

MATERIAL SAFETY DATA SHEET

NRC CRM-GTX1&4-c

SECTION I

PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Certified Reference Materials Program
National Research Council Canada
Institute for Marine Biosciences
1411 Oxford Street
Halifax, Nova Scotia
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EMERGENCY TELEPHONE: (902) 426-8281

PRODUCT NAME: Epimerized solution of Gonyautoxin 1 hydrochloride and
Gonyautoxin 4 hydrochloride in dilute hydrochloric acid

TRADE NAME: NRC-CRM-GTX1&4-c

PRODUCT USE: For laboratory use only

SECTION II

HAZARDOUS INGREDIENTS

<u>CHEMICAL NAME</u>	<u>CAS NO.</u>	<u>CONCENTRATION</u>
Hydrochloric Acid	7647-01-0	0.003M
Acetic Acid	00064-19-7	0.01M
Gonyautoxin 1 hydrochloride	60748-39-2 (free base)	60.4 µmoles/L
Gonyautoxin 4 hydrochloride	64296-26-0 (free base)	19.7 µmoles/L

SECTION III

PHYSICAL DATA

Physical State: Liquid

Appearance and Odour: Clear, colourless liquid with no odour

Specific Gravity: 1.0

Vapour Pressure: Not determined

Vapour Density: Not determined

Evaporation Rate: Not determined

Boiling Point: Not determined

Freezing Point: Not determined

pH: 2.6

Coefficient of Oil/Water Distribution: Not determined



SECTION IV

FIRE AND EXPLOSION HAZARDS

Conditions of Flammability:	Not flammable
Flash Point:	Not applicable
Extinguishing Media:	Use extinguishing media appropriate for surrounding fire: water, carbon dioxide or foam
Hazardous Combustion Products:	Not applicable
Explosion Data:	Not applicable

SECTION V

REACTIVITY DATA

Stability:	Stable under conditions of use and storage.
Incompatibilities:	Most metals, metal oxides, alkali, cyanides, sulfides, sulfites, formaldehydes, amines, strong oxidizers.
Hazardous Decomposition Products:	Hazardous polymerization will not occur. Carbon dioxide and carbon monoxide may form when heated to decomposition. Fumes from hydrogen chloride and hydrogen in contact with metals, chlorine from oxidizers; toxic and irritating vapours

SECTION VI

TOXICOLOGICAL PROPERTIES

The health hazards given for hydrochloric acid and acetic acid in this data sheet applies to concentrated solutions. The hazards of dilute solutions may be reduced. The degree of hazard for reduced concentrations is not currently available in the literature.

Route of Entry:

• Skin Contact:	Toxic and corrosive
• Skin Absorption:	Toxic and corrosive
• Eye Contact	Toxic and corrosive
• Inhalation	Toxic and corrosive
• Ingestion	Toxic and corrosive

LD₅₀:

10.6 µg/kg (i.p., mouse) (GTX 1)
13.8 µg/kg (i.p., mouse) (GTX 4)
900 mg/kg (oral, rat) (hydrochloric acid)
3310 mg/kg (oral, rat) (acetic acid)

Acute Exposure

Contact with hydrochloric acid causes corrosive eye and skin damage resulting in redness, pain and severe skin burns. Inhalation of vapors can cause immediate pain and burns of the nose, throat and upper respiratory tract. Ingestion can cause immediate pain and burns to the mouth, throat, esophagus and gastrointestinal tract.

Contact with acetic acid causes irritation of the respiratory system, liquid may cause eye and skin damage; ingestion may cause burning, nausea, vomiting.



SECTION VI

TOXICOLOGICAL PROPERTIES (Cont'd)

Ingestion of gonyautoxins such as Gonyautoxin 1 hydrochloride and Gonyautoxin 4 hydrochloride causes paresthesia (numbness), paralysis, and in extreme cases, respiratory arrest.

Chronic Exposure:

Hydrochloric Acid. Possible erosion of teeth. Persons with pre-existing medical conditions such as eye or skin problems or chronic respiratory disease may be more susceptible to the effects of concentrated hydrochloric acid.

Acetic Acid. Eye, lung and skin damage.

No information is available on the long-term exposure to Gonyautoxin 1 hydrochloride or Gonyautoxin 4 hydrochloride.

Carcinogenicity/Teratogenicity/
Mutagenicity/Reproductive Toxicity:

No information available. The toxicological properties of the paralytic shellfish toxins such as Gonyautoxin 1 hydrochloride and Gonyautoxin 4 hydrochloride have not been thoroughly investigated.

SECTION VII

FIRST AID MEASURES

Skin:

Drench affected skin with water.
Remove all clothing and place it in the open air (wash before reuse).
Obtain medical attention.

Eye:

Irrigate thoroughly with water for at least 15 minutes.
Obtain medical attention.

Inhalation:

Remove to fresh air. Obtain medical attention.

Ingestion:

Give large amounts of water and induce vomiting if person is conscious.
Obtain medical attention.

SECTION VIII

PREVENTATIVE MEASURES

Personal Protective Equipment:
Storage Requirements:

Gloves, safety goggles, plastic apron, sleeves and boots as appropriate.
Store in the dark in a fridge (+4°C)
Solutions are also stable when stored in a reliable, non-defrosting freezer (preferably <-20°C).

Handling Procedures and Equipment:

Avoid contact with eyes, skin and clothing.
Avoid inhalation of vapours.
Avoid prolonged or repeated exposure.
Wash hands thoroughly after handling.

Leak or Spill Clean-up:

Wipe with plenty of water and run to waste, diluting greatly with running water. Otherwise absorb on inert absorbent and transport to safe open area for atmospheric evaporation.



SECTION IX

PREPARATION INFORMATION

Prepared by:

Certified Reference Materials Program
National Research Council Canada
Institute for Marine Biosciences
Halifax, Nova Scotia
Canada

Date:

October 2008

This material is for research and experimental applications only. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by technically qualified individuals with experience in the handling of potentially hazardous chemicals. The hazardous components are present in such low quantities that exact determination of degree of hazard is not warranted and would be misleading.

The above information is correct to the best of our knowledge. We do not purport that the information is all conclusive but merely serves as a guide. We shall not be held liable for any damage resulting from handling or from contact with the above product.

