

# Safety data sheet

## MoleStrips™ RNA Tissue (Lysis buffer)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product use:** Extraction of total RNA.

Distributor:

**Mole Genetics AS**

**Vollsveien 13D**

**N-1366 Lysaker**

**Norway**

**Tel:+47 67101820 Fax:+47 67101821**

**Emergency telephone number: +47 67101820**

**The emergency telephone is open between 8 a.m. and 4 p.m. on workdays.**

**Email: [mail@molegenetics.com](mailto:mail@molegenetics.com)**

### 2. Hazards identification

Harmful by inhalation, in contact with skin and if swallowed. Contact with acids liberates very toxic gas.

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

### 3. Composition/information on ingredients

<b>Einecs no.</b>	<b>Substances</b>	<b>Classification</b>	<b>w/w%</b>
209-812-1	Guanidinium-thiocyanate	Xn; R20/21/22 R32 R52/53	50-100

*Please see section 16 for the full text of the R-phrases*

### 4. First aid measures

#### **Inhalation**

Seek fresh air. Seek medical advice in case of persistent discomfort.

#### **Ingestion**

Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of discomfort.

#### **Skin**

Remove contaminated clothing. Rinse with water. Seek medical advice in case of persistent discomfort.

#### **Eyes**

Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

#### **Other information**

When obtaining medical advice, show the safety data sheet or label.

### 5. Fire-fighting measures

The product is not directly flammable. Avoid inhalation of vapour and fumes – seek fresh air.

### 6. Accidental release measures

Use the same personal protective equipment as stated in section 8. Prevent spillage from entering drains and/or surface water. Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers. See section 13 for instructions on disposal.

## 7. Handling and storage

### **Handling**

See section 8 for information about precautions for use and personal protective equipment.

### **Storage**

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc.

## 8. Exposure controls/ personal protection

### **Precautions for use**

Work under effective process ventilation (e.g. local exhaust ventilation). Wash hands before breaks, before using restroom facilities, and at the end of work.

### **Respiratory protection**

In case of insufficient ventilation, wear respiratory protective equipment with filter B.

### **Gloves and protective clothing**

Wear suitable protective clothing. Wear protective gloves made of nitrile rubber.

### **Eye protection**

Wear safety goggles.

### **Occupational exposure limits**

Contains no substances subject to reporting requirements.

## 9. Physical and chemical properties

State: Liquid

Colour: Clear

Solubility in water: Soluble

## 10. Stability and reactivity

The product is stable when used in accordance with the supplier's directions. Reacts with strong acids to form very toxic gases.

## 11. Toxicological information

### **Acute**

#### **Inhalation**

Harmful by inhalation.

#### **Ingestion**

Harmful if swallowed.

#### **Skin contact**

Harmful in contact with skin.

#### **Eye contact**

Temporary irritation.

### **Long-term effects**

None known.

## 12. Ecological information

Avoid discharge to drain or surface water.

### **Ecotoxicity**

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

### **Mobility**

Mixable with water. May spread in the aquatic environment.

### 13. Disposal considerations

Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

EWC code: Depends on line of business and use, for instance 15 01 10 packaging containing residues of or contaminated by dangerous substances.

Absorbent/cloth contaminated with the product:

EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

### 14. Transport information

The classification is based on the content of ethanol in wells 2, 3, 4 and 5.

The product must be transported in accordance with national and/or international rules for transport of dangerous goods by road and sea according to ADR and IMDG.

**ADR:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II ; D/E

**IMDG:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II

Classification code: F1 Label ADR: 3 Hazard identification number: 33

Flash point: -°C Label IMDG: 3 IMDG EmS.: F-E, S-D

Transport according to ADR 1.1.3.6:Factor: 3. Maximum total quantity per transport unit: 333 l/kg.

Limited quantities

ADR: Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 1 L per inner packaging and 20 kg per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

IMDG:Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 20 kg gross per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

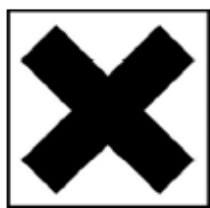
### 15. Regulatory information

**Hazard designation:** Harmful

**Hazard symbols:** Xn

**Contains**

Guanidinium-thiocyanate



Harmful

**R-phrases**

Harmful by inhalation, in contact with skin and if swallowed. (R20/21/22)

Contact with acids liberates very toxic gas. (R32)

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. (R52/53)

**S-phrases**

Wear suitable protective clothing and gloves. (S36/37)

Avoid release to the environment. Refer to special instructions/safety data sheet. (S61)

**Other labelling**

None.

**Chemical safety assessment**

Chemical safety assessment has not been performed.

**Restrictions on use**

None.

**Training requirement**

No special training is required, but a thorough knowledge of this safety data sheet should be a prerequisite condition.

**16. Other information****Sources used**

ADR 2007 edition and IMDG 2006 edition.

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations + Directive 2006/8/EC.

Commission Directive 2004/73/EC of 29 April 2004 adapting to technical progress for the twenty-ninth time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Directive 2000/39/EC + 2006/15/EC (Occupational Exposure Limits).

2001/118/EC: Commission Decision of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency

**Other information**

This safety data sheet was prepared from information provided by the supplier about the product at the time of preparation (e.g. data sheets and the like).

**Full text of the R-phrases that are stated in section 3.**

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R32 Contact with acids liberates very toxic gas.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

# Safety data sheet

## MoleStrips™ RNA Tissue (Glycogen)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product use:** Extraction of total RNA.

Distributor:

**Mole Genetics AS**

**Vollsveien 13D**

**N-1366 Lysaker**

**Norway**

**Tel:+47 67101820 Fax:+47 67101821**

**Emergency telephone number: +47 67101820**

**The emergency telephone is open between 8 a.m. and 4 p.m. on workdays.**

**Email: [mail@molegenetics.com](mailto:mail@molegenetics.com)**

### 2. Hazards identification

Risk advice to man and the environment

There is at present no information or indication of hazardous properties.

The usual precautions taken when handling chemicals should be observed.

Note: slightly hazardous to water and ground

### 3. Composition/information on ingredients

CAS no.	EF no.	Substances	Classification	w/w%
9005-79-2	232-683-8	Glycogen	-	-

### 4. First aid measures

#### **Inhalation**

Seek fresh air. Seek medical advice in case of persistent discomfort.

#### **Ingestion**

Wash out mouth thoroughly.

#### **Skin**

Wash the skin thoroughly with soap and water.

#### **Eyes**

Flush with water (preferably using eye wash equipment) until irritation subsides.

#### **Other information**

When obtaining medical advice, show the safety data sheet or label.

### 5. Fire-fighting measures

Extinguishing media: No restrictions

Decomposition: Dangerous decomposition is not anticipated

### 6. Accidental release measures

Use the same personal protective equipment as stated in section 8. Prevent spillage from entering drains and/or surface water. Contain and absorb spill with sand or other absorbent material and transfer to suitable waste containers. See section 13 for instructions on disposal.

## 7. Handling and storage

### **Handling**

See section 8 for information about precautions for use and personal protective equipment.

### **Storage**

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc.

## 8. Exposure controls/ personal protection

### **Precautions for use**

Work under effective process ventilation (e.g. local exhaust ventilation). Wash hands before breaks, before using restroom facilities, and at the end of work.

### **Respiratory protection**

In case of insufficient ventilation, wear respiratory protective equipment with filter B.

### **Gloves and protective clothing**

Wear suitable protective clothing. Wear protective gloves made of nitrile rubber.

### **Eye protection**

Wear safety goggles.

### **Occupational exposure limits**

Contains no substances subject to reporting requirements.

## 9. Physical and chemical properties

### **Physical properties**

State: Crystalline

Colour: Beige

Solubility in water: Soluble

### **Safety properties**

pH: No available data

Melting point: 270 - 280 °C

Boiling point: No available data

Flash point: No available data

Fire point: No available data

Lower explosive limit: No available data

Upper explosive limit: No available data

## 10. Stability and reactivity

The product is stable when used in accordance with the supplier's directions. Reacts with strong oxidizing agents.

## 11. Toxicological information

### **Acute Toxicity**

Intoxication has so far not become known

### **Long-term effects**

None known.

## 12. Ecological information

Avoid discharge to drain or surface water.

### **Ecotoxicity**

None known.

### **Mobility**

Mixable with water. May spread in the aquatic environment.

### 13. Disposal considerations

Can be disposed of according to local regulations.

### 14. Transport information

The classification is based on the content of ethanol in MoleStrips™ wells 2, 3, 4 and 5.

The product must be transported in accordance with national and/or international rules for transport of dangerous goods by road and sea according to ADR and IMDG.

**ADR:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II ; D/E

**IMDG:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II

Classification code: F1 Label ADR: 3 Hazard identification number: 33

Flash point: -°C Label IMDG: 3 IMDG EmS.: F-E, S-D

Transport according to ADR 1.1.3.6:Factor: 3. Maximum total quantity per transport unit: 333 l/kg.

Limited quantities

ADR: Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 1 L per inner packaging and 20 kg per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

IMDG:Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 20 kg gross per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

### 15. Regulatory information

#### ***Labeling according to EC-Directives***

This product has not to be labeled in accordance with EEC directive 67/548 and 99/45

### 16. Other information

#### ***Other information***

This safety data sheet was prepared from information provided by the supplier about the product at the time of preparation (e.g. data sheets and the like).

# Safety data sheet

## MoleStrips™ RNA Tissue (Wells 2 - 6)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product use:** Extraction of total RNA.

Distributor:

**Mole Genetics AS**

**Vollsveien 13D**

**N-1366 Lysaker**

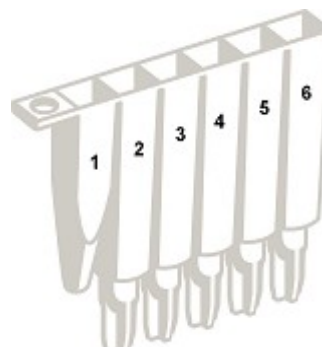
**Norway**

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**Email: [mail@molegenetics.com](mailto:mail@molegenetics.com)**



### 2. Hazards identification

Highly flammable (wells 2, 3, 5)

The product shall not be classified as hazardous according to EU classification and labelling rules (wells 4, 6)

### 3. Composition/information on ingredients (This product is part of MoleStrips™ RNA Tissue)

Wells 2, 3, 5:

Einecs no.	Substances	Classification	w/w%
200-578-6	Ethanol	F;R11	50-100
203-550-1	4-Methylpentan-2-one: Isobutyl methyl ketone	F;R11 Xn;R20 Xi;R36/37 R66	1-5 12

12) The substance is included in the EU list of limit values for occupational exposure

Well 4:

Einecs no.	Substances	Classification	w/w%
200-578-6	Ethanol	F;R11	10-25
231-511-9	Sodium perchlorate monohydrate	O;R9 Xn;R22	10-25
--	Triton(R) X-100	Xn;R22, Xi;R41 N;R51/53	0-1

Well 6:

Einecs no.	Substances	Classification	w/w%
	Contains no substances subject to reporting requirements.		

*Please see section 16 for the full text of the R-phrases*

#### **4. First aid measures**

##### ***Inhalation***

Seek fresh air.

##### ***Ingestion***

Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of persistent discomfort.

##### ***Skin***

Remove contaminated clothing. Wash the skin thoroughly with water and continue washing for a long time.

##### ***Eyes***

Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist.

##### ***Burns***

Flush with water until pain ceases. Remove clothing that is not stuck to the skin – seek medical advice/transport to hospital. If possible, continue flushing until medical attention is obtained.

##### ***Other information***

When obtaining medical advice, show the safety data sheet or label.

#### **5. Fire-fighting measures**

Extinguish with powder, foam, carbon dioxide or water mist. Do not use water stream, as it may spread the fire. Use water or water mist to cool non-ignited stock. Move containers from danger area if it can be done without risk. Avoid inhalation of vapour and flue gases – seek fresh air.

#### **6. Accidental release measures**

Use the same personal protective equipment as stated in section 8. Wipe up minor spills with a cloth. Smoking and naked flames prohibited.

Contain and absorb spill with sand or other absorbent, non-combustible material and transfer to suitable waste containers. See section 13 for instructions on disposal.

#### **7. Handling and storage**

##### ***Handling***

See section 8 for information about precautions for use and personal protective equipment. Smoking and naked flames prohibited.

##### ***Storage***

Store safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc.

## 8. Exposure controls/ personal protection

### **Precautions for use**

Use the product under well-ventilated conditions. Running water and eye wash equipment should be available. Wash hands before breaks, before using restroom facilities, and at the end of work. Smoking and naked flames prohibited.

### **Respiratory protection**

Not required.

### **Gloves and protective clothing**

Wear protective gloves made of nitrile rubber.

### **Eye protection**

Wear safety goggles.

### **Occupational exposure limits, wells 2, 3, 5**

#### **Ingredients**

4-Methylpentan-2-one: Isobutyl methyl ketone

#### **Exposure limit**

20 (8h), 50 (15m) ppm

83 (8h), 208 (15m) mg/m<sup>3</sup>

#### **Remarks**

-

#### **Control methods**

Compliance with the stated occupational exposure limits may be checked by occupational hygiene measurements.

### **Occupational exposure limits, wells 4, 6**

Contains no substances subject to reporting requirements.

## 9. Physical and chemical properties

### **Well 2**

State: Magnetic beads suspended in liquid.

Colour: Reddish brown beads in clear liquid.

Solubility in water: Insoluble beads in water soluble liquid.

### **Wells 3, 4, 5, 6**

State: Liquid

Colour: Clear

Solubility in water: Soluble

## 10. Stability and reactivity

The product is stable when used in accordance with the supplier's directions.

## 11. Toxicological information

### **Acute**

#### **Inhalation**

The product releases organic solvent vapours which may cause lethargy and dizziness. At high concentrations, the vapours may cause headache and intoxication. Inhalation of vapours may cause irritation to the upper airways.

#### **Ingestion**

Ingestion may cause discomfort.

#### **Skin contact**

May cause slight irritation.

#### **Eye contact**

May cause eye irritation.

### **Long-term effects**

None known.

### **12. Ecological information**

Avoid discharge to drain or surface water.

### **13. Disposal considerations**

Collect spills and waste in closed, leak-proof containers for disposal at the local hazardous waste site.

EWC code: Depends on line of business and use, for instance 15 01 10 packaging containing residues of or contaminated by dangerous substances.

Absorbent/cloth contaminated with the product:

EWC code: 15 02 02 absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by dangerous substances.

### **14. Transport information**

The classification is based on the content of ethanol in wells 2, 3, 4 and 5.

The product must be transported in accordance with national and/or international rules for transport of dangerous goods by road and sea according to ADR and IMDG.

**ADR:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II ; D/E

**IMDG:** UN 1170 ; ETHANOL SOLUTION ; 3 ; II

Classification code: F1 Label ADR: 3 Hazard identification number: 33

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Limited quantities

ADR: Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 1 L per inner packaging and 20 kg per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

IMDG:Maximum quantity: 3 L per inner packaging and 30 kg per package for combination packaging. When using shrink or stretch wrapping, the limit is 20 kg gross per package (inner packagings must be made of metal or plastic which does not break or perforate easily).

## 15. Regulatory information

### Wells 2, 3, 5:

**Hazard designation:** Highly flammable

**Hazard symbols:** F

#### **R-phrases**

Highly flammable. (R11)

#### **S-phrases**

Keep container in a well ventilated place. (S9)

Keep away from sources of ignition - No smoking. (S16)



Highly flammable

#### **Other labelling**

None.

#### **Chemical safety assessment**

Chemical safety assessment has not been performed.

#### **Restrictions on use**

None.

#### **Training requirement**

No special training is required, but a thorough knowledge of this safety data sheet should be a prerequisite condition.

### Wells 4, 6:

**Hazard designation:** It has been assessed that the product shall not be classified as hazardous according to EU classification and labelling rules.

#### **Other labelling**

None.

#### **Chemical safety assessment**

Chemical safety assessment has not been performed.

#### **Restrictions on use**

None.

#### **Training requirement**

No special training is required, but a thorough knowledge of this safety data sheet should be a prerequisite condition.

## 16. Other information

### **Sources used**

ADR 2007 edition and IMDG 2006 edition.

Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations + Directive 2006/8/EC.

Commission Directive 2004/73/EC of 29 April 2004 adapting to technical progress for the twenty-ninth time Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances.

Directive 2000/39/EC + 2006/15/EC (Occupational Exposure Limits).

2001/118/EC: Commission Decision of 16 January 2001 amending Decision 2000/532/EC as regards the list of wastes.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency

### **Other information**

This safety data sheet was prepared from information provided by the supplier about the product at the time of preparation (e.g. data sheets and the like).

### **Full text of the R-phrases that are stated in section 3.**

#### Wells 2, 3, 5:

R11 Highly flammable.

R20 Harmful by inhalation.

R36 Irritating to eyes.

R36/37 Irritating to eyes and respiratory system.

R66 Repeated exposure may cause skin dryness or cracking.

R67 Vapours may cause drowsiness and dizziness.

#### Well 4:

R11 Highly flammable.

R22 Harmful if swallowed.

R41 Risk of serious damage to eyes.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R9 Explosive when mixed with combustible material.

#### Well 6:

No R-phrases