MATERIAL SAFETY DATA SHEET

NRC CRM-AZA1

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 B3H 3Z1
TELEPHONE:	(902) 426-8281/51

FOR EMERGENCIES Call CANUTEC's 24-hr Number: (613) 996-6666

PRODUCT NAME:	Azaspiracid-1 in methanol
TRADE NAME:	NRC-CRM-AZA1
PRODUCT USE:	For laboratory use only

IATA Classification: Dangerous Goods in Excepted Quantities, UN Code 1230 Toxic Liquid, organic, n.o.s.* (Methanol)

SECTION II — HAZARDOUS INGREDIENTS

CHEMICAL NAME	CAS NO.	CONCENTRATION
Methanol	67-56-1	neat (+ 99% pure), 0.5 mL/ampoule
Azaspiracid-1	214899-21-5	1.5 µmol/L

SECTION III — PHYSICAL DATA

Physical State:	liquid
Appearance and Odour:	clear, colourless liquid with slight alcoholic odour
Specific Gravity:	0.791 g/mL
Vapour Pressure:	not determined
Vapour Density:	not determine
Evaporation Rate:	not determined
Boiling Point:	not determined
Freezing Point:	not determined
pH:	not determined
Coefficient of Oil/Water Distribution:	Not determined

SECTION IV FIRE AND EXPLOSION HAZARDS

Conditions of Flammability:	Flammable
Flash Point:	11°C
Extinguishing Media:	Compatible with foam, dry powder, carbon dioxide, water spray
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide
Explosion Data:	Vapours may flow along surfaces to distant ignition sources and flash back. Closed containers exposed to heat may explode. Contact with strong oxidizers may cause fire. Burns with a clear, almost invisible flame

SECTION V REACTIVITY DATA

Stability:	Stable under conditions of use and storage.
Incompatibilities:	Protect from moisture, acids, acid chlorides, acid anhydrides, oxidizing agents, alkali metals , reducing agents.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide

SECTION VI TOXICOLOGICAL PROPERTIES

The health hazards given for methanol and AZA1 in this data sheet applies to concentrated solutions. The hazards of dilute solutions may be reduced.

• Route of Entry:	
• Skin Contact:	Toxic and Irritates
• Skin Absorption:	Toxic
• Eye Contact	Toxic and Irritates
• Inhalation	Toxic and Irritates
• Ingestion	Toxic
LD_{50}:	5628 mg/kg (oral, rat) (methanol) TLV/TWA 260 mg/m^3 (200 ppm) for methanol 500-600 µg/kg (p.o., mouse) (AZA1)
LD_{100}:	8.0g/kg (i.p., mice) (methanol) 200µg/kg (i.p., mice) (AZA1)
Acute Exposure:	Inhalation and ingestion of methanol is harmful. May cause skin and eye irritation. Ingestion of methanol may cause blindness or fatality. Ingestion can cause nausea, headache and vomiting., dizziness, weakness, confusion and drowsiness. Azaspiracid-1 is toxic when ingested. Intoxication symptoms include nausea, vomiting, stomach cramps, diarrhea and headache.

SECTION VI TOXICOLOGICAL PROPERTIES (Cont'd)

Chronic Exposure:

Prolonged skin contact with methanol may result in dermatitis and/or kidney damage.
Azaspiracid-1 has shown to cause multiple organ damage through long-term exposure in mice. Results of this can be fatty changes in liver tissue, lung edema, and can cause necrosis in parts of the small intestine and lymphoid tissues. Damage to B and T lymphocytes was also observed.

Carcinogenicity/Teratogenicity/ Mutagenicity/Reproductive Toxicity:

The toxicological properties of azaspiracid-1 are under study. Preliminary studies suggest that the toxin is potentially carcinogenic and can act as a tumor promoter. Azaspiracid-1 has been shown to be highly teratogenic to finfish.

SECTION VII FIRST AID MEASURES

Skin:

Drench affected skin with water for at least 15 minutes.
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 or ventilated area. Obtain medical attention.

Ingestion:

Wash out mouth with water provided person is conscious. Obtain medical attention

SECTION VIII PREVENTATIVE MEASURES

Personal Protective Equipment:

Protective clothing; gloves, safety goggles and laboratory coat.

Storage Requirements:

Store in the dark in a freezer (preferably <-15^{o}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
902-426-8281/8251

Date: May 2009

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.