Conforms to HPR 2015

SAFETY DATA SHEET

Agilent Technologies

Complex Proteomics Standard, Part Number 400510

Section 1. Identification

Product identifier : Complex Proteomics Standard, Part Number 400510

Part no. (chemical kit) : 400510

Part no. : Proteomics Grade Trypsin 204310-51
Pfu Protein Extract Proteomics Standard 400510-51

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Analytical reagent.
Proteomics Grade Trypsin 2 x 0.1 mg
Pfu Protein Extract Proteomics Standard 0.5 mg

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazard identification

Classification of the substance or mixture

Proteomics Grade Trypsin

	COMBUSTIBLE DUSTS - Category 1
H315	SKIN IRRITATION - Category 2
H319	EYE IRRITATION - Category 2A
H334	RESPIRATORY SENSITIZATION - Category 1
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

GHS label elements

Hazard pictograms : Proteomics Grade Trypsin

Signal word : Proteomics Grade Trypsin — Danger
Pfu Protein Extract Proteomics Standard — No signal word.

Hazard statements : Proteomics Grade Trypsin
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
May form combustible dust concentrations in air.

Pfu Protein Extract Proteomics Standard — No known significant effects or critical hazards.

Precautionary statements

Section 2. Hazard identification

Prevention	:	Proteomics Grade Trypsin	P280 - Wear protective gloves. Wear eye or face protection. P284 - Wear respiratory protection. P261 - Avoid breathing dust or mist. P264 - Wash thoroughly after handling.
		Pfu Protein Extract Proteomics Standard	Not applicable.
Response	:	Proteomics Grade Trypsin	P304 + P340, P312 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor. P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of 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. P337 + P313 - If eye irritation persists: Get medical advice or attention.
		Pfu Protein Extract Proteomics Standard	Not applicable.
Storage	:	Proteomics Grade Trypsin	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
		Pfu Protein Extract Proteomics Standard	Not applicable.
Disposal	:	Proteomics Grade Trypsin	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
		Pfu Protein Extract Proteomics Standard	Not applicable.
Supplemental label elements	:	Proteomics Grade Trypsin	Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.
		Pfu Protein Extract Proteomics Standard	None known.
Other hazards which do not result in classification	:	Proteomics Grade Trypsin	None known.
		Pfu Protein Extract Proteomics Standard	None known.

Section 3. Composition/information on ingredients

Substance/mixture	:	Proteomics Grade Trypsin	Substance
		Pfu Protein Extract Proteomics Standard	Mixture

Ingredient name	Synonyms	% (w/w)	CAS number
Proteomics Grade Trypsin			
Trypsin	Trypsin	100	9002-07-7

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First-aid measures

Description of necessary first aid measures

Eye contact	:	Proteomics Grade Trypsin	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
		Pfu Protein Extract Proteomics Standard	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	:	Proteomics Grade Trypsin	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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 necessary, call a poison center or physician. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.
		Pfu Protein Extract Proteomics Standard	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	:	Proteomics Grade Trypsin	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
		Pfu Protein Extract Proteomics Standard	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	:	Proteomics Grade Trypsin	Wash out mouth with water. Remove dentures if any. 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 adverse health effects persist or are severe. 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.
		Pfu Protein Extract Proteomics Standard	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce

Section 4. First-aid measures

vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact	:	Proteomics Grade Trypsin	Causes serious eye irritation.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Inhalation	:	Proteomics Grade Trypsin	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Skin contact	:	Proteomics Grade Trypsin	Causes skin irritation.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Ingestion	:	Proteomics Grade Trypsin	No known significant effects or critical hazards.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	

Over-exposure signs/symptoms

Eye contact	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: pain or irritation watering redness
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Inhalation	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Skin contact	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: irritation redness
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Ingestion	:	Proteomics Grade Trypsin	No specific data.
		Pfu Protein Extract	No specific data.
		Proteomics Standard	

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician	:	Proteomics Grade Trypsin	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Pfu Protein Extract	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
		Proteomics Standard	
Specific treatments	:	Proteomics Grade Trypsin	No specific treatment.
		Pfu Protein Extract	No specific treatment.
		Proteomics Standard	

Section 4. First-aid measures

Protection of first-aiders	:	Proteomics Grade Trypsin	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
		Pfu Protein Extract Proteomics Standard	No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	:	Proteomics Grade Trypsin	Use dry chemical powder.
		Pfu Protein Extract Proteomics Standard	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	:	Proteomics Grade Trypsin	Avoid high pressure media which could cause the formation of a potentially explosible dust-air mixture.
		Pfu Protein Extract Proteomics Standard	None known.
Specific hazards arising from the chemical	:	Proteomics Grade Trypsin	May form explosible dust-air mixture if dispersed.
		Pfu Protein Extract Proteomics Standard	No specific fire or explosion hazard.
Hazardous thermal decomposition products	:	Proteomics Grade Trypsin	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides phosphorus oxides
		Pfu Protein Extract Proteomics Standard	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides sulfur oxides phosphorus oxides
Special protective actions for fire-fighters	:	Proteomics Grade Trypsin	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
		Pfu Protein Extract Proteomics Standard	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Special protective equipment for fire-fighters	:	Proteomics Grade Trypsin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
		Pfu Protein Extract Proteomics Standard	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	:	Proteomics Grade Trypsin	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
		Pfu Protein Extract Proteomics Standard	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment.
For emergency responders	:	Proteomics Grade Trypsin	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
		Pfu Protein Extract Proteomics Standard	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Proteomics Grade Trypsin	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
		Pfu Protein Extract Proteomics Standard	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Methods for cleaning up	:	Proteomics Grade Trypsin	Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
		Pfu Protein Extract Proteomics Standard	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Section 7. Handling and storage

Protective measures	:	Proteomics Grade Trypsin	Put on appropriate personal protective equipment (see Section 8). Persons with a history of asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.
		Pfu Protein Extract Proteomics Standard	Put on appropriate personal protective equipment (see Section 8).
Advice on general occupational hygiene	:	Proteomics Grade Trypsin	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
		Pfu Protein Extract Proteomics Standard	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	:	Proteomics Grade Trypsin	Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
		Pfu Protein Extract Proteomics Standard	Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened

Section 7. Handling and storage

must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Biological exposure indices

No exposure indices known.

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

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.

Eye/face protection : 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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : 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.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state :
Proteomics Grade Trypsin — Solid. [Crystals./ Powder.]
Pfu Protein Extract — Solid. [Enzyme.]
Proteomics Standard

Color :
Proteomics Grade Trypsin — Clear. Yellow.
Pfu Protein Extract — Not available.
Proteomics Standard

Odor :
Proteomics Grade Trypsin — Odorless.
Pfu Protein Extract — Not available.
Proteomics Standard

Odor threshold :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

pH :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

Melting point/freezing point :
Proteomics Grade Trypsin — 115°C (239°F)
Pfu Protein Extract — Not available.
Proteomics Standard

Boiling point, initial boiling point, and boiling range :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

Flash point :
Proteomics Grade Trypsin — Not applicable.
Pfu Protein Extract — Not applicable.
Proteomics Standard

Evaporation rate :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

Flammability :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

Lower and upper explosion limit/flammability limit :
Proteomics Grade Trypsin — Not applicable.
Pfu Protein Extract — Not applicable.
Proteomics Standard

Vapor pressure : Not available.

Relative vapor density :
Proteomics Grade Trypsin — Not applicable.
Pfu Protein Extract — Not applicable.
Proteomics Standard

Relative density :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not available.
Proteomics Standard

Solubility(ies) :

Media	Result
Proteomics Grade Trypsin	
water	Soluble
Pfu Protein Extract Proteomics Standard	
water	Soluble

Partition coefficient: n-octanol/water :
Proteomics Grade Trypsin — Not available.
Pfu Protein Extract — Not applicable.
Proteomics Standard

Section 9. Physical and chemical properties and safety characteristics

Auto-ignition temperature	:	Proteomics Grade Trypsin	Not applicable.
		Pfu Protein Extract	Not applicable.
		Proteomics Standard	
Decomposition temperature	:	Proteomics Grade Trypsin	Not available.
		Pfu Protein Extract	Not available.
		Proteomics Standard	
Viscosity	:	Proteomics Grade Trypsin	Not applicable.
		Pfu Protein Extract	Not applicable.
		Proteomics Standard	
Particle characteristics			
Median particle size	:	Proteomics Grade Trypsin	Not available.
		Pfu Protein Extract	Not available.
		Proteomics Standard	

Section 10. Stability and reactivity

Reactivity	:	Proteomics Grade Trypsin	No specific test data related to reactivity available for this product or its ingredients.
		Pfu Protein Extract	No specific test data related to reactivity available for this product or its ingredients.
		Proteomics Standard	
Chemical stability	:	Proteomics Grade Trypsin	The product is stable.
		Pfu Protein Extract	The product is stable.
		Proteomics Standard	
Possibility of hazardous reactions	:	Proteomics Grade Trypsin	Under normal conditions of storage and use, hazardous reactions will not occur.
		Pfu Protein Extract	Under normal conditions of storage and use, hazardous reactions will not occur.
		Proteomics Standard	
Conditions to avoid	:	Proteomics Grade Trypsin	Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Prevent dust accumulation.
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Incompatible materials	:	Proteomics Grade Trypsin	Reactive or incompatible with the following materials: oxidizing materials
		Pfu Protein Extract	May react or be incompatible with oxidizing materials.
		Proteomics Standard	
Hazardous decomposition products	:	Proteomics Grade Trypsin	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Pfu Protein Extract	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
		Proteomics Standard	

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Proteomics Grade Trypsin Trypsin	LD50 Oral	Rat	>5 g/kg	-

Irritation/Corrosion

Not available.

Conclusion/Summary

Skin : May cause skin sensitization.

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Proteomics Grade Trypsin Trypsin	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure :

Proteomics Grade Trypsin	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
Pfu Protein Extract Proteomics Standard	Not available.

Potential acute health effects

Eye contact :

Proteomics Grade Trypsin	Causes serious eye irritation.
Pfu Protein Extract Proteomics Standard	No known significant effects or critical hazards.

Inhalation :

Proteomics Grade Trypsin	May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Pfu Protein Extract Proteomics Standard	No known significant effects or critical hazards.

Skin contact :

Proteomics Grade Trypsin	Causes skin irritation.
Pfu Protein Extract Proteomics Standard	No known significant effects or critical hazards.

Section 11. Toxicological information

Ingestion	:	Proteomics Grade Trypsin	No known significant effects or critical hazards.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: pain or irritation watering redness
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Inhalation	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: respiratory tract irritation coughing wheezing and breathing difficulties asthma
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Skin contact	:	Proteomics Grade Trypsin	Adverse symptoms may include the following: irritation redness
		Pfu Protein Extract	No specific data.
		Proteomics Standard	
Ingestion	:	Proteomics Grade Trypsin	No specific data.
		Pfu Protein Extract	No specific data.
		Proteomics Standard	

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	:	Proteomics Grade Trypsin	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Carcinogenicity	:	Proteomics Grade Trypsin	No known significant effects or critical hazards.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Mutagenicity	:	Proteomics Grade Trypsin	No known significant effects or critical hazards.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	
Reproductive toxicity	:	Proteomics Grade Trypsin	No known significant effects or critical hazards.
		Pfu Protein Extract	No known significant effects or critical hazards.
		Proteomics Standard	

Numerical measures of toxicity

Section 11. Toxicological information

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Not available.

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Proteomics Grade Trypsin Trypsin	OECD 301B Ready Biodegradability - CO_2 Evolution Test	100 % - Readily - 29 days	-	Activated sludge

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

TDG / IMDG / IATA : Not regulated.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

Canadian lists

Canadian NPRI : None of the components are listed.

CEPA Toxic substances : None of the components are listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Canada : Not determined.

United States : Not determined.

Section 16. Other information

History

Date of issue/Date of revision : 10/31/2023

Date of previous issue : 09/03/2020

Version : 6

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
HPR = Hazardous Products Regulations
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
UN = United Nations

Procedure used to derive the classification

Classification	Justification
Proteomics Grade Trypsin	
COMBUSTIBLE DUSTS - Category 1	On basis of test data
SKIN IRRITATION - Category 2	Expert judgment
EYE IRRITATION - Category 2A	Expert judgment
RESPIRATORY SENSITIZATION - Category 1	Expert judgment
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Expert judgment

Indicates information that has changed from previously issued version.

Notice to reader

Section 16. Other information

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.