DESERT BIOLOGICALS
Material Safety Data Sheet
Aprotinin Freeze Dried Powder

SECTION 1: IDENTITY

Product Name: Aprotinin

CAS Number: 9087-70-1

Physical State: Solid. (Freeze dried powder.)

Synonym: Atagosan; Antikrein; Antilysin(e); Basic Pancreatic trypsin Inhibitor (BPTI); Trasylol, Zymofren

Emergency Contact Number: CHEMTREC 1-800-424-9300 (USA)
1-703-527-3887 (outside USA)

SECTION 2: HAZARDS

Emergency Overview, Handle with Caution: May cause eye and skin irritation. May cause respiratory and digestive tract irritation. May cause adverse reproductive effects based upon animal studies.

Eyes: May cause eye irritation.

Skin: May cause skin irritation. May cause erythema (redness) and oedema (fluid build-up) with crusting and scaling.

Inhalation: May cause respiratory tract irritation. Inhalation of high concentrations may cause bronchospasm.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea

OSHA/HCS Status: While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

SECTION 3: FIRST AID

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical aid.

Skin Contact: Wash skin immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If skin irritation persists, get medical aid.

Inhalation: Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Ingestion: Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if symptoms occur. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of First Aiders: No action shall be taken involving any personal risk or without suitable training.

SECTION 4: FIREFIGHTING MEASURES

Extinguishing: Use dry chemical, CO2, water spray, or appropriate foam.

Special Protective Equipment: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Special Exposure Hazards: No specific hazard.

SECTION 5: ACCIDENTIAL RELEASE MEASURES

Personal Precautions: Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment.

Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods For Cleaning Up: If emergency personnel are unavailable, vacuum or carefully scoop up spilled material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

SECTION 6: HANDLING & STORAGE

Handling: Wash thoroughly after handling.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

SECTION 7: EXPOSURE CONTROLS/ PERSONAL PROTECTION

Please consult local authorities for acceptable exposure limits.

Engineering Measures: No special ventilation requirements. Good general ventilation should be sufficient to control airborne levels. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal Protection Respiratory: Use a properly fitted, paniculate filter respirator complying with an approved standard
if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Skin: 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.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 8: PHYSICAL & CHEMICAL PROPERTIES

Component: Not available

Physical State: Solid. (Freeze dried powder)

Molecular Weight: 6511 g/mole

Color: White / Off-white.

SECTION 9: STABILITY & REACTIVITY

Stability and Reactivity: The product is stable.

SECTION 10: LEXICOLOGICAL INFORMATION

Other Toxic Effects on Humans: No specific information is available in our database regarding the other toxic effects of this materials on humans.

Specific Effects

Carcinogenic effects: No known significant effects or critical hazards.
Mutagenic effects: No known significant effects or critical hazards.
Teratogenicity: No known significant effects or critical hazards
Reproductive toxicity: Adverse reproductive effects have occurred in experimental animals.

Sensitization

Ingestion: No known significant effects or critical hazards.
Inhalation: No known significant effects or critical hazards.
Eyes: No known significant effects or critical hazards.
Skin : No known significant effects or critical hazards.

SECTION 11: ECOLOGICAL INFORMATION

Environmental Precautions: No known significant effects or critical hazards.

SECTION 12: DISPOSAL CONSIDERATIONS

Waste Disposal: The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been

used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 6: HANDLING AND STORAGE and Section 7: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

SECTION 13: TRANSPORT INFORMATION

	UN Number	Proper Shipping Name	Class
DOT Classification:	N/A	N/A	N/A
TDG Classification:	N/A	N/A	N/A
ADR/RID Class:	N/A	N/A	N/A
IATA-DGR Class:	N/A	N/A	N/A

SECTION 14: REGULATORY INFORMATION

United States-

HCS Classification: Not regulated.

U.S Federal Regulations: TSCA: No products were found.
SARA 302/304/311/312 extremely hazardous substances: Not found.
SARA 302/304 emergency planning and notification: Not found.
SARA 302/304/311/312 hazardous chemicals: Not found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Not found.
Clean Water Act (CWA) 307: Not found.
Clean Water Act (CWA) 311: Not found.
Clean Air Act (CAA) 112 accidental release prevention: Not found.
Clean Air Act (CAA) 112 regulated flammable substances: Not found.
Clean Air Act (CAA) 112 regulated toxic substances: Not found.

State Regulations: Not found.

Canada-

WHMIS: Not controlled under WHMIS (Canada).
EU Regulations: This product is not classified according to EU legislation

SECTION 16: OTHER INFORMATION

TSE/BSE Status: Bovine Aprotinin produced by Cardinal Bioscience Ltd originates in New Zealand which is a geographical area considered by the European Committee of Experts on TSE's to contain cattle that are highly unlikely to have been exposed to TSE's and given a CNR rating of 1 which is the lowest TSE risk status.

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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