

**Kit Components**

Product code	Description
<b>6600200</b>	<b>GENECLEAN® DNA EasyClean MicroPrep Kit for Blood</b>

## Components:

6580201	GTC Lysis Buffer
6580205	IPA Pre-Wash Buffer
6580202	DNA Wash Buffer
6580204	DNA Elution Buffer

## 1 Identification

- **Product identifier**
- **Trade name:** GTC Lysis Buffer
- **Article number:** 6580201
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Skin Corr. 1C H314 Causes severe skin burns and eye damage.  
Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Guanidine Thiocyanate, molecular biology reagent
- **Hazard statements**  
Harmful if swallowed.  
Causes severe skin burns and eye damage.
- **Precautionary statements**  
Do not breathe dusts or mists.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.

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Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Wash contaminated clothing before reuse.

If swallowed: Rinse mouth. Do NOT induce vomiting.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:**

Mixture of substances listed below with nonhazardous additions.

Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 56-81-5 EINECS: 200-289-5	Glycerol	10-50%
CAS: 593-84-0 EINECS: 209-812-1	Guanidine Thiocyanate, molecular biology reagent	10-50%

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** Generally the product does not irritate the skin.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Pick up mechanically, dispose contaminated material as waste according to Section 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

56-81-5	Glycerol	45 mg/m <sup>3</sup>
593-84-0	Guanidine Thiocyanate, molecular biology reagent	0.98 mg/m <sup>3</sup>

- **PAC-2:**

56-81-5	Glycerol	180 mg/m <sup>3</sup>
593-84-0	Guanidine Thiocyanate, molecular biology reagent	11 mg/m <sup>3</sup>

- **PAC-3:**

56-81-5	Glycerol	1,100 mg/m <sup>3</sup>
593-84-0	Guanidine Thiocyanate, molecular biology reagent	65 mg/m <sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:** Keep container tightly sealed.

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· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.· **Control parameters**· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

### 56-81-5 Glycerol

PEL	Long-term value: 15* 5** mg/m <sup>3</sup> mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.

· **Additional information:** The lists that were valid during the creation were used as basis.· **Exposure controls**· **Personal protective equipment:**· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

· **Breathing equipment:** Not required.· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Tightly sealed goggles

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## 9 Physical and chemical properties

· <b>Information on basic physical and chemical properties</b>	
· <b>General Information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Liquid
· <b>Color:</b>	According to product specification
· <b>Odor:</b> Indeterminate	
· <b>Odor threshold:</b> Not determined.	
· <b>pH-value:</b> Not determined.	
· <b>Change in condition</b>	
· <b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b> Not applicable.	
· <b>Flammability (solid, gaseous):</b> Not applicable.	
· <b>Ignition temperature:</b> 400 °C (752 °F)	
· <b>Decomposition temperature:</b> Not determined.	
· <b>Auto igniting:</b> Product is not selfigniting.	
· <b>Danger of explosion:</b> See section 10	
· <b>Explosion limits:</b>	
· <b>Lower:</b>	0.9 Vol %
· <b>Upper:</b>	0.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b> 0.1 hPa	
· <b>Density:</b> Not Applicable	
· <b>Relative density</b> Not determined.	
· <b>Vapor density</b> Not determined.	
· <b>Evaporation rate</b> Not determined.	
· <b>Solubility in / Miscibility with</b> Not Determined	
· <b>Water:</b> Soluble.	
· <b>Partition coefficient (n-octanol/water):</b> Not determined.	
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	0.0 %
· <b>Water:</b>	2.7 %
· <b>VOC content:</b>	0.0 g/l / 0.00 lb/gl
· <b>Other information</b> No further relevant information available.	

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.

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- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
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None of the ingredients is listed.
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· <b>NTP (National Toxicology Program)</b>
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None of the ingredients is listed.
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· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
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None of the ingredients is listed.
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## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**

Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

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· **Recommended cleansing agent:** Water, if necessary with cleaning agents.

## 14 Transport information

<b>· UN-Number</b>	UN1760
<b>· DOT, ADR, IMDG, IATA</b>	UN1760
<b>· UN proper shipping name</b>	Corrosive liquids, n.o.s. (Guanidine Thiocyanate, molecular biology reagent)
<b>· DOT</b>	1760 Corrosive liquids, n.o.s. (Guanidine Thiocyanate, molecular biology reagent)
<b>· ADR</b>	1760 Corrosive liquids, n.o.s. (Guanidine Thiocyanate, molecular biology reagent)
<b>· IMDG, IATA</b>	CORROSIVE LIQUID, N.O.S. (Guanidine Thiocyanate, molecular biology reagent)
<b>· Transport hazard class(es)</b>	
<b>· DOT</b>	
	
<b>· Class</b>	8 Corrosive substances
<b>· Label</b>	8
<b>· ADR, IMDG, IATA</b>	
	
<b>· Class</b>	8 Corrosive substances
<b>· Label</b>	8
<b>· Packing group</b>	III
<b>· DOT, ADR, IMDG, IATA</b>	III
<b>· Environmental hazards:</b>	Not applicable.
<b>· Special precautions for user</b>	Warning: Corrosive substances
<b>· Danger code (Kemler):</b>	80
<b>· EMS Number:</b>	F-A,S-B
<b>· Stowage Category</b>	A
<b>· Stowage Code</b>	SW2 Clear of living quarters.
<b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>· Transport/Additional information:</b>	
<b>· DOT</b>	
<b>· Quantity limitations</b>	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

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· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
<hr style="border-top: 1px dashed black;"/>	
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUIDS, N.O.S. (GUANIDINE THIOCYANATE, MOLECULAR BIOLOGY REAGENT), 8, III

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS05 GHS07

· **Signal word** *Danger*· **Hazard-determining components of labeling:***Guanidine Thiocyanate, molecular biology reagent*· **Hazard statements***Harmful if swallowed.**Causes severe skin burns and eye damage.*· **Precautionary statements***Do not breathe dusts or mists.**Wear protective gloves/protective clothing/eye protection/face protection.**Wash thoroughly after handling.**Do not eat, drink or smoke when using this product.**If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**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.**Specific treatment (see on this label).**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**IF INHALED: Remove person to fresh air and keep comfortable for breathing.**Wash contaminated clothing before reuse.**If swallowed: Rinse mouth. Do NOT induce vomiting.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** *Quality Control Dept.*· **Date of preparation / last revision** 02/06/2017 / -· **Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**ACGIH: American Conference of Governmental Industrial Hygienists**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit*

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*Acute Tox. 4: Acute toxicity – Category 4*  
*Skin Corr. 1C: Skin corrosion/irritation – Category 1C*  
*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

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## 1 Identification

- **Product identifier**
- **Trade name:** IPA Pre-Wash Buffer
- **Article number:** 6580205
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 1 H224 Extremely flammable liquid and vapor.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS02 GHS07

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
Guanidine Hydrochloride  
Isopropyl Alcohol
- **Hazard statements**  
Extremely flammable liquid and vapor.  
Harmful if swallowed, in contact with skin or if inhaled.  
Causes skin irritation.  
Causes serious eye irritation.

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May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Specific treatment (see on this label).

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If skin irritation occurs: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

Rinse mouth.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

Take off contaminated clothing and wash it before reuse.

Store locked up.

Store in a well-ventilated place. Keep container tightly closed.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*2

Fire = 3

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

## 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:**

Mixture of substances listed below with nonhazardous additions.

Mixture: consisting of the following components.

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Trade name: IPA Pre-Wash Buffer

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**· Dangerous components:**

CAS: 50-01-1 EINECS: 200-002-3 RTECS: MF4300000	Guanidine Hydrochloride	10-50%
CAS: 67-63-0 EINECS: 200-661-7 RTECS: NT8050000	Isopropyl Alcohol	10-50%

**4 First-aid measures****· Description of first aid measures****· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**· After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.

**· After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.**· After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**· After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

**· Information for doctor:**

**· Most important symptoms and effects, both acute and delayed** No further relevant information available.

**· Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**5 Fire-fighting measures****· Extinguishing media****· Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**· Special hazards arising from the substance or mixture** No further relevant information available.

**· Advice for firefighters**

**· Protective equipment:** Mouth respiratory protective device.

**6 Accidental release measures****· Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**· Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**· Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Ensure adequate ventilation.

**· Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

**· Protective Action Criteria for Chemicals**

· PAC-1:		
50-01-1	Guanidine Hydrochloride	1.4 mg/m <sup>3</sup>
67-63-0	Isopropyl Alcohol	400 ppm
· PAC-2:		
50-01-1	Guanidine Hydrochloride	16 mg/m <sup>3</sup>
67-63-0	Isopropyl Alcohol	2000* ppm
· PAC-3:		
50-01-1	Guanidine Hydrochloride	94 mg/m <sup>3</sup>
67-63-0	Isopropyl Alcohol	12000** ppm

## 7 Handling and storage

**· Handling:**

**· Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.

Open and handle receptacle with care.

**· Information about protection against explosions and fires:**

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

**· Conditions for safe storage, including any incompatibilities**

· **Storage:** 15- 30 °C

· **Requirements to be met by storerooms and receptacles:** Store in a cool location.

**· Further information about storage conditions:**

Keep container tightly sealed.

Do not gas tight seal receptacle.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see Section 7.

**· Control parameters**

**· Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

67-63-0 Isopropyl Alcohol	
PEL	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm
BEI	

· **Additional information:** The lists that were valid during the creation were used as basis.

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Trade name: IPA Pre-Wash Buffer

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- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
 The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
- **Odor:** Indeterminate
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**

<b>Boiling point/Boiling range:</b>	Undetermined.
-------------------------------------	---------------
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 425 °C (797 °F)

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Trade name: IPA Pre-Wash Buffer

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· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Not determined.
· <b>Explosion limits:</b>	
Lower:	2.0 Vol %
Upper:	12.0 Vol %
· <b>Vapor pressure at 20 °C (68 °F):</b>	43.2 hPa (32 mm Hg)
· <b>Density:</b>	Not Applicable
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	Not Determined
· <b>Water:</b>	Soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
Dynamic:	Not determined.
Kinematic:	Not determined.
· <b>Solvent content:</b>	
Organic solvents:	0.0 %
VOC content:	0.0 g/l / 0.00 lb/gl
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

### 50-01-1 Guanidine Hydrochloride

Oral	LD50	571 mg/kg (mouse) 475 mg/kg (rat)
Dermal	LD50	571 mg/kg (mouse)
Inhalative	LC50/4 h	3,181 mg/L (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.

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Trade name: IPA Pre-Wash Buffer

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- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0 Isopropyl Alcohol

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

## 14 Transport information

- |                                  |                                 |
|----------------------------------|---------------------------------|
| · <b>UN-Number</b>               |                                 |
| · <b>DOT, ADR, IMDG, IATA</b>    | UN1219                          |
| · <b>UN proper shipping name</b> |                                 |
| · <b>DOT</b>                     | Isopropanol                     |
| · <b>ADR</b>                     | 1219 Isopropanol                |
| · <b>IMDG, IATA</b>              | ISOPROPANOL (ISOPROPYL ALCOHOL) |

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· **Transport hazard class(es)**· **DOT**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **ADR, IMDG, IATA**

· **Class** 3 Flammable liquids  
 · **Label** 3

· **Packing group**· **DOT, ADR, IMDG, IATA** II· **Environmental hazards:** Not applicable.· **Special precautions for user** Warning: Flammable liquids· **EMS Number:** F-E,S-D· **Stowage Category** B

· **Transport in bulk according to Annex II of  
 MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**· **DOT**

· **Quantity limitations** On passenger aircraft/rail: Forbidden  
 On cargo aircraft only: 30 L

· **ADR**

· **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)** 1L  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1219 ISOPROPANOL, 3, II

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Sara**· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

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· **Section 313 (Specific toxic chemical listings):**

67-63-0 Isopropyl Alcohol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 Isopropyl Alcohol

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Guanidine Hydrochloride

Isopropyl Alcohol

· **Hazard statements**

Extremely flammable liquid and vapor.

Harmful if swallowed, in contact with skin or if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause drowsiness or dizziness.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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# Safety Data Sheet

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**Trade name: IPA Pre-Wash Buffer**

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*Use only outdoors or in a well-ventilated area.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Specific treatment (see on this label).*

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*If skin irritation occurs: Get medical advice/attention.*

*If eye irritation persists: Get medical advice/attention.*

*Rinse mouth.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*Take off contaminated clothing and wash it before reuse.*

*Store locked up.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Quality Control Dept.

· **Date of preparation / last revision** 02/06/2017 / -

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*Flam. Liq. 1: Flammable liquids – Category 1*

*Acute Tox. 4: Acute toxicity – Category 4*

*Skin Irrit. 2: Skin corrosion/irritation – Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*

*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

## 1 Identification

- **Product identifier**
- **Trade name:** DNA Wash Buffer
- **Article number:** 6580202
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Isopropyl Alcohol

- **Hazard statements**

Highly flammable liquid and vapor.

Causes serious eye irritation.

May cause drowsiness or dizziness.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Avoid breathing dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection.

Ground/bond container and receiving equipment.

Use only non-sparking tools.

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Take precautionary measures against static discharge.  
 Wash thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 Call a POISON CENTER/doctor if you feel unwell.  
 If eye irritation persists: Get medical advice/attention.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
 Store locked up.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store in a well-ventilated place. Keep cool.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture: consisting of the following components.

· **Dangerous components:**

CAS: 67-63-0 EINECS: 200-661-7 RTECS: NT8050000	Isopropyl Alcohol	10-50%
CAS: 64-17-5 EINECS: 200-578-6 RTECS: KQ 6300000	ethanol	10-50%

· **Non-Hazardous Ingredients**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC0110000	Water	2.5-<10%
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### 4 First-aid measures

· **Description of first aid measures**

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

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- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

67-63-0	Isopropyl Alcohol	400 ppm
64-17-5	ethanol	1,800 ppm

· **PAC-2:**

67-63-0	Isopropyl Alcohol	2000* ppm
64-17-5	ethanol	3300* ppm

· **PAC-3:**

67-63-0	Isopropyl Alcohol	12000** ppm
64-17-5	ethanol	15000* ppm

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Avoid direct contact with skin. Use protective clothing including gloves, lab coat, face/eye protection.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.

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**Trade name: DNA Wash Buffer**

(Contd. of page 3)

Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15-30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

### 67-63-0 Isopropyl Alcohol

PEL	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 200 ppm BEI

### 64-17-5 ethanol

PEL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
REL	Long-term value: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV	Short-term value: 1880 mg/m <sup>3</sup> , 1000 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing.
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes.
  - Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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Trade name: DNA Wash Buffer

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## · Eye protection:



Tightly sealed goggles

## 9 Physical and chemical properties

## · Information on basic physical and chemical properties

## · General Information

## · Appearance:

Form:	Solution
Color:	According to product specification
Odor:	Indeterminate
Odor threshold:	Not determined.

· pH-value: Not determined.

## · Change in condition

Boiling point/Boiling range: Undetermined.

· Flash point: Not applicable.

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 425 °C (797 °F)

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Not determined.

## · Explosion limits:

Lower: 3.5 Vol %

Upper: 15.0 Vol %

· Vapor pressure at 20 °C (68 °F): 59 hPa (44 mm Hg)

· Density: Not Applicable

· Relative density: Not determined.

· Vapor density: Not determined.

· Evaporation rate: Not determined.

· Solubility in / Miscibility with

Water: Insoluble.

· Partition coefficient (n-octanol/water): Not determined.

## · Viscosity:

Dynamic: Not determined.

Kinematic: Not determined.

## · Solvent content:

Organic solvents: 45.0 %

Water: 5.0 %

VOC content: 45.0 %

450.0 g/l / 3.76 lb/gal

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· **Other information** No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Irritant
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

67-63-0	Isopropyl Alcohol	3
64-17-5	ethanol	1

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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Trade name: DNA Wash Buffer



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· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
Can not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	UN1987
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	Alcohols, n.o.s. (Isopropanol, Ethanol) 1987 Alcohols, n.o.s. (Isopropanol, Ethanol) ALCOHOLS, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), ETHANOL (ETHYL ALCOHOL)) ALCOHOLS, N.O.S. (ISOPROPANOL (ISOPROPYL ALCOHOL), ETHANOL)
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	3 Flammable liquids 3
<ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	3 Flammable liquids 3
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	II
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> </ul>	Warning: Flammable liquids F-E,S-D B
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.

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Trade name: DNA Wash Buffer

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· **Transport/Additional information:**

· **ADR**

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1987 ALCOHOLS, N.O.S. (ISOPROPANOL, ETHANOL), 3, II

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

67-63-0 Isopropyl Alcohol

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

64-17-5 ethanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

67-63-0 Isopropyl Alcohol

A4

64-17-5 ethanol

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Danger

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# Safety Data Sheet

## acc. to OSHA HCS

Printing date 02/06/2017

Reviewed on 02/06/2017

**Trade name: DNA Wash Buffer**

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· **Hazard-determining components of labeling:**

*Isopropyl Alcohol*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Causes serious eye irritation.*

*May cause drowsiness or dizziness.*

· **Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Avoid breathing dust/fume/gas/mist/vapors/spray*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*Ground/bond container and receiving equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*Call a POISON CENTER/doctor if you feel unwell.*

*If eye irritation persists: Get medical advice/attention.*

*In case of fire: Use for extinction: CO2, powder or water spray.*

*Store locked up.*

*Store in a well-ventilated place. Keep container tightly closed.*

*Store in a well-ventilated place. Keep cool.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

· **Department issuing SDS:** Quality Control Dept.

· **Date of preparation / last revision** 02/06/2017 / -

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

*CAS: Chemical Abstracts Service (division of the American Chemical Society)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety & Health*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*Flam. Liq. 2: Flammable liquids – Category 2*

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*

*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*

## 1 Identification

- **Product identifier**
- **Trade name:** DNA Elution Buffer
- **Article number:** 6580204
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).

- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## 3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:**  
Mixture of substances listed below with nonhazardous additions.  
Mixture: consisting of the following components.
- **Dangerous components:** Void

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Trade name: DNA Elution Buffer

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**· Non-Hazardous Ingredients**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC0110000	Water	90-100%
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**4 First-aid measures**

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Flush eyes with running water as a precaution.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**  
Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.  
For personal protection see section 8.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

**· PAC-1:**

6381-92-6	Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate	30 mg/m3
1185-53-1	Tris Hydrochloride	12 mg/m3

**· PAC-2:**

6381-92-6	Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate	330 mg/m3
1185-53-1	Tris Hydrochloride	130 mg/m3

**· PAC-3:**

6381-92-6	Ethylenediamine Tetraacetic Acid Disodium Salt Dihydrate	2,000 mg/m3
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Trade name: DNA Elution Buffer

1185-53-1 Tris Hydrochloride

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790 mg/m<sup>3</sup>

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 15 - 30 °C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:**
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	According to product specification
<b>Odor:</b>	Indeterminate

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· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b> <b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not applicable.
· <b>Ignition temperature:</b>	
<b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	See section 10
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable
· <b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17 mm Hg)
· <b>Density:</b>	Not Applicable
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b> <b>Water:</b>	Not Determined Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Water:</b>	98.0 %
<b>VOC content:</b>	0.0 g/l / 0.00 lb/gl
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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Trade name: DNA Elution Buffer

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## 11 Toxicological information

- **Information on toxicological effects**

- **Acute toxicity:**

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritant and potentially harmful

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability:** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential:** No further relevant information available.

- **Mobility in soil:** No further relevant information available.

- **Additional ecological information:**

- **General notes:** Generally not hazardous for water

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Can not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Discard must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleaning agents.

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Trade name: DNA Elution Buffer

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## 14 Transport information

<b>· UN-Number</b>	
<b>· DOT, ADR, ADN, IMDG, IATA</b>	Not regulated
<b>· UN proper shipping name</b>	
<b>· DOT, ADR, ADN, IMDG, IATA</b>	Not regulated
<b>· Transport hazard class(es)</b>	
<b>· DOT, ADR, ADN, IMDG, IATA</b>	
<b>· Class</b>	Not regulated
<b>· Packing group</b>	
<b>· DOT, ADR, IMDG, IATA</b>	Not regulated
<b>· Environmental hazards:</b>	Not applicable.
<b>· Special precautions for user</b>	Not applicable.
<b>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>· UN "Model Regulation":</b>	Not regulated

## 15 Regulatory information

<b>· Safety, health and environmental regulations/legislation specific for the substance or mixture</b>	
<b>· Sara</b>	
<b>· Section 355 (extremely hazardous substances):</b>	
None of the ingredients is listed.	
<b>· Section 313 (Specific toxic chemical listings):</b>	
None of the ingredients is listed.	
<b>· TSCA (Toxic Substances Control Act):</b>	
1185-53-1	Tris Hydrochloride
7732-18-5	Water
<b>· Proposition 65</b>	
<b>· Chemicals known to cause cancer:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for females:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	
<b>· Carcinogenic categories</b>	
<b>· EPA (Environmental Protection Agency)</b>	
None of the ingredients is listed.	
<b>· TLV (Threshold Limit Value established by ACGIH)</b>	
None of the ingredients is listed.	

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Reviewed on 01/27/2017

**Trade name: DNA Elution Buffer**

(Contd. of page 6)

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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