1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING
1.1 Product Identifiers
   Product Name: Recombinant Human Cathepsin L Protein, CF
   Catalog Number: 952-CY
1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified Uses: For Research Use Only
1.3 Details of the supplier of the safety data sheet
   Company: R&D Systems, Inc. a Bio-Techne Brand
   614 McKinley Place NE
   Minneapolis, MN 55413, USA
   Telephone: 1-800-343-7475
   Fax: 1-612-656-4400
   Internet: www.rndsystems.com
   Email address: info@bio-techne.com
   Canada: 461 North Service Rd West
   Unit B37
   Oakville, ON L6M 2V5
   Telephone: 1-855-668-8722
   Fax: 902-827-6402
   Email address: Canada.inquiries@bio-techne.com
   United Kingdom: 19 Barton Lane
   Abingdon Science Park
   Abingdon, OX14 3NB
   Telephone: 44 (0)1235 529449
   Fax: 44 (0)1235 533420
   Email address: info.emea@bio-techne.com
1.4 Emergency Telephone Number
   Emergency Tel: US: 612-379-2956 or 800-343-7475 / Europe: +44(0)1235-529449

2. HAZARDS IDENTIFICATION
2.1 Classification of the substance or mixture
   This substance does not meet the classification criteria of the EC Directives 67/548/EEC, 1999/45/EC, 1272/2008 [CLP], GHS or 29 CFR 1910.1200 [OSHA].
2.2 Label Elements
   The product does not need to be labelled in accordance with EC directives or respective national laws.
2.3 Other Hazards - None

3. COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substances
   Not applicable.
3.2 Mixtures
   This product does not contain hazardous chemicals at concentrations of 1% or greater. This product is not known to contain carcinogens at concentrations of 0.1% or greater.

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.

5. FIRE-FIGHTING MEASURES
5.1 Extinguishing Media
**ACCIDENTAL RELEASE MEASURES**

**5.2 Special hazards arising from the substance or mixture**

In combustion, may emit toxic fumes.

**5.3 Precautions for fire-fighters**

Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**HANDLING AND STORAGE**

**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. Hold all material for appropriate disposal as described under section 13 of SDS.

**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**

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.

Personal Protective Equipment

Eye / Face Protection

Use appropriate safety glasses.

Skin Protection

Use appropriate chemical resistant gloves (minimum requirement use standard BS EN 374:2003). Gloves should be inspected before use. Wash and dry hands thoroughly after handling.

Body Protection

Wear appropriate protective clothing.

Respiratory Protection

If risk assessment indicates necessary, use a suitable respirator.

**PHYSICAL AND CHEMICAL PROPERTIES**

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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Lyophilized white powder or clear liquid</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Little to none</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Boiling Point / Range</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No data available.</td>
<td></td>
</tr>
<tr>
<td>Upper / Lower Flammability or Explosive Limits</td>
<td>No data available.</td>
<td></td>
</tr>
</tbody>
</table>

**9.2 Other safety information**
10. **STABILITY AND REACTIVITY**

**10.1 Reactivity**
Stable under recommended transport or storage conditions.

**10.2 Chemical stability**
Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions**
Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

**10.4 Conditions to avoid**
Heat, moisture.

**10.5 Incompatible materials**
Strong acids/alkalis, strong oxidising/reducing agents.

**10.6 Hazardous decomposition products**
Strong acids/alkalis, strong oxidising/reducing agents.

11. **TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

**Acute Toxicity**
Classified based on available data

**Skin Corrosion / Irritation**
Classified based on available data

**Serious Eye Damage / Irritation**
Classified based on available data

**Respiratory or Skin Sensitization**
Classified based on available data

**Germ Cell Mutagenicity**
Classified based on available data

**Carcinogenicity**
Classified based on available data

**Reproductive Toxicity**
Classified based on available data

**Specific Target Organ Toxicity - Single Exposure**
Classified based on available data

**Specific Target Organ Toxicity - Repeated Exposure**
Classified based on available data

**Aspiration Hazard**
Classified based on available data

**Symptoms / Routes of Exposure**

- **Inhalation:** There may be irritation of the throat with a feeling of tightness in the chest.
- **Ingestion:** There may be irritation of the throat.
- **Skin:** There may be mild irritation at the site of contact.
- **Eyes:** There may be irritation and redness.
- **Delayed / Immediate Effects:** No known symptoms.

**Additional Information**
Classified based on available data

12. **ECOLOGICAL INFORMATION**

**12.1 Toxicity**
No data available.

**12.2 Persistence and degradability**
No data available.

**12.3 Bioaccumulative potential**
No data available.

**12.4 Mobility in soil**
No data available.
12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
Product
Transfer to a suitable container and arrange for collection by specialized disposal company in accordance with national, regional, or local legislation.

Contaminated Packaging
Dispose of in a regulated landfill site or other method for hazardous or toxic wastes in accordance with national, regional, or local legislation.

14. TRANSPORT INFORMATION

Classified according to the criteria of the UN Model Regulations as reflected in the IMDG Code, ADR, RID, DOT and IATA.

14.1 UN-Number
Does not meet the criteria for classification as hazardous for transport.

14.2 UN proper shipping name
Does not meet the criteria for classification as hazardous for transport.

14.3 Transport hazard class(es)
Does not meet the criteria for classification as hazardous for transport.

14.4 Packaging group
Does not meet the criteria for classification as hazardous for transport.

14.5 Environmental hazards
Does not meet the criteria for classification as hazardous for transport.

14.6 Special precautions for users
Does not meet the criteria for classification as hazardous for transport.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 453/2010.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
TSCA (Toxic Substances Control Act) : Not applicable.
SARA 313 : Not applicable.
SARA 311/312 : Not applicable.
CERCLA Reportable Quantity : Not applicable.
California Proposition 65 :

15.2 Chemical safety assessment
A Chemical Safety Assessment has not been made for this product.

16. OTHER INFORMATION

Further Information
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This company shall not be held liable for any damage resulting from handling or from contact with the above product. This material must only be handled by suitably qualified experienced scientists in appropriately equipped and authorized facilities. The above information is believed to be correct but does not purport to be all inclusive and should be used as a guide only for experienced personnel. Always consult your safety advisor and follow appropriate local and national safety legislature. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists.

End of safety data sheet