

# MATERIAL SAFETY DATA SHEET

According to EC Directive 1907/2006  
Revision Date: 10.07.15 MS-52084 V01.1



A Meridian Life Science® Company

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

Trade Name : ISOLATE II Plant microRNA Kit

Catalogue Number : BIO-52084 25 preps

Manufacturer/ Supplier: Headquarters  
Bioline Reagents Ltd.  
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### **Other regions**

Please contact the UK headquarters

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GERMANY  
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## 2. HAZARD IDENTIFICATION

Product name	Directive 1999/45/EC	GHS Directive 1272/2008/EC
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 RPX	Does not need labelling as hazardous	WARNING



H302 – Acute Tox. 4 oral  
H312 – Acute Tox. 4 dermal  
H315 – Irritant dermal  
H318 – Dermal allergen  
H332 – Acute Tox. 4 inhale  
H335 – Irritant inhale  
H400 – Very Tox. Aquatic life  
H410 – Very Tox. Aquatic life, long lasting  
H412 – Aquatic Chronic 3

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

According to Regulation (EC) No1272/2008  
Skin Sensitivity (Category 1A/1B)  
Respiratory Sensitivity (Category 1A/1B)  
Acute Toxicity, Oral (Category 4)  
Serious eye damage (Category 1)  
Specific Target Organ Toxicity – Single Exposure (Category 3)  
Acute aquatic toxicity (Category 1)  
Chronic aquatic toxicity (Category 1)

According to European Directive 67/548/EEC as amended.  
C – Corrosive.  
Xn – Harmful.  
Xi – Irritant.  
N – Dangerous for the environment

### Label elements

Pictogram



Signal word

Warning

### Hazard statement(s)

H302

Harmful if swallowed

H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H400	Harmful to aquatic life with long lasting effects
H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects
<b>Precautionary statement(s)</b>	
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
<b>Hazard symbol(s)</b>	
Xi	Irritant
Xn	Harmful
C	Corrosive
N	Dangerous for the environment
<b>R-phrases(s)</b>	
R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R34	Causes burns.
R36/37/38	Irritating to eyes, respiratory system and skin.
R41	Risk of serious damage to eyes.
R42/43	May cause sensitization by inhalation and skin contact.
R50/52/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>S-phrases(s)</b>	
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.
<b>Other hazards</b>	None

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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

Chemical name	CAS-No.	EC-No.	Concentration	Classification
Lysis Buffer RPX				
Guanidinium chloride	50-01-1	200-002-3	60-100%	P302 + P352; P305 + P351 + P338; H302; H315; H319; R22; R36/38; S22
Cetrimonium bromide	57-09-0	200-311-3	1 – 5%	H302; H318; H400; Xn; Xi; N; R22; R36/38; R50
RNA Elution Buffer				
Declaration not required	n/a	n/a	0.1-1%	n/a
Wash Buffer W1				
Declaration not required	n/a	n/a	0.1-1%	n/a
DNase I Reaction Buffer DRB				
Declaration not required	n/a	n/a	0.1-1%	n/a
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

### 4. FIRST AID MEASURES

#### After Inhalation

Remove to fresh air. Keep airways free. Seek medical advice.

#### After Swallowing

Drink lots of water after ingestion and seek medical advice.

#### 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. Seek medical advice.

#### 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
Wash Buffer W1	Colourless	Odourless	Liquid	7.5	NA	Soluble
Lysis Buffer RPX	Colourless	Odourless	Liquid	7.0	NA	Soluble
RNA Elution Buffer	Colourless	Odourless	Liquid	7.0	NA	Soluble
DNase I Solution	Colourless	Odourless	Liquid	5-7	NA	Soluble
DNase I Reaction Buffer DRB	Colourless	Odourless	Liquid	7.5	NA	Soluble

## 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, carbon monoxide, carbon dioxide, toxic gases.

Hazardous polymerization will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

	Lysis Buffer RPX	
	Guanidine hydrochloride 50-01-1	Cetrimonium bromide 57-09-0
LD50 <sub>orli rat</sub>	475 mg/kg	410 mg/kg
LDL0 <sub>subcutaneous rat</sub>	404 mg/Kg	-
LD50 <sub>drm rbt</sub>	>2000 mg/kg	-

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

## 12. ECOLOGICAL INFORMATION

	Lysis Buffer RPX	
	Guanidine hydrochloride 50-01-1	Cetrimonium bromide 57-09-0
Bioaccumulative potential	LogP <sub>ow</sub> : -1.7 BCF: - Potential: Low	-
EC50 <sub>Pseudokirchneriella/96h</sub>	-	Algae: 96 Hr EC50 Pseudokirchneriella subcapitata: 0.09 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

<b>14.1 UN number</b>		
ADR/RID: 3082	IMDG: 3082	IATA: 3082
<b>14.2 UN proper shipping name</b>		
ADR/RID: Environmentally hazardous substance, liquid, n.o.s. (Cetrimonium bromide)		
IMDG: Environmentally hazardous substance, liquid, n.o.s. (Cetrimonium bromide)		
IATA: Environmentally hazardous substance, liquid, n.o.s. (Cetrimonium bromide)		
<b>14.3 Transport hazard class(es)</b>		
ADR/RID: 9	IMDG: 9	IATA: 9
<b>14.4 Packaging group</b>		
ADR/RID: III	IMDG: III	IATA: III
<b>14.5 Environmental hazards</b>		
ADR/RID: Marine pollutant	IMDG: Marine pollutant	IATA: Marine pollutant

### 15. REGULATORY INFORMATION

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

#### 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.

H334

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

H412

Harmful to aquatic life with long lasting effects

P261

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

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing.

P302+352

Wear protective gloves/protective clothing/eye

P304+341	protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+313	Immediately call a POISON CENTER or doctor/physician.
P342+311	IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
<b>Hazard symbol(s)</b>	
Xi	Irritant
Xn	Harmful
C	Corrosive
<b>R-phrases(s)</b>	
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.
<b>S-phrases(s)</b>	
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.
<b>Other hazards</b>	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.