

MATERIAL SAFETY DATA SHEET

According to EC Directive 1907/2006
Revision Date: 10.07.15 MS-52085 V04.1



A Meridian Life Science® Company

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Trade Name : ISOLATE II RNA/DNA/Protein Kit
Catalogue Number : BIO-52085 50 preps

Manufacturer/ Supplier: Headquarters
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Other regions

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2. HAZARD IDENTIFICATION

Product name	Directive 1999/45/EC	GHS Directive 1272/2008/EC
Protein Loading dye	Does not need labelling as hazardous	Does not need labelling as hazardous
Protein Binding Buffer	HARMFUL	WARNING  H302 – Acute Tox. 4 oral R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed. S22-26-36/37 – Do not breathe dust
Protein Elution Buffer	Does not need labelling as hazardous	Does not need labelling as hazardous
Protein Neutralization Buffer	Does not need labelling as hazardous	Does not need labelling as hazardous
DNA Elution Buffer	Does not need labelling as hazardous	Does not need labelling as hazardous
RNA Elution Buffer	Does not need labelling as hazardous	Does not need labelling as hazardous
Wash Buffer W1	Does not need labelling as hazardous	Does not need labelling as hazardous
DNase I Reaction Buffer DRB	Does not need labelling as hazardous	Does not need labelling as hazardous
Lysis Buffer TX	Does not need labelling as hazardous	DANGER  H302 – Acute Tox. 4 oral H312 – Acute Tox. 4 dermal H332 – Acute Tox. 4 inhale H412 – Chronic Tox. aquatic life EUH032 – Contact with acids liberates very toxic gas
DNase I Solution	HARMFUL  R42/43 – May cause sensitisation by inhalation and skin contact	WARNING  H317 – Skin Sens. 1A/1B H334 – Resp. Sens. 1A/1B
Wash Buffer W2	Does not need labelling as hazardous	Does not need labelling as hazardous
Wash Buffer W3	HARMFUL	WARNING  H302 – Acute Tox. 4 oral R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed. S22-26-36/37 – Do not breathe dust

According to Regulation (EC) No1272/2008
 Skin Sensitivity (Category 1A/1B)
 Respiratory Sensitivity (Category 1A/1B)
 Acute Toxicity, Oral (Category 4)
 Eye Irritant (Category 2)
 Specific Target Organ Toxicity – Single Exposure (Category 3)

According to European Directive 67/548/EEC as amended.

C – Corrosive.

Xn – Harmful.

Xi – Irritant. Irritating to eyes. May cause sensitisation by inhalation and skin contact.

Label elements

Pictogram



Signal word

Warning

Hazard statement(s)

H302

Harmful if swallowed.

H312

Harmful in contact with skin.

H317

May cause an allergic skin reaction

H331

Toxic if inhaled.

EUH032

Contact with acids liberates very toxic gas.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H412

Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P261

Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

P302+352

IF ON SKIN: Wash with plenty of soap and water.

P304+341

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+313

If skin irritation or rash occurs: Get medical advice/attention.

P342+311

If experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P363

Wash contaminated clothing before reuse.

Hazard symbol(s)

Xi

Irritant

Xn

Harmful

C

Corrosive

R-phrases(s)

R20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

R32

Contact with acids liberates very toxic gas.

R34

Causes burns.

R36

Irritating to eyes.

R42/43

May cause sensitization by inhalation and skin contact.

R52/53

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S22

Do not breathe dust.

S26

In case of contact with eyes, rinse

S36/37/39

immediately with plenty of water and seek medical advice.
Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately
(Show the label where possible).
Avoid release to the environment.

S61

Other hazards

None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture of hazardous substances listed below with non-hazardous additions.

Chemical name	CAS-No.	EC-No.	Concentration	Classification
DNase I Solution				
DNase I	9003-98-9	232-667-0	90-100%	Skin Sens. 1A/1B; Resp. Sens. 1A/1B; H317; H334; R42/43
DNase I Reaction Buffer DRB				
Declaration not required	n/a	n/a	0.1-1%	n/a
DNA Elution Buffer				
Declaration not required	n/a	n/a	0.1-1%	n/a
Lysis Buffer TX				
Guanidine thiocyanate	593-84-0	209-812-1	30-60%	H302; H312; H332; H412; Xn; R20/21/22; R32; R52/53
Protein Binding Buffer				
Citric Acid	77-92-9	201-069-1	10-13%	Acute Tox. 4 oral;
Phosphoric Acid	7664-38-2	231-633-2	5-7%	H302; R20/21/22;
Sodium Hydroxide	1310-73-2	215-185-5	5-7%	S22-26-36-37
Protein Elution Buffer				
Declaration not required	n/a	n/a	0.1-1%	n/a
Protein loading dye				
Declaration not required	n/a	n/a	0.1-1%	n/a
Protein Neutralization buffer				
Citric Acid	77-92-9	201-069-1	5-7%	n/a
Phosphoric Acid	7664-38-2	231-633-2	5-7%	
RNA Elution Buffer				
Declaration not required	n/a	n/a	0.1-1%	n/a
Wash Solution W1				
Declaration not required	n/a	n/a	0.1-1%	n/a
Wash Buffer W2				
Declaration not required	n/a	n/a	0.1-1%	n/a
Wash Buffer W3				
Citric Acid	77-92-9	201-069-1	10-13%	Acute Tox. 4 oral;
Phosphoric Acid	7664-38-2	231-633-2	5-7%	H302; R20/21/22;
Sodium Hydroxide	1310-73-2	215-185-5	5-7%	S22-26-36-37

4. FIRST AID MEASURES

After Inhalation

Remove to fresh air. Keep airways free.

After Swallowing

Drink lots of water after ingestion.

After Contact with Eyes

Immediately flush eyes with copious amounts of water for at least 20 minutes, retracting eyelids often. Tilt the head to prevent chemical transferring to uncontaminated eye.

After Contact with Skin

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. Use soap if possible.

Note to Physician

No additional recommendations

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

All extinguishers can be used, including fire blankets.

Unusual Fire Hazard

Formation of hazardous and caustic vapour-air mixtures possible. Only when there is a large scale leak is there danger to the environment, or on the formation of hazardous substances.

Fire Fighting Protective Measures

Wear full protective clothing to prevent contact with the skin and eyes.

Wear self-contained breathing equipment to prevent inhalation of explosive or combustion gases. Fight fire from a safe distance and a protected location due to the potential of hazardous vapours and decomposition products. Product package burns like paper of plastic. Spray vapours with water. Retain fire water. Use only acid-resistant safety equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

Ensure ventilation is adequate. Only to be used by trained staff.
Refer to section 8 for personal protection equipment recommendations.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Clean-up Measures

Prevent the spread of any spill in order to minimise harm to human health and the environment if it is safe to do so. Use a liquid-binding material (e.g. sand, sawdust, diatomite etc.) to absorb the spillage. Place in closed containers for disposal. Ventilate area well after clean-up procedures have taken place.

7. HANDLING AND STORAGE

Handling

In accordance with the instructions that come with the product. Avoid inhalation of vapour or mist. Use good laboratory handling procedures.

Storage

Packaging allows safe storage. Do not store near acids. Refer to section 12 for further details.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures

Local exhaust ventilation or other engineering controls are normally required when handling this product to avoid overexposure.

Personal Protection:

Respiratory Protection: Only if additional recommendations in test instruction or packing insert.

Eye Protection: An eye wash station must be available where this product is used. Wear chemically resistant, tightly fitting safety goggles or glasses with side-shields, according to EN 166.

Skin Protection: Prevent all contact with this product. Protective gloves, apron, face and further skin protection should be used depending on conditions of use, according to EN 374. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment thoroughly after each use.

Hygiene Practices: Avoid contact with skin or eyes. Do not place in mouth. Do not eat, drink or smoke when handling this product. Upon completion of the use of this product, dispose of protective gloves safely and wash hands thoroughly with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

	Colour	Odour	Appearance	pH	Flash point	Sol. In water
Protein Loading dye	Purple	Slight	Liquid	7.5	NA	Soluble
Protein Binding Buffer	Colourless	Odourless	Liquid	6.5	NA	Soluble
Wash Buffer W2	Colourless	Odourless	Liquid	9.0	NA	Soluble
Wash Buffer W3	Colourless	Odourless	Liquid	6.5	NA	Soluble
Wash Buffer W1	Colourless	Odourless	Liquid	7.5	NA	Soluble
Protein Elution Buffer	Colourless	Odourless	Liquid	12.5	NA	Soluble
Protein Neutralization Buffer	Colourless	Odourless	Liquid	3.5	NA	Soluble
RNA Elution Buffer	Colourless	Odourless	Liquid	7.0	NA	Soluble
DNA Elution Buffer	Colourless	Odourless	Liquid	9.0	NA	Soluble
DNase I solution	Colourless	Odourless	Liquid	5-7	NA	Soluble
DNase I Reaction Buffer DRB	Colourless	Odourless	Liquid	7.5	NA	Soluble
Lysis Buffer TX	Colourless	Odourless	Liquid	7.0	NA	Soluble

10. STABILITY AND REACTIVITY

Stability

Product is stable under normal handling and storage conditions.

Avoid excess heat, flame and pressure.

Thermal decomposition: None if used under ordinary conditions.

Conditions to avoid: Strong acids, strong oxidising agents, high temperatures, visible light, acids, temperatures above flash point in combination with sparks, open flames, or other sources of ignition. Metals (ferrous) and isocyanates should also be avoided.

Reactivity

Dangerous Reactions: See conditions to avoid in stability section.

Hazardous decomposition products: Ammonia, nitrogen oxides, sulphur containing gases, hydrogen cyanide, carbon monoxide, carbon dioxide, toxic gases.

Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

	Lysis buffer TX	Protein Neutralization Buffer		Wash Buffer W3		
	Guanidine thiocyanate 593-84-0	Citric Acid 77-92-9	Phosphoric Acid 7664-38-2	Citric Acid 77-92-9	Phosphoric Acid 7664-38-2	Sodium Hydroxide 1310-73-2
LD50 _{ori rat}	593 mg/kg	-	1530mg/kg	-	1530mg/kg	-
LD50 _{ihl rat}	-	-	-	-	-	2300 mg/m ³ /2H
LD50 _{drm rbt}	-	-	2740mg/kg	-	2740mg/kg	2740 mg/kg
LD50 _{ihl mouse}	-	-	-	-	-	1200 mg/m ³ /2H
LD50 _{oral mouse}	-	5040mg/kg	-	5040mg/kg	-	6600 mg/kg
LD50 _{intrapertona eel mouse}	300 mg/kg	-	-	-	-	-

	Protein Binding Buffer		
	Citric Acid 77-92-9	Phosphoric Acid 7664-38-2	Sodium Hydroxide 1310-73-2
LD50 _{ori rat}	-	1530mg/kg	-
LD50 _{ihl rat}	-	-	2300 mg/m ³ /2H
LD50 _{drm rbt}	-	2740mg/kg	2740 mg/kg
LD50 _{ihl mouse}	-	-	1200 mg/m ³ /2H
LD50 _{oral mouse}	5040mg/kg	-	6600 mg/kg

Data on other components is either not available or not required.

12. ECOLOGICAL INFORMATION

Bio Toxicity	Lysis Buffer TX
	Guanidine thiocyanate 593-84-0
LC50 _{fish/96h}	Acute LC50 89.1/mg/l
EC50 _{daphnia/48h}	Acute EC50 42.4 mg/l

Data on other components is either not available or not required.

13. DISPOSAL CONSIDERATIONS

Product Disposal

Must be disposed of according to all local official regulations (waste code: 16 05 06).

Packaging Disposal

Unclean packaging should be disposed of according to all local official regulations.

14. TRANSPORT INFORMATION

14.1 UN number		
ADR/RID: 1760, 1805, 1824	IMDG: 1760, 1805, 1824	IATA: 1760, 1805, 1824
14.2 UN proper shipping name		
ADR/RID: CORROSIVE LIQUID, N.O.S. (Guanidinium thiocyanate); PHOSPHORIC ACID SOLUTION; SODIUM HYDROXIDE SOLUTION		
IMDG: CORROSIVE LIQUID, N.O.S. (Guanidinium thiocyanate); PHOSPHORIC ACID SOLUTION; SODIUM HYDROXIDE SOLUTION		
IATA: Corrosive liquid, n.o.s. (Guanidinium thiocyanate); PHOSPHORIC ACID SOLUTION; SODIUM HYDROXIDE SOLUTION		
14.3 Transport hazard class(es)		
ADR/RID: 8	IMDG: 8	IATA: 8
14.4 Packaging group		
ADR/RID: 8	IMDG: 8	IATA: 8
14.5 Environmental hazards		
ADR/RID: III	IMDG: III	IATA: III

15. REGULATORY INFORMATION

This safety sheet complies with the requirements of Regulation (EC) No. 1907/2006.

Label elements

Pictogram



Signal word

Warning
Danger

Hazard statement(s)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction
H331	Toxic if inhaled.
EUH031	Contact with acids liberates toxic gas.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P261S	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P273	Avoid release to the environment.
P280sh	Wear protective gloves/ protective clothing.
P302+352	Wear protective gloves/protective clothing/eye protection/face protection.

P304+341

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

P333+313

P342+311

IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P363

Wash contaminated clothing before reuse.

Hazard symbol(s)

Xi

Irritant

Xn

Harmful

C

Corrosive

R-phrases(s)

R20/21/22

Harmful by inhalation, in contact with skin and if swallowed.

R32

Contact with acids liberates very toxic gas.

R34

Causes burns.

R36

Irritating to eyes.

R42/43

May cause sensitization by inhalation and skin contact.

R52/53

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S-phrases(s)

S22

Do not breathe dust.

S26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39

Wear suitable protective clothing, gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)..

S61

Avoid release to the environment.

Other hazards

None

16. OTHER INFORMATION

The information provided in this Material Safety Data Sheet (MSDS) is accurate to the best of our present knowledge. However, this shall not constitute a guarantee for any specific product features. All substances and preparations may present unknown hazards and should be used with caution. Bioline shall not be held liable for any damage resulting from the handling of or from contact with the above product. The information supplied in this MSDS shall not establish a legally valid contractual relationship.