

BIO-38032

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TRIsure
Safety Data Sheet



A Meridian Life Science® Company

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : TRIsure Reagent

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial use
Professional use
Use of the substance/mixture : Laboratory use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Bioline (Aust) Pty Ltd
Suite 111, National Innovation Centre Building
Australian Technology Park, Eveleigh, NSW 2015
Australia

Phone: +61 (0)2 9209 4180

Fax: +61 (0)2 9209 4763

E-mail: tech@bioline.com

1.4. Emergency telephone number

Emergency number : +61 2 8014 4558 (Australia)
(24 hours, 7 days)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 3 (Oral) H301
Acute Tox. 4 (Dermal) H312
Acute Tox. 3 (Inhalation) H331
Skin Corr. 1B H314
Eye Dam. 1 H318
Muta. 2 H341
STOT RE 2 H373
Aquatic Chronic 2 H411

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Extra labelling to display Extra classification(s) to display

Hazard pictograms (CLP) :



GHS05

GHS06

GHS08

GHS09

Signal word (CLP) : Danger

Hazardous ingredients : Phenol; Ammonium thiocyanate; Guanidinium thiocyanate

Hazard statements (CLP) : H301+H331 - Toxic if swallowed or if inhaled
H312 - Harmful in contact with skin

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	H314 - Causes severe skin burns and eye damage H341 - Suspected of causing genetic defects H373 - May cause damage to organs (kidneys, liver, Skin, nervous system) through prolonged or repeated exposure H411 - Toxic to aquatic life with long lasting effects
Precautionary statements (CLP)	: P260 - Do not breathe vapours P280 - Wear eye protection, protective gloves, protective clothing P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a doctor
EUH-statements	: EUH032 - Contact with acids liberates very toxic gas

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Phenol	(CAS No) 108-95-2 (EC No.) 203-632-7 (EC index No.) 604-001-00-2	30 - 40	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 STOT RE 2, H373 Aquatic Chronic 2, H411
Guanidinium thiocyanate	(CAS No) 593-84-0 (EC No.) 209-812-1 (EC index No.) 615-030-00-5	10 - 20	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1C, H314 Aquatic Chronic 3, H412
Ammonium thiocyanate	(CAS No) 1762-95-4 (EC No.) 217-175-6 (EC index No.) 615-004-00-3	5 - 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Glycerol	(CAS No) 56-81-5 (EC No.) 200-289-5	5 - 10	Not classified
Citric acid	(CAS No) 77-92-9 (EC No.) 201-069-1	3 - 5	Eye Irrit. 2, H319

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove to fresh air, keep the patient warm and at rest. If symptoms develop, obtain medical attention.
First-aid measures after skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Obtain immediate medical attention.
First-aid measures after eye contact	: Rinse immediately with plenty of water (for at least 15 minutes). Ensure that folded skin of eyelids is thoroughly washed with water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain immediate medical attention.
First-aid measures after ingestion	: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth. Give 100 - 200 ml of water to drink. Obtain immediate medical attention.

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4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries after inhalation : Toxic if inhaled. Inhalation of vapours may cause respiratory irritation.
Symptoms/injuries after skin contact : Causes burns. Harmful in contact with skin.
Symptoms/injuries after eye contact : Causes serious eye damage.
Symptoms/injuries after ingestion : Toxic if swallowed. Severe irritation or burns to the mouth, throat, oesophagus, and stomach.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Alcohol-resistant foam. Carbon dioxide. Dry chemical.
Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not flammable.
Hazardous decomposition products in case of fire : Carbon monoxide. Carbon dioxide. Sulphur oxides. Nitrogen oxides.

5.3. Advice for firefighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. Avoid fire-fighting water entering the environment.
Protection during firefighting : As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel. Do not breathe vapours. Do not get in eyes, on skin, or on clothing.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing and gloves.
Emergency procedures : Ensure adequate ventilation. Do not breathe vapours. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Avoid release to the environment. Collect spillage. Notify authorities if large amounts of the product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Absorb with non-combustible material (sand or similar) and transfer to containers for later disposal.

6.4. Reference to other sections

SECTION 8: Exposure controls/personal protection. SECTION 13: Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Use only outdoors or in a well-ventilated area. Do not breathe vapours. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Keep only in the original container in a cool well ventilated place. Keep container tightly closed.
Incompatible materials : Strong oxidizing agents. Strong acids. Cyanides.

7.3. Specific end use(s)

Laboratory use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phenol (108-95-2)		
United Kingdom	Local name	Phenol

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Phenol (108-95-2)		
United Kingdom	WEL TWA (mg/m ³)	7.8 mg/m ³
United Kingdom	WEL TWA (ppm)	2 ppm
United Kingdom	WEL STEL (mg/m ³)	16 mg/m ³
United Kingdom	WEL STEL (ppm)	4 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Australia	Local name	Phenol
Australia	TWA (mg/m ³)	4 mg/m ³
Australia	TWA (ppm)	1 ppm
Glycerol (56-81-5)		
United Kingdom	Local name	Glycerol
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ mist
Australia	Local name	Glycerin mist
Australia	TWA (mg/m ³)	10 mg/m ³
Australia	Remark (AU)	(a)

8.2. Exposure controls

Appropriate engineering controls:

Provide adequate ventilation. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves. Standard EN 374 - Protective gloves against chemicals. The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed. Gloves should be removed and replaced if there are any signs of degradation or breakthrough

Eye protection:

Wear safety glasses with side shields. Standard EN 166 - Personal eye-protection

Skin and body protection:

Use chemically protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Full face respirator with ABEK+P cartridge. Standard EN 14387 - Gas filter(s), combined filter(s) and full face mask - EN 136

Thermal hazard protection:

Not required for normal conditions of use.

Other information:

Do not eat, drink or smoke during use. Handle in accordance with good industrial hygiene and safety procedures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Odourless.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: Not applicable.
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 1 (Water = 1)
Solubility	: Water: Miscible
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Strong oxidizing agents. Strong acids. Cyanides.

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Sulphur oxides. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Harmful in contact with skin. Inhalation: Toxic if inhaled.

Phenol (108-95-2)	
LD50 dermal rat	660 mg/kg
Citric acid (77-92-9)	
LD50 oral rat	3000 mg/kg
Guanidinium thiocyanate (593-84-0)	
LD50 oral rat	593 mg/kg
Glycerol (56-81-5)	
LD50 oral rat	27200 mg/kg
LD50 dermal	56750 mg/kg (Guinea pig)
LC50 inhalation rat (mg/l)	> 2.75 mg/l/4h

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Suspected of causing genetic defects.
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: May cause damage to organs (kidneys, liver, Skin, nervous system) through prolonged or repeated exposure.
Aspiration hazard	: Not classified

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Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Causes severe skin burns and eye damage. Harmful in contact with skin. Toxic if inhaled. Inhalation of vapours may cause respiratory irritation. Toxic if swallowed. Severe irritation or burns to the mouth, throat, oesophagus, and stomach.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Phenol (108-95-2)	
LC50 fish	8.9 mg/l 96 Hours - Oncorhynchus mykiss
EC50 Daphnia	3.1 mg/l 48 Hours - Ceriodaphnia dubia
EC50 72h algae (1)	61.1 mg/l
EC50 96h algae (1)	61.1 mg/l 96 Hours - Pseudokirchneriella subcapitata
NOEC chronic fish	0.077 mg/l 60 days - Cirrhina mrigala
NOEC chronic crustacea	0.16 mg/l 16 days - Daphnia magna (Growth rate)
Citric acid (77-92-9)	
LC50 fish	1516 mg/l 96 h - Lepomis macrochirus
LC50 other aquatic organisms	48 h - Daphnia magna
EC50 Daphnia	120 mg/l
Guanidinium thiocyanate (593-84-0)	
EC50 Daphnia	42.4 mg/l 48 Hours - Daphnia magna
Glycerol (56-81-5)	
LC50 fish	54000 mg/l 96 Hours (Salmo gairdneri)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

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Ecology - soil	Miscible with water.

12.5. Results of PBT and vPvB assessment

TRIsure Reagent	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR)	: 2922
UN-No. (IMDG)	: 2922
UN-No. (IATA)	: 2922
UN-No. (ADN)	: 2922
UN-No. (RID)	: 2922

14.2. UN proper shipping name

Proper Shipping Name	: CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate)
Proper Shipping Name (IMDG)	: CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate)
Proper Shipping Name (IATA)	: Corrosive liquid, toxic, n.o.s. (Phenol ; Guanidinium thiocyanate)
Proper Shipping Name (ADN)	: CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate)

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Proper Shipping Name (RID)	: CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate)
Transport document description (ADR)	: UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate), 8 (6.1), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (IMDG)	: UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate), 8 (6.1), II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Transport document description (IATA)	: UN 2922 Corrosive liquid, toxic, n.o.s. (Phenol ; Guanidinium thiocyanate), 8 (6.1) (6.1), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (ADN)	: UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate), 8 (6.1), II, ENVIRONMENTALLY HAZARDOUS
Transport document description (RID)	: UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol ; Guanidinium thiocyanate), 8 (6.1), II, ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 8 (6.1)
Hazard labels	: 8, 6.1



IMDG

Transport hazard class(es) (IMDG)	: 8 (6.1)
Danger labels (IMDG)	: 8, 6.1



IATA

Transport hazard class(es) (IATA)	: 8 (6.1)
Hazard labels (IATA)	: 8, 6.1



ADN

Transport hazard class(es) (ADN)	: 8 (6.1)
Danger labels (ADN)	: 8, 6.1



RID

Transport hazard class(es) (RID)	: 8 (6.1)
Danger labels (RID)	: 8, 6.1



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14.4. Packing group

Packing group	: II
Packing group (IMDG)	: II
Packing group (IATA)	: II
Packing group (ADN)	: II
Packing group (RID)	: II

14.5. Environmental hazards

Dangerous for the environment	: Yes
Marine pollutant	: Yes
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

EAC code	: 2X
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- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Authorisations and/or restrictions on use (Annex XVII):

3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008	TRIsure Reagent - Ammonium thiocyanate
3(b) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10	TRIsure Reagent - Ammonium thiocyanate
3(c) Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1	TRIsure Reagent - Ammonium thiocyanate

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

	ADR (Accord européen relatif au transport international des marchandises Dangereuses par Route)
	ATE (Acute Toxicity Estimate)
	CAS (Chemical Abstracts Service) number
	CLP (Classification, Labeling and Packaging)
	DNEL (Derived No effect Limit)
	EC (European Community)
	EC50 (Effective Concentration 50%)
	EN (European Norm)
	IARC (International Agency for Research on Cancer)

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	IATA (International Air Transport Association)
	IBC (Intermediate Bulk Container)
	IMDG (International Maritime Dangerous Goods Code)
	IMO (International Maritime Organisation)
	LC50 (Lethal Concentration 50%)
	LD50 (Lethal Dose 50%)
	MAC (Maximal Allowed Concentration)
	O/W (Oil-in-Water (chemistry))
	OECD (Organisation for Economic Co-operation and Development)
	PBT (Persistent, Bioaccumulative and Toxic)
	PMcc (Pensky-Martens Closed Cup test)
	PNEC (Predicted No Effect Concentration)
	REACH (Registration, Evaluation and Authorisation of CHemicals)
	RID (Règlement concernant le transport international ferroviaire de marchandises)
	STEL (Short Term Exposure Limit)
	TWA (Time Weighted Average)
	UNxxxx (Number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods)
	vPvB (very Persistent and very Bioaccumulative)

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1C
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
H301	Toxic if swallowed
H302	Harmful if swallowed
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H341	Suspected of causing genetic defects
H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
EUH032	Contact with acids liberates very toxic gas

NCEC SDS EU BlackandWhite

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product