye damage/eye irritation	Category 3
H336	Specific target organ toxicity, single exposure; Narcotic effects	Category 3

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



Signal word: Danger

Hazard statement(s):

H225	Highly Flammable liquid and vapour.
H301	Toxic if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statement(s):

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: Mixture of 100 mM Sodium Fluoride, 50 mM Sodium Pyrophosphate Decahydrate, 50 mM Sodium Orthovanadate, 100 mM Sodium beta-Glycerophosphate Pentahydrate

Component	CAS Number	Concentration
Sodium Fluoride	7681-49-4	0.42%
Sodium Pyrophosphate Decahydrate	13472-36-1	2.23%
Sodium Orthovanadate	13721-39-6	0.92%
Sodium beta-Glycerophosphate 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.



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v. **Control of environmental exposure:** Do not let product enter drains

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, Colorless Liquid	Vapor Pressure	No Data Available
Odor	No Data Available	Vapor Density	No Data Available
Odor Threshold	No Data Available	Relative Density	No Data Available
pH	No Data Available	Water Solubility	No Data Available
Melting/Freezing Point	No Data Available	Partition Coefficient	No Data Available
Initial Boiling Point Range	No Data Available	Auto-Ignition Temperature	No Data Available
Flash Point	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity	No Data Available
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available
Upper/Lower Flammability or Explosive Limits	No Data Available	Oxidizing Properties	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

Acute toxicity	Skin corrosion/irritation	Respiratory or skin sensitization	Germ cell mutagenicity
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



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Sodium Pyrophosphate Decahydrate

Acute toxicity	Skin corrosion/irritation	Serious eye damage/eye irritation	Germ cell mutagenicity
<p>LD50 Oral - Rat - female - > 300 - < 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 - > 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 - > 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

Toxicity to Fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to algae	Toxicity to bacteria
<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>



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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.

STATE RIGHT TO KNOW

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

HMIS Rating



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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: 2025