

Material Safety Data Sheet

Product Name: CHLOROTOXIN

Catalog No.: AF3175

Batch No.: AF02

CAS Number: 163515-35-3

PHYSICAL AND CHEMICAL PROPERTIES

Chemical Name: CLTX; CLTX (EGYPTIAN SCORPION); H-MET-CYS-MET-PRO-CYS-PHE-THR-THR-ASP-HIS-GLN-MET-ALA-ARG-LYS-CYS-ASP-ASP-CYS-CYS-GLY-GLY-LYS-GLY-ARG-GLY-LYS-CYS-TYR-GLY-PRO-GLN-CYS-LEU-CYS-ARG-NH₂; H-MET-CYS-MET-PRO-CYS-PHE-THR-THR-ASP-HIS-GLN-MET-ALA-ARG-LYS-CYS-ASP-ASP-CYS-CYS-GLY-GLY-LYS-GLY-ARG-GLY-LYS-CYS-TYR-GLY-PRO-GLN-CYS-LEU-CYS-ARG-NH₂, (DISULFIDE BONDS BETWEEN CYS2 AND CYS19/CYS5 AND CYS28/CYS16 AND CYS33/CYS20 AND CYS35); H-MET-CYS-MET-PRO-CYS-PHE-THR-THR-ASP-HIS-GLN-MET-ALA-ARG-LYS-CYS-ASP-ASP-CYS-CYS-GLY-GLY-LYS-GLY-ARG-GLY-LYS-CYS-TYR-GLY-PRO-GLN-CYS-LEU-CYS-ARG-OH; MET-CYS-MET-PRO-CYS-PHE-THR-THR-ASP-HIS-GLN-MET-ALA-ARG-LYS-CYS-ASP-ASP-CYS-CYS-GLY-GLY-LYS-GLY-ARG-GLY-LYS-CYS-TYR-GLY-PRO-GLN-CYS-LEU-CYS-ARG-NH₂; CHLOROTOXIN, RECOMBINANT, EXPRESSED

Batch Molecular Formula: C₁₅₈H₂₅₆N₅₂O₄₈S₁₁

Batch Molecular Weight: 3,997 Da.

Solubility: Water and saline.

Biological Description: CHLOROTOXIN is a blocker of small-conductance Cl⁻ channels derived from epithelial cells when applied to the cytoplasmic surface. 36-amino acid peptide with 4 disulfide bridges, from *Leiurus quinquestriatus* scorpion venom.

Batch Molecular Structure:

Met-Cys-Met-Pro-Cys-Phe-Thr-Thr-Asp-His-
Gln-Met-Ala-Arg-Lys-Cys-Asp-Asp-Cys-Cys-
Gly-Gly-Lys-Gly-Arg-Gly-Lys-Cys-Tyr-Gly-Pro-
Gln-Cys-Leu-Cys-Arg

CAUTION:

For Research Use Only

Not For Human Use or Veterinary Use or Therapeutic Use

Not fully tested

HAZARDS IDENTIFICATION

Very Toxic

Harmful in contact with skin.

Harmful in contact with Eye/face.

Harmful if swallowed.

Very toxic to aquatic organisms.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

FIRST AID MEASURES

In all cases of exposure, obtain medical advice immediately.

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.

If inhaled

Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.

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.

Indication of immediate medical attention and special treatment needed

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

FIRE FIGHTING MEASURES

Extinguishing Media:

Material is non-combustible. Use extinguishing media appropriate to surrounding fire conditions.

Special Firefighting Procedures:

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

Unusual fire and explosive hazards: May emit toxic gases upon thermal decomposition.

ACCIDENTAL RELEASE MEASURES

Evacuate area. Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves. Wear disposable overalls and discard them after use. Cover material with dry lime or soda ash. Sweep up and place in an appropriate container. Avoid raising dust. Hold for appropriate disposal. Decontaminate spill site with 10% caustic solution and ventilate area after pick-up is complete.

HANDLING AND STORAGE

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above -20°C (-4°F).

Handling: Keep away from heat. Keep away from source of ignition. Empty containers pose a fire risk, evaporate the residue under a fume hood. Avoid contact with skin. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label.

EXPOSURE CONTROLS / PERSONAL PROTECTION

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.

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

Physical state: Solid

Density: Not available.

Flash point: Not available.

Explosive properties: Not available.

Solubility: Easily soluble in water.

STABILITY AND REACTIVITY

Stability: Stable under normal handling conditions.

Conditions to Avoid: Do not shake or vortex.

Hazardous Combustion or Decomposition Products: May emit toxic gases such as carbon dioxide, carbon monoxide and nitrogen oxides upon thermal decomposition.



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TOXICOLOGICAL INFORMATION

Harmful if inhaled, swallowed or absorbed through skin .To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

ECOLOGICAL INFORMATION

Data not yet available.

DISPOSAL CONSIDERATIONS

Methods of disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

REGULATORY INFORMATION

European information.

OTHER INFORMATION

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 local and national safety legislation. The absence of warning may not, under any circumstances, be taken to mean that no hazard exists.

LAST UPDATED: February, 2013