

## MPLC Total NA Isolation Kit-Large Volume

Version  
1.4

Revision Date:  
08-02-2018

Date of last issue: 06-15-2018  
Date of first issue: 11-12-2015

### SECTION 1. IDENTIFICATION

Product name : MPLC Total NA Isolation Kit-Large Volume

Product code : 03264793001

#### Manufacturer or supplier's details

Company name of supplier : Roche Diagnostics

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Address : 9115 Hague Road  
46250 Indianapolis IN  
USA

Telephone : 1-800-428-5074

Emergency telephone

In case of emergencies: : CHEMTREC 1-800-424-9300 (U.S. or Canada)  
1-703-527-3887 (International)

#### Recommended use of the chemical and restrictions on use

Restrictions on use : For professional users only.

### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with 29 CFR 1910.1200

The product is a kit consisting of individual ingredients. The classification of the ingredients can be obtained from section 3. Section Label elements contains the resulting labelling for the kit

#### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.  
H302 + H332 Harmful if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H336 May cause drowsiness or dizziness.  
H350 May cause cancer.

Precautionary Statements :

#### Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

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and understood.  
P210 Keep away from heat/sparks/open flames/hot surfaces.  
No smoking.  
P233 Keep container tightly closed.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ 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.  
P272 Contaminated work clothing must not be allowed out of the workplace.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. 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.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**
***Wash Buffer I (WB I) / Inhib. Removal Buffer***
**GHS Classification**

Flammable liquids : Category 3

Acute toxicity (Oral) : Category 4

Skin irritation : Category 2

Eye irritation : Category 2A

Carcinogenicity : Category 1A

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Guanidine, hydrochloride (1:1)	50-01-1	>= 30 - < 50
Ethanol	64-17-5	>= 20 - < 30

***Wash Buffer II (WB II)***
**GHS Classification**

Flammable liquids : Category 3

Carcinogenicity : Category 1A

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Ethanol	64-17-5	>= 30 - < 50

***Wash Buffer III***
**GHS Classification**

Not a hazardous substance or mixture.

**Hazardous ingredients**

No hazardous ingredients

***Lysis/Binding Buffer***
**GHS Classification**

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin corrosion : Category 1B

Serious eye damage : Category 1

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**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Thiocyanic acid, compd. with guanidine (1:1)	593-84-0	>= 30 - < 50
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9002-93-1	>= 20 - < 30

**Proteinase K**
**GHS Classification**

Skin irritation : Category 2

Eye irritation : Category 2A

Respiratory sensitization : Category 1

Skin sensitization : Category 1

Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system)

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
Proteinase K	39450-01-6	>= 70 - < 90

**Elution Buffer**
**GHS Classification**

Not a hazardous substance or mixture.

**Hazardous ingredients**

No hazardous ingredients

**MGPs**
**GHS Classification**

Flammable liquids : Category 2

Eye irritation : Category 2A

Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)

**Hazardous ingredients**

Chemical name	CAS-No.	Concentration (% w/w)
2-Propanol	67-63-0	>= 90 - <= 100

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### SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.  
Consult a physician.  
Show this material safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : Call a physician or poison control center immediately.  
Move to fresh air.  
If unconscious, place in recovery position and seek medical advice.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.  
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
Continue rinsing eyes during transport to hospital.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : No information available.
- Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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### SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet

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- Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Sulfur oxides  
Hydrogen cyanide (hydrocyanic acid)
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.  
For safety reasons in case of fire, cans should be stored separately in closed containments.  
Use a water spray to cool fully closed containers.
- Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Evacuate personnel to safe areas.  
Refer to protective measures listed in sections 7 and 8.  
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion : Do not spray on a naked flame or any incandescent material.  
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).  
Use only explosion-proof equipment.  
Keep away from open flames, hot surfaces and sources of ignition.
- Advice on safe handling : Avoid formation of aerosol.  
Do not breathe vapors/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.

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For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Take precautionary measures against static discharges.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Open drum carefully as content may be under pressure.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
To prevent leaks or spillages from spreading, provide a suitable liquid retention system.

- Conditions for safe storage : No smoking.  
Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Electrical installations / working materials must comply with the technological safety standards.
- Technical measures/Precautions : See label, package insert or internal guidelines
- Further information on storage stability : No decomposition if stored and applied as directed.

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**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**
***Wash Buffer I (WB I) / Inhib. Removal Buffer***
**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA P0
		STEL	1,000 ppm	ACGIH

***Wash Buffer II (WB II)***
**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethanol	64-17-5	TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	NIOSH REL

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		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	OSHA P0
		STEL	1,000 ppm	ACGIH

**Wash Buffer III**
**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Lysis/Binding Buffer**
**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

**Proteinase K**
**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Proteinase K	39450-01-6	IOEL	0.00006 mg/m <sup>3</sup>	Roche Industrial Hygiene Committee (RIHC)

**Elution Buffer**
**Ingredients with workplace control parameters**

Contains no substances with occupational exposure limit values.

**MGPs**
**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m <sup>3</sup>	NIOSH REL
		ST	500 ppm 1,225 mg/m <sup>3</sup>	NIOSH REL
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA Z-1
		TWA	400 ppm 980 mg/m <sup>3</sup>	OSHA P0
		STEL	500 ppm 1,225 mg/m <sup>3</sup>	OSHA P0



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**Biological occupational exposure limits**

Ingredients	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-Propanol	67-63-0	Acetone	Urine	End of shift at end of work-week	40 mg/l	ACGIH BEI

**Engineering measures** : No data available

**Personal protective equipment**

Respiratory protection : In the case of vapor formation use a respirator with an approved filter.

Hand protection

Material : Protective gloves

 Remarks : Wear appropriate protective gloves to prevent skin contact.  
Replace torn or punctured gloves promptly.

 Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

 Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

 Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

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**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**
***Wash Buffer I (WB I) / Inhib. Removal Buffer***

 Appearance : liquid  
 Color : colorless  
 Odor : characteristic  
 Odor Threshold : No data available  
 pH : 6.6 (25 °C / 25 °C)  
 Melting point/range : No data available

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Boiling point/boiling range	:	No data available
Flash point	:	29 °C / 29 °C
Evaporation rate	:	No data available
Self-ignition	:	425 °C / 425 °C
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	43 hPa
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	1.057 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

***Wash Buffer II (WB II)***

Appearance	:	liquid
Color	:	colorless
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	7.4

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Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	25 °C / 25 °C
Evaporation rate	:	No data available
Self-ignition	:	425 °C / 425 °C
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	43 hPa
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.93 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

***Wash Buffer III***

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available

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pH	:	4.0
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

***Lysis/Binding Buffer***

Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
pH	:	6.0 - 7.0

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Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	The product is not flammable.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	Hazardous decomposition products formed under fire conditions.
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

***Proteinase K***

Appearance	:	solid, (lyophilized)
Color	:	white
Odor	:	very faint

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Odor Threshold	:	Not applicable
pH	:	6.5 (as aqueous solution)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	does not flash
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Sustains combustion
Flammability (liquids)	:	Sustains combustion
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	Not applicable
Relative density	:	No data available
Bulk density	:	ca. 35 kg/m <sup>3</sup>
Solubility(ies)		
Water solubility	:	soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	Decomposes on heating.
Viscosity		
Viscosity, dynamic	:	Not applicable
Viscosity, kinematic	:	Not applicable
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

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Appearance	:	liquid
Color	:	colorless
Odor	:	none
Odor Threshold	:	No data available
pH	:	8.0
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	The product is not flammable.
Flammability (liquids)	:	Does not sustain combustion.
Self-ignition	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapor pressure	:	No data available
Relative vapor density	:	No data available
Relative density	:	No data available
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

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Appearance	:	liquid
Color	:	black, brown
Odor	:	alcohol-like
Odor Threshold	:	No data available
pH	:	No data available
Melting point/range	:	-89 °C / -89 °C
Boiling point/boiling range	:	82 °C / 82 °C
Flash point	:	12 °C / 12 °C
Evaporation rate	:	No data available
Self-ignition	:	485 °C / 485 °C
Upper explosion limit / Upper flammability limit	:	13.4 %(V)
Lower explosion limit / Lower flammability limit	:	2 %(V)
Vapor pressure	:	42 hPa (20 °C / 20 °C)
Relative vapor density	:	No data available
Relative density	:	No data available
Density	:	0.78 g/cm <sup>3</sup>
Solubility(ies)		
Water solubility	:	completely miscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Autoignition temperature	:	425 °C / 425 °C
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	2.2 mPa.s (20 °C / 20 °C)
Viscosity, kinematic	:	No data available



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Oxidizing properties : The substance or mixture is not classified as oxidizing.

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : Toxic gases may be released if in contact with the following:  
sodium hypochlorite  
Acids  
Strong oxidizing agents  
No decomposition if stored and applied as directed.  
Vapors may form explosive mixture with air.

Conditions to avoid : Heat, flames and sparks.

Incompatible materials : Strong acids  
Strong oxidizing agents  
Cyanides  
sodium hypochlorite

Hazardous decomposition products : In case of fire hazardous decomposition products may be produced such as:  
Carbon oxides  
Nitrogen oxides (NOx)  
Sulfur oxides  
Hydrogen cyanide (hydrocyanic acid)

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**SECTION 11. TOXICOLOGICAL INFORMATION*****Wash Buffer I (WB I) / Inhib. Removal Buffer*****Acute toxicity**

Harmful if swallowed.

**Ingredients:****Guanidine, hydrochloride (1:1):**

Acute oral toxicity : LD50 Oral (Rat): 475 mg/kg  
LD50 Oral (Mouse): 571 mg/kg  
LD50 Oral (Rat): 1,120 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 3.2 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
LC50 (Rat, male and female): 5.3 mg/l  
Exposure time: 4 h

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Test atmosphere: dust/mist

LC50 (Rat, male): 7.7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 Dermal (Rabbit): &gt; 2,001 mg/kg

**Ethanol:**

Acute oral toxicity : LD50 Oral (Rat): 7,060 mg/kg

LD50 Oral (Mouse): 3,450 mg/kg

Acute inhalation toxicity : LC50 (Rat): 20000 ppm  
Exposure time: 10 h  
Test atmosphere: vaporLC50 (Mouse): 39 g/m<sup>3</sup>  
Exposure time: 4 h  
Test atmosphere: vapor**Skin corrosion/irritation**

Causes skin irritation.

**Ingredients:****Guanidine, hydrochloride (1:1):**Species : Rabbit  
Result : Irritating to skin.**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Ingredients:****Guanidine, hydrochloride (1:1):**Species : Rabbit  
Result : Irritating to eyes.**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Ingredients:****Guanidine, hydrochloride (1:1):**

Assessment : Did not cause sensitization on laboratory animals.

**Germ cell mutagenicity**

Not classified based on available information.

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**Ingredients:**
**Guanidine, hydrochloride (1:1):**

Germ cell mutagenicity - : Not mutagenic in Ames Test.  
Assessment

**Carcinogenicity**

May cause cancer.

**IARC** Group 1: Carcinogenic to humans  
Ethanol 64-17-5

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Further information**
***Wash Buffer II (WB II)***
**Acute toxicity**

Not classified based on available information.

**Ingredients:**
**Ethanol:**

Acute oral toxicity : LD50 Oral (Rat): 7,060 mg/kg  
LD50 Oral (Mouse): 3,450 mg/kg

Acute inhalation toxicity : LC50 (Rat): 20000 ppm  
Exposure time: 10 h  
Test atmosphere: vapor

LC50 (Mouse): 39 g/m<sup>3</sup>  
Exposure time: 4 h  
Test atmosphere: vapor

**Skin corrosion/irritation**

Not classified based on available information.

**MPLC Total NA Isolation Kit-Large Volume**Version  
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Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

May cause cancer.

**IARC** Group 1: Carcinogenic to humans  
Ethanol

64-17-5

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**Further information*****Wash Buffer III*****Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

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**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

***Lysis/Binding Buffer***
**Acute toxicity**

Harmful if swallowed or if inhaled.

**Ingredients:**
**Thiocyanic acid, compd. with guanidine (1:1):**

Acute oral toxicity : LD50 Oral (Rat): 593 mg/kg  
Symptoms: Vomiting

Acute inhalation toxicity : Acute toxicity estimate: 1.5 mg/l  
Test atmosphere: dust/mist  
Method: Expert judgment

Acute dermal toxicity : Acute toxicity estimate: 1,100 mg/kg  
Method: Expert judgment

**Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-:**

Acute oral toxicity : LD50 Oral (Rat): 1,900 - 5,000 mg/kg

Acute toxicity estimate: 500 mg/kg  
Method: Expert judgment

Acute dermal toxicity : LD50 Dermal (Rabbit): > 3,000 mg/kg

**Skin corrosion/irritation**

Causes severe burns.

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Result : Causes burns.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Ingredients:****Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-:**

Result : Risk of serious damage to eyes.

Remarks : May cause irreversible eye damage.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**Ingredients:****Thiocyanic acid, compd. with guanidine (1:1):**

Remarks : No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

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Not classified based on available information.

**Skin corrosion/irritation**

Causes skin irritation.

**Ingredients:****Proteinase K:**

Result : Irritating to skin.  
Remarks : May cause skin irritation and/or dermatitis.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

**Ingredients:****Proteinase K:**

Result : Irritating to eyes.  
Remarks : May cause irreversible eye damage.

**Respiratory or skin sensitization****Skin sensitization**

May cause an allergic skin reaction.

**Respiratory sensitization**

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

**Ingredients:****Proteinase K:**

Assessment : May cause sensitization by skin contact.  
Remarks : Causes sensitization.

Assessment : May cause sensitization by inhalation.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Not classified based on available information.

**STOT-single exposure**

May cause respiratory irritation.

**Ingredients:****Proteinase K:**

Assessment : May cause respiratory irritation.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:****Proteinase K:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity**

Not classified based on available information.

**Ingredients:****Proteinase K:**

No data available

***Elution Buffer*****Acute toxicity**

Not classified based on available information.

**Skin corrosion/irritation**

Not classified based on available information.

**Serious eye damage/eye irritation**

Not classified based on available information.

**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.



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**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

Not classified based on available information.

**STOT-repeated exposure**

Not classified based on available information.

**Aspiration toxicity**

Not classified based on available information.

**MGPs****Acute toxicity**

Not classified based on available information.

**Ingredients:****2-Propanol:**

Acute oral toxicity : LD50 Oral (Rat): 4,570 mg/kg  
LD50 Oral (Mouse): 3,600 mg/kg  
LD50 Oral (Rabbit): 6,410 mg/kg

Acute inhalation toxicity : LC50 (Rat): 30 mg/l, 16000 ppm  
Exposure time: 4 h  
Test atmosphere: vapor  
LC50 (Mouse): 53 mg/l  
Test atmosphere: vapor

Acute dermal toxicity : LD50 Dermal (Rabbit): 13,400 mg/kg

**Skin corrosion/irritation**

Not classified based on available information.

**Ingredients:****2-Propanol:**

Remarks : May cause skin irritation in susceptible persons.

**Serious eye damage/eye irritation**

Causes serious eye irritation.

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Remarks : May cause irreversible eye damage.**Respiratory or skin sensitization****Skin sensitization**

Not classified based on available information.

**Respiratory sensitization**

Not classified based on available information.

**Germ cell mutagenicity**

Not classified based on available information.

**Carcinogenicity**

Not classified based on available information.

**IARC** No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.**OSHA** No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.**NTP** No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.**Reproductive toxicity**

Not classified based on available information.

**STOT-single exposure**

May cause drowsiness or dizziness.

**Ingredients:****2-Propanol:**

Assessment : May cause drowsiness or dizziness.

**STOT-repeated exposure**

Not classified based on available information.

**Ingredients:****2-Propanol:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration toxicity**

Not classified based on available information.

**Further information**

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Date of first issue: 11-12-2015**SECTION 12. ECOLOGICAL INFORMATION*****Wash Buffer I (WB I) / Inhib. Removal Buffer*****Ecotoxicity****Ingredients:****Guanidine, hydrochloride (1:1):**Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 1,759 mg/l  
Exposure time: 48 hToxicity to microorganisms : EC50 (Pseudomonas putida): 89 mg/l  
Exposure time: 18 h**Ecotoxicology Assessment**

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to  
the environment : No data available**Ethanol:**Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 8,100 mg/l  
Exposure time: 48 hLC50 (Oncorhynchus mykiss (rainbow trout)): 7,100 mg/l  
Method: OECD Test Guideline 203  
GLP: noToxicity to daphnia and other  
aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5,400 mg/l  
Exposure time: 48 h  
GLP: noToxicity to algae : EC0 (Scenedesmus quadricauda (Green algae)): 5,000 mg/l  
Exposure time: 7 dToxicity to microorganisms : EC0 (Pseudomonas putida): 6,500 mg/l  
Exposure time: 16 h**Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to  
the environment : No data available

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Biodegradability : Biodegradation: < 70 %  
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Impact on Sewage Treatment : Do not discharge product into the aquatic environment without pretreatment (biological treatment plant).

**Ethanol:**

Biodegradability : Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
Remarks: Readily biodegradable, according to appropriate OECD test.

**Bioaccumulative potential****Ingredients:****Guanidine, hydrochloride (1:1):**

Partition coefficient: n-octanol/water : log Pow: ca. -1.7 (20 °C / 20 °C)

**Ethanol:**

Partition coefficient: n-octanol/water : Remarks: No data available

**Mobility in soil**

No data available

**Other adverse effects*****Wash Buffer II (WB II)*****Ecotoxicity****Ingredients:****Ethanol:**

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 8,100 mg/l  
Exposure time: 48 h  
  
LC50 (Oncorhynchus mykiss (rainbow trout)): 7,100 mg/l  
Method: OECD Test Guideline 203  
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5,400 mg/l  
Exposure time: 48 h  
GLP: no

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Toxicity to algae : EC0 (Scenedesmus quadricauda (Green algae)): 5,000 mg/l  
Exposure time: 7 d

Toxicity to microorganisms : EC0 (Pseudomonas putida): 6,500 mg/l  
Exposure time: 16 h

**Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to  
the environment : No data available**Persistence and degradability****Ingredients:****Ethanol:**Biodegradability : Biodegradation: 97 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
Remarks: Readily biodegradable, according to appropriate  
OECD test.**Bioaccumulative potential****Ingredients:****Ethanol:**Partition coefficient: n-  
octanol/water : Remarks: No data available**Mobility in soil**

No data available

**Other adverse effects*****Wash Buffer III*****Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects*****Lysis/Binding Buffer***

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Date of first issue: 11-12-2015**Ecotoxicity****Ingredients:****Thiocyanic acid, compd. with guanidine (1:1):**Toxicity to fish : LC50 (Poecilia reticulata (guppy)): 89.1 mg/l  
Exposure time: 96 hNOEC (Poecilia reticulata (guppy)): 25 mg/l  
Exposure time: 96 hToxicity to daphnia and other : EC50 (Daphnia): 42.4 mg/l  
aquatic invertebrates Exposure time: 48 hNOEC (Daphnia magna (Water flea)): 6.25 mg/l  
Exposure time: 48 h**Ecotoxicology Assessment**

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to : No data available  
the environment**Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-:**Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 4 - 8.9 mg/l  
Exposure time: 96 hToxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 18 - 26 mg/l  
aquatic invertebrates Exposure time: 48 h**Ecotoxicology Assessment**

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to : No data available  
the environment**Persistence and degradability****Ingredients:****Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-:**Biodegradability : Biodegradation: > 60 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
Remarks: According to the results of tests of biodegradability  
this product is not readily biodegradable.

**MPLC Total NA Isolation Kit-Large Volume**Version  
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08-02-2018Date of last issue: 06-15-2018  
Date of first issue: 11-12-2015**Bioaccumulative potential****Ingredients:****Thiocyanic acid, compd. with guanidine (1:1):**Partition coefficient: n-  
octanol/water : log Pow: -1.38**Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-:**

Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow &lt;= 4).

Partition coefficient: n-  
octanol/water : Remarks: No data available**Mobility in soil**

No data available

**Other adverse effects*****Proteinase K*****Ecotoxicity****Ingredients:****Proteinase K:****Ecotoxicology Assessment**

Toxicity Data on Soil : Not expected to adsorb on soil.

Other organisms relevant to  
the environment : No data available**Persistence and degradability**

No data available

**Bioaccumulative potential****Ingredients:****Proteinase K:**Partition coefficient: n-  
octanol/water : Remarks: No data available**Mobility in soil**

No data available

**Other adverse effects*****Elution Buffer***

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**Ecotoxicity**

No data available

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects**
**MGPs**
**Ecotoxicity**
**Ingredients:**
**2-Propanol:**

- |   |   |  |
|---|---|--|
| Toxicity to fish                                    | : | LC0 (Oncorhynchus mykiss (rainbow trout)): 10,000 mg/l<br>Method: OECD Test Guideline 203                          |
|   |   | LC50 (Oncorhynchus mykiss (rainbow trout)): 12,250 mg/l<br>Method: OECD Test Guideline 203                         |
|   |   | LC100 (Oncorhynchus mykiss (rainbow trout)): 15,000 mg/l<br>Method: OECD Test Guideline 203                        |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 9,500 mg/l<br>Exposure time: 24 h   |
| Toxicity to algae                                   | : | EC0 (Scenedesmus quadricauda (Green algae)): 1,800 mg/l<br>Exposure time: 168 h<br>Method: OECD Test Guideline 201 |
| Toxicity to microorganisms                          | : | EC0 (Pseudomonas putida): 1,050 mg/l<br>Exposure time: 16 h  |

**Ecotoxicology Assessment**

- |   |   |                                 |
|---|---|---------------------------------|
| Toxicity Data on Soil                       | : | Not expected to adsorb on soil. |
| Other organisms relevant to the environment | : | No data available               |

**Persistence and degradability**
**Ingredients:**
**2-Propanol:**

- |                  |   |  |
|------------------|---|--|
| Biodegradability | : | Biodegradation: 99 %<br>Exposure time: 11 d<br>Method: OECD Test Guideline 302 |
|------------------|---|--|



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Biodegradation: 57 %  
Exposure time: 5 d  
Method: OECD Test Guideline 302

### Bioaccumulative potential

#### Ingredients:

##### 2-Propanol:

Partition coefficient: n-  
octanol/water : log Pow: 0.05

#### Mobility in soil

No data available

#### Other adverse effects

---

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.
- Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.  
Do not burn, or use a cutting torch on, the empty drum.

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## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### UNRTDG

UN number : UN 3316  
Proper shipping name : CHEMICAL KIT  
Class : 9  
Packing group : II  
Labels : 9

#### IATA-DGR

UN/ID No. : UN 3316  
Proper shipping name : Chemical kit  
Class : 9  
Packing group : II  
Labels :  
Packing instruction (cargo : 960  
aircraft)  
Packing instruction (passen- : 960  
ger aircraft)

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Proper shipping name : CHEMICAL KITClass : 9  
Packing group : II  
Labels : 9  
EmS Code : F-A, S-P  
Marine pollutant : no**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**Domestic regulation****49 CFR**UN/ID/NA number : UN 3316  
Proper shipping name : Chemical kitClass : 9  
Packing group : II  
Labels : Class 9 - Miscellaneous Dangerous Goods  
ERG Code : 171  
Marine pollutant : no**Special precautions for user**

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

**SECTION 15. REGULATORY INFORMATION*****Wash Buffer I (WB I) / Inhib. Removal Buffer*****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Carcinogenicity

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**MPLC Total NA Isolation Kit-Large Volume**
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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Ethanol	64-17-5	>= 20 - < 30 %
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**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

Ethanol	64-17-5
---------	---------

**Pennsylvania Right To Know**

Guanidine, hydrochloride (1:1)	50-01-1
Water	7732-18-5
Ethanol	64-17-5

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**California List of Hazardous Substances**

Ethanol	64-17-5
---------	---------

**California Permissible Exposure Limits for Chemical Contaminants**

Ethanol	64-17-5
---------	---------

**The ingredients of this product are reported in the following inventories:**

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory

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KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

TCSI : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Wash Buffer II (WB II)****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Carcinogenicity

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Ethanol	64-17-5	>= 30 - < 50 %
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**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

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This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations**
**Massachusetts Right To Know**

Ethanol	64-17-5
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**Pennsylvania Right To Know**

Water	7732-18-5
Ethanol	64-17-5

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**California List of Hazardous Substances**

Ethanol	64-17-5
---------	---------

**California Permissible Exposure Limits for Chemical Contaminants**

Ethanol	64-17-5
---------	---------

**The ingredients of this product are reported in the following inventories:**

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**MPLC Total NA Isolation Kit-Large Volume**Version  
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Date of first issue: 11-12-2015**Wash Buffer III****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Water

7732-18-5

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

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**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

***Lysis/Binding Buffer***
**EPCRA - Emergency Planning and Community Right-to-Know**
**CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

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This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Thiocyanic acid, compd. with guanidine (1:1)	593-84-0
Water	7732-18-5
Poly(oxy-1,2-ethanediyl), .alpha.-[4-(1,1,3,3-tetramethylbutyl)phenyl]-.omega.-hydroxy-	9002-93-1

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory



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IECSC : On the inventory, or in compliance with the inventory  
TCSI : On the inventory, or in compliance with the inventory  
TSCA : On TSCA Inventory

### TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

## Proteinase K

### EPCRA - Emergency Planning and Community Right-to-Know

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

#### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitization  
Specific target organ toxicity (single or repeated exposure)

**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM/ Intermediate or Final VOC's (40 CFR 60.489).

### Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**MPLC Total NA Isolation Kit-Large Volume**
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No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Proteinase K	39450-01-6
Calcium acetate hydrate	114460-21-8

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

DSL	: This product contains the following components that are not on the Canadian DSL nor NDSL.  Proteinase K
AICS	: Not in compliance with the inventory
NZIoC	: On the inventory, or in compliance with the inventory
ENCS	: Not in compliance with the inventory
ISHL	: Not in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: Not On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

***Elution Buffer***

**MPLC Total NA Isolation Kit-Large Volume**Version  
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Date of first issue: 11-12-2015**EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards**SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Water

7732-18-5

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California Prop. 65**

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

**The ingredients of this product are reported in the following inventories:**

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DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	Not in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**MGPs****EPCRA - Emergency Planning and Community Right-to-Know****CERCLA Reportable Quantity**

This material does not contain any components with a CERCLA RQ.

**SARA 304 Extremely Hazardous Substances Reportable Quantity**

This material does not contain any components with a section 304 EHS RQ.

**SARA 302 Extremely Hazardous Substances Threshold Planning Quantity**

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : Flammable (gases, aerosols, liquids, or solids)  
Serious eye damage or eye irritation  
Specific target organ toxicity (single or repeated exposure)

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:

2-Propanol	67-63-0	>= 90 - <= 100 %
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**Clean Air Act**

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).



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PICCS : Not in compliance with the inventory  
 IECSC : Not in compliance with the inventory  
 TCSI : Not in compliance with the inventory  
 TSCA : Not On TSCA Inventory

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

**Wash Buffer I (WB I) / Inhib. Removal Buffer****GHS label elements**

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H226 Flammable liquid and vapor.  
 H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H350 May cause cancer.

Precautionary Statements

: **Prevention:**

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.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P264 Wash skin thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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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 + P313 IF exposed or concerned: Get medical advice/ attention.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.  
P362 Take off contaminated clothing and wash before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

### Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

### Wash Buffer II (WB II)

#### GHS label elements

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H226 Flammable liquid and vapor.  
H350 May cause cancer.

Precautionary Statements

: **Prevention:**  
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.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use only non-sparking tools.  
P243 Take precautionary measures against static discharge.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P370 + P378 In case of fire: Use dry sand, dry chemical or

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alcohol-resistant foam to extinguish.

**Storage:**

P403 + P235 Store in a well-ventilated place. Keep cool.  
P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

### Wash Buffer III

**GHS label elements**

Not a hazardous substance or mixture.

### Lysis/Binding Buffer

**GHS label elements**

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H302 + H332 Harmful if swallowed or if inhaled.  
H314 Causes severe skin burns and eye damage.

Precautionary Statements

: **Prevention:**  
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ 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.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. 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.  
P363 Wash contaminated clothing before reuse.

**Storage:**

P405 Store locked up.



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P501 Dispose of contents/ container to an approved waste disposal plant.

**Proteinase K****GHS label elements**

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.

Precautionary Statements

**Prevention:**

P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P280 Wear protective gloves/ eye protection/ face protection.  
 P285 In case of inadequate ventilation wear respiratory protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
 P337 + P313 If eye irritation persists: Get medical advice/ attention.  
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P362 Take off contaminated clothing and wash before reuse.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste

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disposal plant.

**Elution Buffer****GHS label elements**

Not a hazardous substance or mixture.

**MGPs****GHS label elements**

Hazard pictograms



Signal Word

: Danger

Hazard Statements

: H225 Highly flammable liquid and vapor.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.

Precautionary Statements

: **Prevention:**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
 P233 Keep container tightly closed.  
 P240 Ground/bond container and receiving equipment.  
 P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
 P242 Use only non-sparking tools.  
 P243 Take precautionary measures against static discharge.  
 P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.  
 P264 Wash skin thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 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 to extinguish.

**Storage:**

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
 P403 + P235 Store in a well-ventilated place. Keep cool.  
 P405 Store locked up.

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**Disposal:**

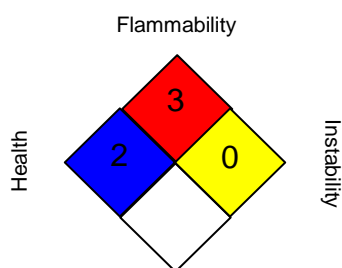
P501 Dispose of contents/ container to an approved waste disposal plant.

**SECTION 16. OTHER INFORMATION**

**Further information**

***Wash Buffer I (WB I) / Inhib. Removal Buffer***

**NFPA:**



Special hazard.

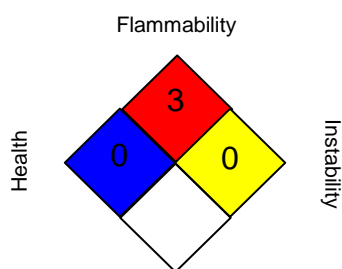
**HMIS® IV:**

<b>HEALTH</b>	*	<b>2</b>
<b>FLAMMABILITY</b>	<b>3</b>	
<b>PHYSICAL HAZARD</b>	<b>0</b>	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

***Wash Buffer II (WB II)***

**NFPA:**



Special hazard.

**HMIS® IV:**

<b>HEALTH</b>	*	<b>0</b>
<b>FLAMMABILITY</b>	<b>3</b>	
<b>PHYSICAL HAZARD</b>	<b>0</b>	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**MPLC Total NA Isolation Kit-Large Volume**

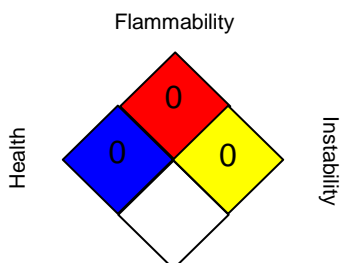
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08-02-2018

Date of last issue: 06-15-2018  
Date of first issue: 11-12-2015

**Wash Buffer III**

**NFPA:**



Special hazard.

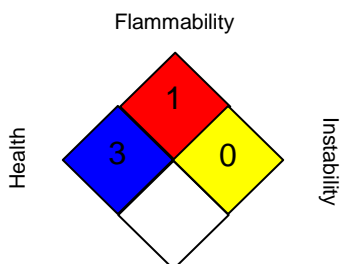
**HMIS® IV:**

<b>HEALTH</b>	/	0
<b>FLAMMABILITY</b>		0
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**Lysis/Binding Buffer**

**NFPA:**



Special hazard.

**HMIS® IV:**

<b>HEALTH</b>	/	3
<b>FLAMMABILITY</b>		0
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**MPLC Total NA Isolation Kit-Large Volume**

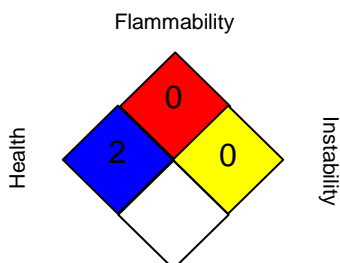
Version  
1.4

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08-02-2018

Date of last issue: 06-15-2018  
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***Proteinase K***

**NFPA:**



Special hazard.

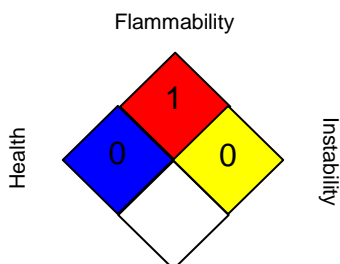
**HMIS® IV:**

<b>HEALTH</b>	*	<b>2</b>
<b>FLAMMABILITY</b>	<b>0</b>	
<b>PHYSICAL HAZARD</b>	<b>0</b>	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

***Elution Buffer***

**NFPA:**

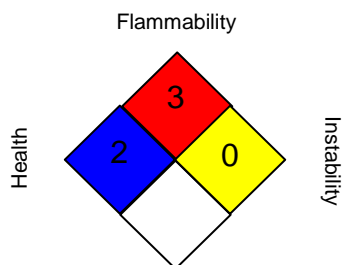


Special hazard.

**HMIS® IV:**

<b>HEALTH</b>	/	<b>0</b>
<b>FLAMMABILITY</b>	<b>0</b>	
<b>PHYSICAL HAZARD</b>	<b>0</b>	

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**MPLC Total NA Isolation Kit-Large Volume**
Version  
1.4Revision Date:  
08-02-2018Date of last issue: 06-15-2018  
Date of first issue: 11-12-2015**MGPs****NFPA:**

Special hazard.

**HMIS® IV:**

<b>HEALTH</b>	/	2
<b>FLAMMABILITY</b>		3
<b>PHYSICAL HAZARD</b>		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

**Full text of other abbreviations**

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

# SAFETY DATA SHEET



## MPLC Total NA Isolation Kit-Large Volume

Version  
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