

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

A. PRODUCT IDENTIFIERS

PRODUCT NAME: **NEBNext® Enzymatic Methyl-seq Kit**
 PRODUCT NUMBER: **101977 (E7119B-TW1)**
 SYNONYMS: Methylating Kit

B. DETAILS OF SUPPLIER OF THE SAFETY DATA SHEET

COMPANY: Twist Bioscience
 681 Gateway Boulevard
 South San Francisco, CA 94080
 TELEPHONE: (415) 216-8966
 EMERGENCY PHONE #: In the event of chemical emergencies: Contact CHEMTREC 24 Hour Emergency Telephone:
 In US: 1-800-424-9300;
 International number (Outside the US): +1-703-741-5970

C. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE: For research and development purposes only.

SECTION 2: HAZARD IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory Sensitization Category 1

Hazard Statements

Danger

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



Product Number	Chemical Name	CAS No	Weight-%	Concentration of Composition
E7132	Proteinase K	39450-01-6	1 - 5	Trade Secret

Precautionary Statements – Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
 In case of inadequate ventilation wear respiratory protection

Precautionary Statements - Response

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing
 If experiencing respiratory symptoms: Get medical attention

Other information

Causes mild skin irritation

Supplier Information:

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Other Information:

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Despite the classification of certain products/components as hazardous or non-hazardous, we strongly recommend using prudent laboratory practices: avoiding unnecessary contact and use of personal protective equipment, which may include gloves, eye protection, and lab coats, during the use of any laboratory reagent. Twist Bioscience shall not be held liable for any damages resulting from handling or from contact with the above product.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance

Not Applicable

Mixture

Product Number	Product Name	Classification
*101977/E7119B-TW1	Custom NEBNext® Enzymatic Methyl-seq Kit	
E7122	Control DNA CpG methylated pUC19	Not Classified
E7123	Control DNA unmethylated Lambd	Not Classified
E7647	NEBNext® Ultra™ II End Prep Reaction Buffer	Not Classified
E7646	NEBNext® Ultra™ II End Prep Enzyme Mix	Not Classified
E7648	NEBNext® Ultra™ II Ligation Master Mix	Not Classified
E7374	NEBNext® Ligation Enhancer	Not Classified
E7124	Elution Buffer	Not Classified
E7126	TET2 Reaction Buffer	Not Classified
E7127	TET2 Reaction Buffer Supplement	Not Classified
E7128	Oxidation Supplement	Not Classified
E7129	Oxidation Enhancer	Not Classified
E7130	TET2	Not Classified
E7131	Fe (II) Solution	Not Classified
E7132	Stop Reagent	Category 1
E7133	APOBEC	Not Classified
E7134	APOBEC Reaction Buffer	Not Classified
E7135	BSA	Not Classified
E7136	NEBNext® Q5U™ Master Mix	Not Classified
E7139	DTT	Not Classified

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SECTION 4: FIRST AID MEASURES

SKIN CONTACT: Remove contaminated clothing. Flush affected area with water and then wash with soap or mild detergent and water. Observe for signs of irritation. If irritation is present, get medical attention.

EYE CONTACT: Wash eyes with large amounts of water or normal saline for a minimal time of 15 minutes. If irritation isn't available, seek medical attention.

INGESTION: Get medical attention.

INHALATION: Remove from exposure area to fresh air immediately. Get medical attention immediately.

INJECTION: If accidentally injected, get medical attention.

NOTE TO PHYSICIAN: There is no specific antidote. Treat symptomatically and supportively as needed.

SECTION 5: FIRE FIGHTING MEASURES

Fire and Explosion Hazard: None known to exist.

Fire Extinguishing Media: Dry chemical, foam, carbon dioxide or water. Warning: Take precaution not to aerosolize the powder, where it could become an inhalation risk.

SECTION 6: ACCIDENTAL RELEASE MEASURES

OCCUPATIONAL SPILL: Wear appropriate protective clothing, safety glasses and chemically compatible gloves. Place contaminated material spillage in appropriate container for waste disposal according to site regulation. Wash contaminated clothing before reuse.

REPORTABLE QUANTITY (RQ): N/A

SECTION 7: HANDLING AND STORING

Observe all federal, state and local regulations. Avoid contact with eyes, skin and clothing. Wash hands thoroughly after handling. Keep tightly closed. Store at -80 °C. Use good laboratory practices for handling and storage of chemical substances of unknown toxicity.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

Product Number	Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
E7131	Trade Secret	TWA: 1 mg/m ³ Fe	(vacated) TWA: 1 mg/m ³ Fe	TWA: 1 mg/m ³ Fe

EXPOSURE CONTROLS: Use good laboratory practices for handling chemical substances of unknown toxicity. Use in a laboratory hood or other ventilated device. OSHA, ACGIH, or NIOSH has not established occupational exposure limits for this substance.

EYE PROTECTION: Wear safety goggles to prevent eye contact with this substance.

CLOTHING: Wear appropriate protective clothing (laboratory coat with long sleeves) and equipment to prevent skin contact with this material.

GLOVES: Wear appropriate protective gloves to prevent contact with this material.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Product Number	Product Name	Physical State	Appearance	Odor	Odor Threshold	pH
*101977/E7119B-TW1	Custom NEBNext® Enzymatic Methyl-seq Kit					
E7122	Control DNA CpG methylated pUC19	Liquid	Clear	None	N/A	8
E7123	Control DNA unmethylated Lambd	Liquid	Clear	None	N/A	8
E7647	NEBNext® Ultra™ II End Prep Reaction Buffer	Liquid	Colorless	Mild	N/A	N/A
E7646	NEBNext® Ultra™ II End Prep Enzyme Mix	Liquid	Colorless	Mild	N/A	N/A
E7648	NEBNext® Ultra™ II Ligation Master Mix	Liquid	Colorless	Mild	N/A	N/A
E7374	NEBNext® Ligation Enhancer	Liquid	Colorless	Mild	N/A	N/A
E7124	Elution Buffer	Liquid	Clear	None	N/A	8
E7126	TET2 Reaction Buffer	Liquid	Clear	None	N/A	8
E7127	TET2 Reaction Buffer Supplement	Liquid	Clear	None	N/A	8
E7128	Oxidation Supplement	Liquid	Colorless	None	N/A	N/A
E7129	Oxidation Enhancer	Liquid	Colorless	Mild	N/A	N/A
E7130	TET2	Liquid	Colorless	Mild	N/A	N/A
E7131	Fe (II) Solution	Liquid	Clear	Mild	N/A	N/A
E7132	Stop Reagent	Liquid	Colorless	Mild	N/A	7.4
E7133	APOBEC	Liquid	Clear	None	N/A	7.4
E7134	APOBEC Reaction Buffer	Liquid	Clear	None	N/A	6
E7135	BSA	Liquid	Clear	Mild	N/A	N/A
E7136	NEBNext® Q5U™ Master Mix	Liquid	Clear	Slight	N/A	8.6
E7139	DTT	Liquid	Clear	Mild	N/A	8

*No data available for:

Melting point / freezing point	Upper flammability or explosive limits	Flammability (solid, gas)	Water solubility	Dynamic viscosity
Boiling point / boiling range	Lower flammability or explosive limits	Flammability Limit in Air	Autoignition temperature	Kinematic viscosity
Flash point	Vapor pressure	Vapor density	Decomposition temperature	
Evaporation rate	Partition coefficient	Relative density		

SECTION 10: STABILITY AND REACTIVITY

 STABILITY:
 REACTIVITY:

 Stable under typical conditions of use and storage.
 N/A

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SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY:

Product Number	Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
E7131	Trade Secret	= 3250 mg/kg (Rat)	--	--
*E7136	Trade Secret	= 14500 mg/kg (Rat) = 28300 mg/kg (Rat)	= 40 g/kg (Rat)	> 5.33 mg/L (Rat) 4 h
E7136	Trade Secret	= 2600 mg/kg (Rat)	--	--
E7647	Trade Secret	= 2800 mg/kg (Rat)	--	--

*Respiratory or skin sensitization - May cause sensitization by inhalation.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY

Product Number	Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
E7136	Trade Secret	EC50: 12350 - 25500mg/L (96h, Skeletonema costatum)	LC50: 33 - 37g/L (96h, <i>Oncorhynchus mykiss</i>) LC50: =41.7g/L (96h, <i>Cyprinus carpio</i>) LC50: >40g/L (96h, <i>Lepomis macrochirus</i>) LC50: =34000mg/L (96h, <i>Pimephales promelas</i>)	--	EC50: =7000mg/L (24h, <i>Daphnia</i> species)
E7136	Trade Secret	EC50: =2500mg/L (72h, <i>Desmodesmus subspicatus</i>)	LC50: =1060mg/L (96h, <i>Lepomis macrochirus</i>) LC50: 750 - 1020mg/L (96h, <i>Pimephales promelas</i>)	--	EC50: =83mg/L (48h, <i>Daphnia magna</i>) EC50: =825mg/L (48h, <i>Daphnia magna</i>)
E7647	Magnesium Chloride	EC50: >82.7mg/L (72h, <i>Pseudokirchneriell</i>)	LC50: =4210mg/L (96h, <i>Gambusia affinis</i>) LC50: 1970 - 3880mg/L (96h, <i>Pimephales promelas</i>)	--	EC50: =140mg/L (48h, <i>Daphnia magna</i>) EC50: =1400mg/L (24h, <i>Daphnia magna</i>)

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state and local environmental control regulations.

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SECTION 14: TRANSPORT INFORMATION

Ship as non-regulated material, no transportation restrictions apply.

SECTION 15: REGULATORY INFORMATION

California Proposition 65

This product contains the following Proposition 65 chemicals.

Product Number	Chemical Name	California Proposition 65
E7131	Trade Secret	Carcinogen

U.S. State Right-To-Know

Product Number	Chemical Name	U.S. State Right-to-Know
E7131	Trade Secret	Pennsylvania
E7136	Trade Secret	New Jersey

SECTION 16: OTHER INFORMATION

POTENTIAL HEALTH EFFECTS:

SKIN CONTACT:	Short Term Exposure: Possible Irritant Long Term Exposure: No information available
EYE CONTACT:	Short Term Exposure: Possible Irritant Long Term Exposure: No information available
INGESTION:	Short Term Exposure: Possible Irritant Long Term Exposure: No information available
INHALATION:	Short Term Exposure: Possible Irritant Long Term Exposure: No information available
INJECTION:	Short Term Exposure: No information available Long Term Exposure: No information available

THE AFOREMENTIONED INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. TWIST BIOSCIENCE SHALL NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING OR FROM CONTACT WITH THE ABOVE PRODUCT.

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