

# Material Safety Data Sheet

## Section 1. Product and Company Identification

**Product Name** MicroRNA Isolation Kit  
**Catalog #** KS341025  
**Manufacturer** Biochain Institute, Inc.  
39600 Eureka Drive  
Newark, CA 94560  
USA  
510.783.8588 or 1.888.762.2568  
Email: [info@biochain.com](mailto:info@biochain.com)  
**Emergency Phone #** Contact your local hazardous material control center.  
Call 911 in case of medical emergency.

## Section 2. Hazards Identification

### GHS Classification

Flammable liquids (Category 2), H225  
Acute toxicity, Oral (Category 3), H301  
Acute toxicity, Inhalation (Category 3), H331  
Acute toxicity, Dermal (Category 3), H311  
Skin corrosion (Category 1B), H314  
H319 Causes serious eye irritation.  
Serious eye damage (Category 1), H318  
Germ cell mutagenicity (Category 2), H341  
Specific target organ toxicity - repeated exposure, Oral (Category 2), Liver, Heart, Kidney H373  
Acute aquatic toxicity (Category 3), H402  
Chronic aquatic toxicity (Category 2), H411

### GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

### Hazard statements

H225 Highly flammable liquid and vapour  
H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled.  
H317 May cause an allergic skin reaction  
H319 Causes serious eye irritation  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H341 Suspected of causing genetic defects.  
H373 Causes damage to organs (Liver, Kidney, Heart) through prolonged or repeated exposure.  
H402 Harmful to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary statements

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P233 Keep container tightly closed.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P301 + P310 + P330 IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.  
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.  
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 + P310 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/doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P391 Collect spillage.  
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

### **Section 3. Composition and Information on Hazardous (OSHA) Ingredients**

Item	Part No.
1. Lysis Buffer	KS341025-1
2. Lysis Enhancer Solution	KS341025-2
3. Acidified Phenol:Chloroform	KS341025-3
4. Spin Column with Collection Tubes	KS341025-4
5. Wash Buffer 1	KS341025-5
6. Wash Buffer 2 (Concentrated)	KS341025-6
7. RNase-Free Water	KS341025-7
8. Elution Buffer	KS341025-8

Lysis Buffer: Guanidine Thiocyanate (CAS # 593-84-0): <50%; Sarkosyl (CAS # 137-16-6): 0.1-2%; beta-mercaptoethanol (CAS # 60-24-2): <1%;

Lysis Enhancer Solution: No hazardous ingredients.

Acidified Phenol:Chloroform: Phenol (CAS # 108-95-2): 90-100%; Chloroform (CAS # 67-66-3): 10-20%

Wash Buffer 1: Guanidine Thiocyanate (CAS # 593-84-0): <30%; Ethanol (CAS # 64-17-5): <=75%

Wash Buffer 2: No hazardous ingredients.

RNase-Free Water: No hazardous ingredients.

Elution Buffer: No hazardous ingredients.

### **Section 4. First Aid Measures**

**Skin:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**Eyes:** Immediately flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Seek medical attention.

**Inhalation:** Move victim to fresh air. If irritation persists, get medical attention.

**Ingestion:** Do NOT induce vomiting. If affected person is conscious, rinse mouth with water. Seek medical attention.

### **Section 5. Fire Fighting Measures**

Extinguishing media: water spray, carbon dioxide, dry chemical powder or alcohol-resistant foam.

Special firefighting procedures: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosion hazards: emits toxic fumes under fire conditions.

### **Section 6. Accidental Release Measures**

#### **Small Spill and Leak:**

Wear self-contained breathing apparatus. Shut off ignition sources; no flares, smoking or flames in the area. Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

### **Section 7. Handling and Storage**

**Handling:** Avoid contact with eyes, skin, and clothing. Avoid breathing vapors or spray mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

**Storage:** Keep container tightly closed. Keep container in a cool, well-ventilated area.

### **Section 8. Exposure Controls/Personal Protection**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

**Eyes and Face:** Splash goggles.

**Body:** Lab coat.

**Respiratory:** Be sure to use NIOSH/MSHA approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

**Hands:** Gloves.

Consult local authorities for acceptable exposure limits.

### **Section 9. Physical and Chemical Properties**

<i>Item</i>	<i>Physical State and Appearance</i>	<i>Color</i>
1. Lysis Buffer	Liquid	Clear
2. Lysis Enhancer Solution	Liquid	Clear
3. Acidified Phenol:Chloroform	Liquid	Clear
4. Spin Column with Collection Tubes	Solid	Clear
5. Wash Buffer 1	Liquid	Clear
6. Wash Buffer 2 (Concentrated)	Liquid	Clear
7. RNase-Free Water	Liquid	Clear
8. Elution Buffer	Liquid	Clear

### **Section 10. Stability and Reactivity**

**Stability and Reactivity:** The product is stable under recommended storage conditions.

**Incompatibility:** No decomposition if used according to specifications. No dangerous reactions known.

**Hazardous Decomposition Products:** N/A

### **Section 11. Toxicological Information**

**On the Skin:** Severe skin irritation.

**On the Eye:** Corrosive.

**Sensitization:**

Skin sensitization: May cause an allergic skin reaction.

Respiratory sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### **Section 12. Ecological Information**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

### **Section 13. Disposal Considerations**

**Waste Information:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Hand over to hazardous waste disposers.

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

### **Section 14. Transport Information**

Contact BioChain for all transport information.

### **Section 15. Regulatory Information**

*EINECS:* Not available.

*European Information:* Irritating to eyes, skin, and respiratory system. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### **Section 16. Other Information**

The information contained in this SDS was obtained from sources we believe are reliable. However, the above information is provided without warranty, expressed or implied, regarding its correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.