

SAFETY DATA SHEET

SDS DATE: September 1, 2020



SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: DNA Bisulfite Conversion Kit II
PRODUCT CODES: Cat# K1479-96-1, -4
RESTRICTIONS ON USE: For laboratory research purposes. Not for drug or household use.
MANUFACTURER: BioVision, Inc.
ADDRESS: 155 S. Milpitas Boulevard, Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801
EMAIL: sds@biovision.com

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	K1479-96-1 (1 pack)	K1479-96-4 (4 packs)	Safety Information
*CT Conversion Reagent	Contains Sodium metabisulfite	1 bottle	4 bottles	See Below
Dilution Buffer	Liquid (Contains Sodium hydroxide)	3.5 ml	14 ml	See Below
Dissolving Buffer	Liquid (Contains N,N-Dimethylformamide)	600 µl	2 x 1.2 ml	See Below
Binding Buffer	Liquid (Contains Guanidine hydrochloride)	60 ml	2 x 120 ml	See Below
**Wash Buffer	Liquid	15 ml	2 x 25 ml	No hazards
Desulphonation Buffer	Liquid (Contains Sodium hydroxide & Ethyl alcohol)	20 ml	80 ml	See Below
Elution Buffer	Liquid	2 x 1.5 ml	15 ml	No hazards
MagPure Beads	--	2 ml	8 ml	No hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula	Concentration
Sodium metabisulfite	7681-57-4	231-673-0	190.11	Na ₂ O ₅ S ₂	<90-100%
Sodium hydroxide	1310-73-2	215-185-5	40.00	NaOH	<5%
N,N-Dimethylformamide	68-12-2	200-679-5	73.09	C ₃ H ₇ NO	<80%
Guanidine hydrochloride	50-01-1	200-002-3	95.53	CH ₅ N ₃ · HCl	50%
Sodium hydroxide	1310-73-2	215-185-5	40.00	NaOH	<2.5%
Ethyl alcohol	64-17-5	200-578-6	46.07	C ₂ H ₆ O	<70%

*CT Conversion Reagent

Emergency Overview

GHS Classification: Acute oral toxicity Category 4
Serious eye damage/irritation Category 1

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H302 Harmful if swallowed
H318 Causes serious eye damage.

Precautionary statement(s): P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 - Rinse mouth.
P501 - Dispose of contents/container to an approved waste disposal plant.

SAFETY DATA SHEET

SDS DATE: September 1, 2020

HMIS Classification

Health hazard: 2
 Chronic Health Hazard: *
 Flammability: 0
 Physical hazards: 0

Dilution Buffer

Emergency Overview

GHS Classification: Skin corrosion/irritation Category 1B
 Serious eye damage/irritation Category 1

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Danger

Hazard statement(s):

H314 Causes severe skin burns and eye damage.

Precautionary statement(s):

P264 - Wash hands thoroughly after handling
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 - Immediately call a POISON CENTER or doctor/physician.
 P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
 P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 3
 Chronic Health Hazard: *
 Flammability: 0
 Physical hazards: 0

Dissolving Buffer

Emergency Overview

GHS Classification: Reproductive Toxicity Category 1A
 Serious eye damage/irritation Category 2
 GHS Physical Hazard Category Number Category 3

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Danger

Hazard statement(s):

H319 Causes serious eye irritation.
 H226 Flammable liquid and vapor.
 H360 May damage fertility or the unborn child.

Precautionary statement(s):

P201 - Obtain special instructions before use
 P202 - Do not handle until all safety precautions have been read and understood
 P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
 P264 - Wash hands thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308 + P311 - IF exposed or concerned: Call a POISON CENTER or doctor.
 P337 + P313 - If eye irritation persists: Get medical advice/attention.
 P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
 P403 + P235 - Store in a well-ventilated place. Keep cool.
 P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 4
 Chronic Health Hazard: *
 Flammability: 3
 Physical hazards: 0

Binding Buffer

Emergency Overview

SAFETY DATA SHEET

SDS DATE: September 1, 2020

GHS Classification: Acute oral toxicity Category 4
Skin corrosion/irritation Category 2
Serious eye damage/irritation Category 2

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Warning

Hazard statement(s): H319 Causes serious eye irritation.
H302 Harmful if swallowed.
H315 Causes skin irritation.

Precautionary statement(s): P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330 - Rinse mouth.
P362 + P364 - Take off all contaminated clothing and wash it before reuse.
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 1

Chronic Health Hazard: *

Flammability: 0

Physical hazards: 0

Desulphonation Buffer

Emergency Overview

GHS Classification: Skin corrosion/irritation Category 1
Specific target organ systemic toxicity (single exposure) Category 3
Serious eye damage/irritation Category 1
GHS Physical Hazard 1 Flammable liquids
GHS Physical Hazard Category Number Category 3

GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H226 Flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.

Precautionary statement(s): P264 - Wash hands thoroughly after handling
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P233 - Keep container tightly closed
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 - Immediately call a POISON CENTER or doctor/physician.
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents/container to an approved waste disposal plant.

HMIS Classification

Health hazard: 3

Chronic Health Hazard: *

Flammability: 3

Physical hazards: 0

SECTION 4: FIRST AID MEASURES

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Immediate medical attention is required.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Get medical attention if

SAFETY DATA SHEET

SDS DATE: September 1, 2020

symptoms occur.

Inhalation Remove to fresh air. If not breathing, give artificial respiration. If symptoms persist, call a physician.

Notes to Physician Treat symptomatically.



SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.

Unsuitable extinguishing media No information available.

Special hazards arising from the substance or mixture Not known

Protective equipment and precautions for firefighters Standard procedure for chemical fires.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation. Always wear recommended Personal Protective Equipment. Use personal protection equipment

Environmental precautions No special environmental precautions required.

Methods and material for containment and cleaning up Take up mechanically, placing in appropriate containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling Use personal protective equipment as required. No special handling advices are necessary.

Conditions for safe storage, including any incompatibilities Keep in a dry, cool and well-ventilated place. Keep in properly labeled containers.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering Measures

Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal Protective Equipment

Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand protection

Wear suitable gloves. Glove material: Compatible chemical-resistant gloves.

Eye protection

Tight sealing safety goggles.

Skin and Body Protection

Wear suitable protective clothing.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

Prevent product from entering drains. Do not allow material to contaminate ground water system.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	*CT Conversion Reagent	Dilution Buffer	Dissolving Buffer	Binding Buffer	Desulphonation Buffer
Appearance:	Powder			Liquid	
pH:					
Water Solubility:					
Other Solubility:					
Boiling Point (°C):					
Melting Point (°C):					
Flash Point (°C):					
Ignition Temperature (°C):					
Density:					

SECTION 10: STABILITY AND REACTIVITY

Property	*CT Conversion Reagent	Dilution Buffer	Dissolving Buffer	Binding Buffer	Desulphonation Buffer
Chemical stability:					
Conditions to avoid:					
Materials to avoid:					
Hazardous decomposition products:					

SAFETY DATA SHEET

SDS DATE: September 1, 2020



SECTION 11: TOXICOLOGICAL INFORMATION

*CT Conversion Reagent

Chemical Name	ID50 (oral, rat/mouse)	ID50 (dermal, rat/rabbit)	ID50 (inhalation, rat/mouse)
Sodium metabisulfite	1310 mg/kg	No data available	No data available

Principal Routes of Exposure

Irritation Serious Eye Damage / Eye Irritation.

Corrosivity Data are conclusive but insufficient for classification

Sensitization Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT)–single exposure May cause drowsiness or dizziness

Specific target organ toxicity (STOT)–repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

Desulphonation Buffer

Chemical Name	ID50 (oral, rat/mouse)	ID50 (dermal, rat/rabbit)	ID50 (inhalation, rat/mouse)
Sodium hydroxide	500 mg/kg	1350 mg/kg	No data available
Ethyl alcohol	7060 mg/kg	No data available	124.7 mg/L

Principal Routes of Exposure

Irritation Serious Eye Damage / Eye Irritation.

Corrosivity Causes severe skin burn and eye damage

Sensitization Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT)–single exposure May cause drowsiness or dizziness

Specific target organ toxicity (STOT)–repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

Dilution Buffer

Chemical Name	ID50 (oral, rat/mouse)	ID50 (dermal, rat/rabbit)	ID50 (inhalation, rat/mouse)
Sodium hydroxide	500 mg/kg	1350 mg/kg	No data available

Principal Routes of Exposure

Irritation Causes severe burns.

Corrosivity Causes severe skin burns and eye damage

Sensitization Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT)–single exposure May cause drowsiness or dizziness

Specific target organ toxicity (STOT)–repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

Dissolving Buffer

Chemical Name	ID50 (oral, rat/mouse)	ID50 (dermal, rat/rabbit)	ID50 (inhalation, rat/mouse)
N,N-Dimethylformamide	2000 mg/kg	No data available	No data available

Irritation Serious Eye Damage / Eye Irritation

Corrosivity Data are conclusive but insufficient for classification

Sensitization Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT)–single exposure May cause drowsiness or dizziness

Specific target organ toxicity (STOT)–repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

Binding Buffer

Chemical Name	ID50 (oral, rat/mouse)	ID50 (dermal, rat/rabbit)	ID50 (inhalation, rat/mouse)
Guanidine hydrochloride	475mg/kg	>2000 mg/kg	No data available

Principal Routes of Exposure

Irritation Serious Eye Damage / Eye Irritation.

Corrosivity Data are conclusive but insufficient for classification

Sensitization Data are conclusive but insufficient for classification

Specific target organ toxicity (STOT)–single exposure May cause drowsiness or dizziness

SAFETY DATA SHEET



SDS DATE: September 1, 2020

Specific target organ toxicity (STOT)–repeated exposure Data are conclusive but insufficient for classification

Carcinogenicity Data are conclusive but insufficient for classification

Germ cell mutagenicity Data are conclusive but insufficient for classification

Reproductive toxicity Data are conclusive but insufficient for classification

Aspiration hazard Data are conclusive but insufficient for classification

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Results of PBT and vPvB assessment This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other adverse effects No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in accordance with approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations. Do not empty into drains. Do not dispose of waste into sewer.

SECTION 14: TRANSPORT INFORMATION

***CT Conversion Reagent & Desulphonation Buffer**

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: No known OSHA hazards

SARA 302 Components: SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 313.

SARA 311/312 Hazards: No SARA Hazards

Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: No components are subject to the Pennsylvania Right to Know Act.

New Jersey Right To Know Components: No components are subject to the New Jersey Right to Know Act.

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations: This product is not classified according to the EU regulations.

Component	Risk Phrases	Safety Phrases
*CT Conversion Reagent	--	--
Dilution Buffer	--	--
Dissolving Buffer	--	--
Binding Buffer	--	--
Desulphonation Buffer	--	--

SECTION 16: OTHER INFORMATION

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.