



Epigentek Group Inc
 110 Bi County Blvd. Ste 122
 Farmingdale, NY 11735
 Phone: 631-755-0888
 Fax: 718-484-3956
 www.epigentek.com

MSDS Information for:

Cat. # P-9006

EpiNext™ RNA Bisulfite-Seq Kit (Illumina) Kit

A Material Safety Data Sheet (MSDS) for the product as a whole is not required, as it is a kit consisting of individual components.

The following components are defined as hazardous (See MSDS page)

Desulphonation Solution
Conversion Powder
0.1M DTT*

The following components are defined as non-hazardous and do not require MSDS. The products do not contain any hazardous components above 1% or any carcinogens above 0.1% as defined in 29 CFR 1910. 1200, the OSHA Hazard Communication Standard.

Component	Storage Upon Receipt
Conversion Buffer	RT
NA Binding Solution	RT
F-Spin Column**	RT
F-Collection Tube	RT
5X RT Reaction Buffer*	-20°C
10 mM dNTP Mix*	-20°C
RNase Inhibitor*	-20°C
Random Primer (50 µM)*	-20°C
RT Enzyme Mix*	-20°C
10X End Polishing Buffer*	-20°C
End Polishing Enzyme Mix*	-20°C
End Polishing Enhancer*	-20°C
2X Ligation Buffer*	-20°C
T4 DNA Ligase*	-20°C
Adaptors (50 µM)*	-20°C
MQ Binding Beads*	4°C
2X HiFi PCR Master Mix*	-20°C
Primer U (10 µM)*	-20°C
Primer I (10 µM)*	-20°C
Elution Buffer*	-20°C
User Guide	RT

Material Safety Data Sheet

Section 1. Identification

Product Name	EpiNext™ RNA Bisulfite-Seq Kit (Illumina) Kit
Product No.	P-9006
Supplier	Epigentek Group Inc. 110 Bi County Blvd. Ste 122 Farmingdale, NY 11735
In Case of Emergency	631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
Desulphonation Solution
Cas# 1310-73-2

Section 3. Hazards Identification

Emergency Overview

Causes severe irritation and burns. Harmful if swallowed. Avoid breathing vapor or dust. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash hands thoroughly after handling. Keep container closed.

Potential Health Effects

Inhalation: Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract, depending on severity of exposure. Symptoms may include sneezing, sore throat, or runny nose. Severe pneumonitis may occur.

Ingestion: Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may result. Symptoms may include bleeding, vomiting, diarrhea, and decrease of blood pressure. Damage may appear days after exposure.

Skin Contact: Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Eye Contact: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Chronic Exposure: Prolonged contact with dilute solutions or dust has a destructive effect upon tissue.

Section 4. First Aid Measures

- Inhalation:** Quickly move victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply. Call a physician.
- Ingestion:** DO NOT INDUCE VOMITING! Give large quantities of water or milk if available. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician, immediately. Wash clothing before reuse.
- Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Note to Physician:

Perform endoscopy in all cases of suspected sodium hydroxide ingestion. In cases of severe esophageal corrosion, the use of therapeutic doses of steroids should be considered. General supportive measures with continual monitoring of gas exchange, acid-base balance, electrolytes, and fluid intake are also required.

Section 5. Fire Fighting Measures

- Fire:** Not considered to be a fire hazard. Hot or molten material can react violently with water. Can react with certain metals, such as aluminum, to generate flammable hydrogen gas.
- Explosion:** May cause fire and explosions when in contact with incompatible materials.
- Extinguishing Media:** Use any appropriate means suitable for extinguishing surrounding fire. Adding water to caustic solution generates large amounts of heat.
- Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

Section 6. Accidental Release Measures

Ventilate area of leak or spill. Keep unnecessary and unprotected people away from area of spill. Absorb spill with inert material, then place in a chemical waste container. Neutralize with a weak acid.

Section 7. Handling and Storage

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture, and incompatibilities. Wash hands thoroughly after handling.

Section 8. Exposure Controls/Personal Protection

- Respiratory Protection:** NIOSH/MSHA-approved respirator

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9. Physical and Chemical Properties

Appearance: Clear, colorless solution.
Odor: Odorless.
Solubility: Completely miscible with water.
pH: 14.0
% Volatiles No information found.
Boiling Point: Information not available
Melting Point: Not applicable
Vapor Density: No information found.
Vapor Pressure: Information not available.
Evaporation Rate: No information found.

Section 10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition: Not established.
Hazardous Polymerization: Will not occur.
Materials to Avoid: Acids, flammable liquids, organic halogens, metals, nitrocompounds.
Conditions to Avoid: Heat, incompatibles.

Section 11. Toxicological Information

Irritation Data: Skin, rabbit: 500 mg/24H severe; eye rabbit: 50 ug/24H severe.
Carcinogen: Not considered to be carcinogenic by ACGIH and IARC

Section 12. Ecological Information

Environmental Fate: No information found.
Environmental Toxicity: No information found.

Section 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use, or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14. Transport Information

Information not available.

Section 15. Regulatory Information

OSHA Hazard Communication Evaluation

Meets criteria for hazardous material, as defined by 29 CFR 1910.1200

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name	EpiNext™ RNA Bisulfite-Seq Kit (Illumina) Kit
Product No.	P-9006
Supplier	Epigentek Group Inc. 110 Bi County Blvd. Ste 122 Farmingdale, NY 11735
In Case of Emergency	631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
Conversion Powder
Cas# 7681-57-4

Section 3. Hazards Identification

Emergency Overview

Harmful if swallowed. Contact with acids liberates toxic gas.
Irritating to eyes and respiratory system. Moisture sensitive. Air sensitive.

Potential Health Effects

Eye:	Cause eye irritation.
Skin:	May cause skin irritation.
Ingestion:	Harmful if swallowed. May cause irritation of the digestive tract.
Inhalation:	Causes respiratory tract irritation.
Chronic:	Not available.

Section 4. First Aid Measures

Eye: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention.
Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes.
Ingestion: Get medical aid. Rinse mouth out with water.
Inhalation: Quickly move victim from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen supply.

Section 5. Fire Fighting Measures

General

Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible.

Extinguishing

Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition

Temperature: Not applicable.

Flash Point: Not available

NFPA Rating: Health 1; Flammability 0; instability 0.

Explosion Limits Not available.

Section 6. Accident Release Measures

General

Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks Sweep up then place into a suitable container for disposal. Avoid generating dusty conditions.

Section 7. Handling and Storage

Handling: Wash hands thoroughly after handling. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Keep container tightly closed. Avoid breathing dust.

Storage: Store in a cool, dry place. Store in a tightly closed container.

Section 8. Exposure Control and Personal Protection

Engineering

Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Eye: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Following the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Section 9. Physical and Chemical Properties

Physical State:	Solid
Appearance:	White
Odor:	Sulfur dioxide odor
pH:	Acidic in solution
Vapor Pressure:	Not applicable
Viscosity:	Not applicable
Vapor Density:	Not applicable
Boiling Point:	Not applicable
Freeze/Melting Point:	Not applicable
Decomposition Temperature:	Not applicable
Solubility:	Soluble
Specific Gravity/Density:	1.48

Section 10. Stability and reactivity

Chemical Stability:	Stable. However, may decompose if heated. Oxidizes when exposure to air. Moisture sensitive.
Conditions to Avoid:	Incompatible materials, exposure to air, acids, exposure to moist air or water, temperatures above 125°C.
Incompatibilities with Other Materials:	Strong oxidizing agents, acids, sodium nitrate.
Hazardous Decomposition Products:	Oxides of sulfur
Hazardous Polymerization:	Has not been reported.

Section 11. Toxicological Information

RTECS#:	CAS# 7681-57-4: UX8225000
LD50/LC50:	CAS# 7681-57-4: Dermal, guinea pig: LD50 > 1 g/kg; Oral, rat: LD50 = 1130-1900 mg/kg
Carcinogenicity:	CAS# 7681-57-4. ACS - ACGIH: A4 - Not Classifiable as a Human Carcinogen See actual entry in RTECS for complete information.

Section 12. Ecological Information

No information available.

Section 13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport Information

No information available

Section 15. Regulatory Information

US FEDERAL: Listed on the TSCA inventory.
International Regulations: European Labeling in Accordance with EC Directives
Hazard Symbols: XN

Section 16. Other Information

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Material Safety Data Sheet

Section 1. Identification

Product Name: EpiNext™ RNA Bisulfite-Seq Kit (Illumina) Kit
Product No. P-9006
Supplier Epigentek Group Inc.
110 Bi County Blvd. Ste. 122
Farmingdale, NY 11735

In Case of Emergency 631-755-0888

Section 2. Composition, Information on Ingredients

Ingredient Name
DTT
Cas# 3483-12-3

Section 3. Hazards Identification

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Can cause nausea, headache and vomiting. Exposure may result in blood in urine, difficulty breathing, irregular heartbeat, anemia, weakness, drunkenness, bluish skin color, lung congestion, kidney damage, paralysis, convulsions unconsciousness and coma. Thiols may cause central nervous system depression

Ingestion: Exposure can cause nausea, headache, vomiting, diarrhea, weakness, drunkenness, restlessness, bluish skin color, paralysis and coma.

Skin Contact: Causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin. May cause dermatitis.

Eye Contact: Causes irritation, redness, and pain.

Chronic Exposure: No information found.

Section 4. First Aid Measures

Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.
Eye Contact:	Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get medical attention if irritation persists.

Section 5. Fire Fight Measures

Fire	Flash point: > 109°C. As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.
Explosion	Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Extinguishing Media	Water spray, dry chemical, alcohol foam, or carbon dioxide.
Special Information	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6. Accident Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.

Section 7. Handling and Storage

Product must be refrigerated at 2 – 8°C (36 – 46°F). Keep in a tightly closed container. Protect against physical damage. Handle and store under nitrogen. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

Section 8. Exposure Control, Personal Protection

Airborne Exposure Limits	None established.
Ventilation System	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, <i>Industrial Ventilation, A Manual of Recommended Practices</i> , most recent edition, for details.
Personal Respirators	For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.
Skin Protection	Wear protective gloves and clean body-covering clothing.

Eye Protection Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9. Physical and Chemical Properties

Appearance	White crystals.
Odor	Thiol odor.
Solubility	Soluble in water.
Specific Gravity	1.0
pH	4.3 (5% solution)
% Volatiles by Volume	0
Boiling Point	125 – 130°C (257 – 266°F)
Melting Point	42 – 43°C (108 – 109°F)
Vapor Density (Air=1)	5.3
Vapor Pressure (mm Hg)	No information found.
Evaporation Rate (BuAc=1)	No information found.

Section 10. Stability and Reactivity

Stability	Stable under ordinary conditions of use and storage. Hygroscopic.
Decomposition Products	Burning may produce carbon monoxide, carbon dioxide, sulfur oxides.
Hazardous Polymerization	Will not occur.
Incompatibilities	Strong oxidizers.
Conditions to Avoid	Heat, flames, ignition sources and incompatibles.

Section 11. Toxicological Information

LD50	Oral rat LD50: 400 mg/kg.
Carcinogenicity	No information found.

Section 12. Ecological Information

No information available.

Section 13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14. Transport Information

No information available

Section 15. Regulatory Information

US FEDERAL:	Listed on the TSCA inventory.
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Section 16. Other Information

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