

# Safety data sheet

Version: 01.01/USA

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## SECTION 1: Identification

### 1.1. Product identifier

Trade name: miRCURY RNA isolation kit - FFPE

Item number: 300115

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

Recommended uses: Life Science laboratory chemicals. For research use only.

Kit containing 9 tubes:

- Paraffin Dissolver A
- Lysis Buffer B
- Precipitation Buffer C
- Binding Buffer D
- DNase Buffer E
- Wash Buffer F (concentrate)
- H2O RNase free
- rDNase, RNase free (lyophilized)
- Proteinase K

NB: Only the tubes containing Paraffin Dissolver A, Binding Buffer D, rDNase, RNase free (lyophilized) and Proteinase K pose a danger. This safety data sheet describes the danger of the total content of all the tubes.

### 1.3. Details of the supplier of the safety data sheet

Supplier: Exiqon A/S  
Skelstedet 16  
2950 Vedbæk  
Denmark

Tel: +4545660888  
Fax: +4545661888  
Email: support@exiqon.com  
WWW: www.exiqon.dk

### 1.4. Emergency telephone number

+45 45 66 08 88  
Emergency telephone comments: The emergency telephone is open between 8 a.m. and 4 p.m. on workdays.

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## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classification: Flam. Liq. 2 Skin Sens. 1 Eye Irrit. 2 Resp. Sens. 1 STOT SE 3 Carc. 2

Most serious harmful effects: Highly flammable liquid and vapour. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing cancer.

### 2.2. Label elements



Signal word: Danger

Contains: rDNase; 1,4-dioxane; Proteinase (Tritirachium album)

H-phrases: Highly flammable liquid and vapour.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.  
Suspected of causing cancer.

P-phrases: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Wear protective gloves/eye protection.  
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Supplemental information: May form explosive peroxides. Repeated exposure may cause skin dryness or cracking.

### 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

CAS No.	Substance	w/w%	Note
.	Tube: rDNase, RNase free (lyophilized)	.	.
9003-98-9	rDNase	90-100	.
.	.	.	.
64742-46-7-E	Tube: Paraffin Dissolver A Distillates (petroleum), hydrotreated middle	90-100	.
.	.	.	.
123-91-1-A	Tube: Binding Buffer D 1,4-dioxane	40-90	.
.	.	.	.
39450-01-6-A	Tube: Proteinase K Proteinase (Tritirachium album)	1-3	.
.	.	.	.

Other information: Any letters after the CAS number refer to individual data sets.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

Inhalation: Seek fresh air. Seek medical advice in case of breathing difficulties.

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. Wash skin with soap and water. Seek medical advice in case of persistent discomfort.

Eyes: Flush immediately with water (preferably using eye wash station for at least 5 minutes. Open eye wide. Remove any contact lenses. Seek medical advice.

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

Other information: Bring the safety data sheet or label when seeking medical advice

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

Degreases and dries the skin. Repeated exposure may cause skin dryness or cracking. Irritating to eyes. Causes a burning sensation and tearing. May cause sensitization on inhalation and skin contact. Symptoms include cold, sneezing, breathing difficulties and hives. Reddening, swelling, blistering, and ulceration may develop on the skin – often slowly. Suspected of causing cancer. Inhalation of vapors is irritating to the upper airways.

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

Treat symptoms. No special immediate treatment required.

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### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media Extinguish with powder, foam, carbon dioxide or water mist.

Unsuitable extinguishing media Do not use a jet of water, as it may spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

Product decomposes in fire conditions or when heated to high temperatures, and inflammable and toxic gases may be released.

#### 5.3. Advice for firefighters

Move containers from danger area if it can be done without risk. Avoid inhalation of vapor and smoke gases – seek fresh air. Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Stop leak if this can be done without risk. Wear gloves. Wear safety goggles.

For emergency responders: In addition to the above: Protective suit is recommended.

#### 6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

#### 6.3. Methods and material for containment and cleaning up

Contain and absorb spills using sand or other absorbent material and transfer to suitable waste containers. Wipe up minor spills with a cloth.

#### 6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

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### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work. Smoking and open flames prohibited. A workplace assessment must be conducted to ensure that employees are not exposed to effects that may involve a risk during pregnancy.

#### 7.2. Conditions for safe storage, including any incompatibilities

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

#### 7.3. Specific end use(s)

None.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

Occupational exposure limits:

Ingredient:	Exposure limit	Notations
1,4-dioxane	100 ppm, 360 mg/m <sup>3</sup> (TWA) (OSHA) 20 ppm (TWA), - (STEL) (ACGIH)	Skin Skin, A3

Legal basis: ACGIH Threshold Limit Values (TLV's) and Biological Exposure Indices (BEI's), 2015. OSHA 29 CFR part 1910.1000, table Z1-Z3, Limits for Air Contaminants 2006.

Notations: Skin: A skin notation assigned to the OEL identifies the possibility of significant uptake through

the skin  
A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans.  
Measuring methods: Compliance with the stated occupational exposure limits may be checked by occupational hygiene measurements.

## 8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.  
Personal protective equipment, eye/face protection: Wear safety goggles.  
Personal protective equipment, skin protection: Wear gloves. Type of material: Latex/ Neoprene rubber/ Nitril rubber.  
Personal protective equipment, respiratory protection: Not required.  
Environmental exposure controls: Ensure compliance with local regulations for emissions.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

State: Liquid /Solid substance  
Color: Colorless /White  
Odour: No data  
Odour threshold: No data  
pH (solution for use): No data  
pH (concentrate): No data  
Melting point/freezing point: No data  
Initial boiling point and boiling range: No data  
Flash point: No data  
Evaporation rate: No data  
Flammability (solid, gas): No data  
Upper/lower flammability limits: No data  
Upper/lower explosive limits: No data  
Vapor pressure: No data  
Vapour density: No data  
Relative density: No data  
Solubility: No data  
Partition coefficient n-octanol/water: No data  
Auto-ignition temperature: No data  
Decomposition temperature: No data  
Viscosity: No data  
Explosive properties: No data  
Oxidizing properties: No data

### 9.2. Other information

None.

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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with the following: Strong alkalis/ Strong acids.

### 10.2. Chemical stability

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

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

Strong alkalis/ Strong acids.

## 10.6. Hazardous decomposition products

Can generate harmful flue gases containing carbon monoxide in the event of fire.

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### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity - oral:	The product does not have to be classified. Test data are not available. 123-91-1-A: Rat: LD50 = 5200 mg/kg
Acute toxicity - dermal:	The product does not have to be classified. Test data are not available. 123-91-1-A: Rabbit: LD50 = 7378 mg/kg
Acute toxicity - inhalation:	The product does not have to be classified. Test data are not available. 123-91-1-A: Rat: LC50 = 48,5-53,4 mg/m <sup>3</sup>
Skin corrosion/irritation:	The product does not have to be classified. Test data are not available. Degreases and dries the skin. Repeated exposure may cause skin dryness or cracking.
Serious eye damage/eye irritation:	Irritating to eyes. Causes a burning sensation and tearing.
Respiratory sensitisation or skin sensitisation:	May cause sensitization on inhalation and skin contact. Symptoms include cold, sneezing, breathing difficulties and hives. Reddening, swelling, blistering, and ulceration may develop on the skin – often slowly.
Germ cell mutagenicity:	The product does not have to be classified. Test data are not available.
Carcinogenic properties:	Suspected of causing cancer.  This product contains the following carcinogens or potential carcinogens as listed by OSHA, IARC or NTP: IARC: 1,4-dioxane, group 2B NTP: Reasonably anticipated to be a human carcinogen
Reproductive toxicity:	The product does not have to be classified. Test data are not available.
Single STOT exposure:	Inhalation of vapors is irritating to the upper airways.
Repeated STOT exposure:	The product does not have to be classified. Test data are not available.
Aspiration hazard:	The product does not have to be classified. Test data are not available.
Other toxicological effects:	None known.

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### SECTION 12: Ecological information

#### 12.1. Toxicity

The product does not have to be classified. Test data are not available.

#### 12.2. Persistence and degradability

Test data are not available.

#### 12.3. Bioaccumulative potential

Test data are not available.

#### 12.4. Mobility in soil

Test data are not available.

#### 12.5. Results of PBT and vPvB assessment

No assessment has been made.

## 12.6. Other adverse effects

None known.

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## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Avoid discharge to drain or surface water. If this product as supplied becomes a waste, it meets the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

ID number: D001 (Binding Buffer D). 1,4-dioxane RCRA code: U108

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

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## SECTION 14: Transport information

### ADR/DOT

14.1. UN number 1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (1,4-dioxane mixture)

14.3. Transport hazard class(es) 3

14.4. Packing group II

Hazard identification number 33

Tunnel restriction code: D/E

14.5. Environmental hazards The product should not be labelled as an environmental hazard (symbol: fish and tree).

### IMDG

14.1. UN number 1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (1,4-dioxane mixture)

14.3. Transport hazard class(es) 3

14.4. Packing group II

14.5. Environmental hazards The product is not a Marine Pollutant (MP).

IMDG Code segregation group: -

### ICAO/IATA

14.1. UN number 1993

14.2. UN proper shipping name FLAMMABLE LIQUID, N.O.S. (1,4-dioxane mixture)

14.3. Transport hazard class(es) 3

14.4. Packing group II

14.5. Environmental hazards The product should not be labelled as an environmental hazard (symbol: fish and tree).

### 14.6. Special precautions for user

None.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

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## SECTION 15: Regulatory information

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

Special provisions: None.

### US Federal

TSCA: All ingredients are on the inventory or exempt from listing.

**CERCLA:** 1,4-dioxane: 100 lbs (RQ) (Binding Buffer D)

**SARA title III Rules**

**Section 302:** None of the ingredients are on the inventory.

**Section 311/312 Hazard classes:**

Fire Hazard       Reactive Hazard       Release of Pressure       Acute Health Hazard       Chronic Health Hazard

**Section 313:** 1,4-dioxane: 40-90% (Binding Buffer D)

**NFPA ratings (scale 0 - 4)**

**Health Hazard:** 2

**Flammability:** 3

**Instability:** 2

**HMIS III ratings (scale 0 - 4)**

**Health hazard:** 3; \*

**Flammability:** 3

**Physical hazard:** 2

**Remarks:** \*: Suspected of causing cancer.

**State regulations**

**Proposition 65**

Chemicals known to cause cancer:  
1,4-dioxane (Binding Buffer D)

Chemicals known to cause reproductive toxicity:  
None of the ingredients are listed

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**SECTION 16: Other information**

Changes have been made in the following sections: 2,3,16

Abbreviation explanations: PBT: Persistent, Bioaccumulative and Toxic  
vPvB: Very Persistent and Very Bioaccumulative  
STOT: Specific Target Organ Toxicity

Classification method: Calculation based on the hazards of the known components.

Training: A thorough knowledge of this safety data sheet should be a prerequisite condition.

Other information: This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with CFR29, §1910.1200.

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