<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA1060</td>
<td>Rapid Digestion Kit - Trypsin</td>
</tr>
</tbody>
</table>

Components:

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V181A</td>
<td>Resuspension Buffer, 500ul</td>
</tr>
<tr>
<td>V528A</td>
<td>Trypsin Gold-Mass Spec Grade</td>
</tr>
<tr>
<td>VA106</td>
<td>Rapid Digest Buffer</td>
</tr>
</tbody>
</table>
1 Identification

Product identifier
Trade name: Resuspension Buffer, 500ul

Article number: V181A
Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified as hazardous 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)
Health = 0
Fire = 0
Reactivity = 0
HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 0
Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown

Other hazards
This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

Results of PBT and vPvB assessment
PBT: Not applicable.

(Contd. on page 2)
**3 Composition/information on ingredients**

**Chemical characterization:** Mixtures

**Description:**
The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

**Dangerous components:** Void

**Additional information:** For the wording of the listed risk phrases refer to section 15.

---

**4 First-aid measures**

**Description of first aid measures**

**General information:** No special measures required.

**After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.

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

**After eye contact:** Rinse opened eye for several minutes under running water.

**After swallowing:** If the patient feels unwell or is concerned, obtain medical advice.

**Information for doctor:**

- **Most important symptoms and effects, both acute and delayed** None
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

---

**5 Fire-fighting measures**

**Extinguishing media**

**Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**Special hazards arising from the substance or mixture** None known

**Advice for firefighters**
No special advice

**Protective equipment:** No special measures required.

---

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Not required.

**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**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 13 for disposal information.

---

**7 Handling and storage**

**Handling:**

**Precautions for safe handling** No special measures required.
Trade name: Resuspension Buffer, 500ul

Information about protection against explosions and fires: The product is not flammable.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: None.
Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

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: Not required.
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.
Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Fluid
Color: Colorless
Odor: Not determined
Odor threshold: Not determined.
pH-value at 20 °C (68 °F): 3
Change in condition
Melting point/Melting range: 0 °C (32 °F)
Boiling point/Boiling range: 100 °C (212 °F)
Flash point: Not applicable.
Flammability (solid, gaseous): Not applicable.
Ignition temperature:
Decomposition temperature: Not determined.
Auto igniting: Product is not selfigniting.
Danger of explosion: Product does not present an explosion hazard.
**Safety Data Sheet**

**Trade name: Resuspension Buffer, 500ul**

---

**Explosion limits:**
- Lower: Not determined.
- Upper: Not determined.

**Density:**
- Not determined.

**Relative density:**
- Not determined.

**Vapor density:**
- Not determined.

**Evaporation rate:**
- Not determined.

**Solubility in / Miscibility with Water:**
- Fully miscible.

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

**Viscosity:**
- Dynamic: Not determined.
- Kinematic: Not determined.

**Organic solvents:**
- 0.3 %

**Water:**
- 99.7 %

**VOC content:**
- 0.3 %

**Solids content:**
- 5.0 %

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

---

### 10 Stability and reactivity

**Reactivity**
- No further relevant information available.

**Chemical stability**
- 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: No data available

**Primary irritant effect:**
- on the skin: No irritant effect.
- on the eye: Irritating effect.

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

**Additional toxicological information:**
- The product is not subject to classification according to internally approved calculation methods for preparations:

**Carcinogenic categories**

**IARC (International Agency for Research on Cancer)**
- None of the ingredients are listed.
12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability: Not available
Behavior in environmental systems: 
Bioaccumulative potential: Not known
Mobility in soil: No further relevant information available.
Ecotoxicological effects:
Remark: Not 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:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number DOT, ADR, ADN, IMDG, IATA</th>
<th>Not hazardous for transportation Void</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name DOT, ADR, ADN, IMDG, IATA</td>
<td>None Void</td>
</tr>
<tr>
<td>Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA Class</td>
<td>None Void</td>
</tr>
<tr>
<td>Packing group DOT, ADR, IMDG, IATA</td>
<td>None Void</td>
</tr>
<tr>
<td>Environmental hazards: Marine pollutant:</td>
<td>No</td>
</tr>
</tbody>
</table>
Trade name: Resuspension Buffer, 500ul

| Special precautions for user          | Not applicable. |
| Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| UN "Model Regulation":              | Void            |

**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 are listed.

Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.

TSCA (Toxic Substances Control Act):
All ingredients are listed.

Proposition 65

Chemicals known to cause cancer:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.

Chemicals known to cause developmental toxicity:
None of the ingredients are listed.

Cancerogenity categories

EPA (Environmental Protection Agency)
None of the ingredients are listed.

TLV (Threshold Limit Value established by ACGIH)
None of the ingredients are listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.

GHS label elements: Void
Signal word: Void
Hazard statements: Void

National regulations:

Water hazard class: Generally not hazardous for water.
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.
Trade name: Resuspension Buffer, 500ul

Department issuing SDS:
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph: (608) 274-4330

Date of preparation / last revision: 03/20/2017 / -

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organization
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)
VFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LD50: Lethal dose, 50 percent
LC50: Lethal concentration, 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

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Trypsin Gold-Mass Spec Grade

Article number: V528A
CAS Number: 9002-07-7
EC number: 232-650-8
Index number: 647-010-00-7

Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture

GHS08 Health hazard

Resp. Sens. 1  H334  May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07

Skin Irrit. 2  H315  Causes skin irritation.
Eye Irrit. 2A  H319  Causes serious eye irritation.
STOT SE 3  H335  May cause respiratory irritation.

Label elements
GHS label elements
The substance is classified and labeled according to the Globally Harmonized System (GHS).
Hazard pictograms GHS07, GHS08
Signal word Danger
Hazard-determining components of labeling:
Trypsin

Hazard statements
Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary statements
Wash thoroughly after handling.
[In case of inadequate ventilation] wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Use only outdoors or in a well-ventilated area.
IF ON SKIN: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)
Health = 1
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)
Health = *
Fire = 0
Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200):
Irritant
Sensitizer

Primary route(s) of entry:
Dermal
Inhalation
Oral

Target Organ(s): Affects Pulmonary system (Lungs)
Other hazards Product has been observed to have sensitizing effects.

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
9002-07-7 Trypsin
4 First-aid measures

Description of first aid measures
After inhalation:
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Seek medical treatment in case of complaints.
After skin contact:
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:
If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed: Allergic reactions
Indication of any immediate medical attention and special treatment needed:
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture: None known
Advice for firefighters: No special advice

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Remove persons from danger area.
Avoid formation of dust.
Wear protective clothing.
Environmental precautions: No special measures required.
Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to Section 13.
Pick up mechanically.
Ensure adequate ventilation.
Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling:
Keep receptacles tightly sealed.
8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace: Not required.
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 and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
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
Select the glove material considering penetration time, rate of diffusion and degradation time.
It is recommended that the selected protective gloves be tested and approved under NIOSH or EU Directive 89/686/EEC and the standard EN 374 derived from it.
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.
Eye protection:
Safety glasses
Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Powder
Color: White
Odor: Not determined
Odor threshold: Not determined.
**Trade name:** Trypsin Gold-Mass Spec Grade

<table>
<thead>
<tr>
<th>Property</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Change in condition</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Undetermined.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Product is not flammable.</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Auto igniting</td>
<td>Not determined.</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits</td>
<td></td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
<td></td>
</tr>
<tr>
<td>Water</td>
<td>Soluble.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not determined.</td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not applicable.</td>
</tr>
<tr>
<td><strong>Organic solvents:</strong></td>
<td>0.0 %</td>
</tr>
<tr>
<td>Solids content</td>
<td>100.0 %</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

* **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:**
      - 9002-07-7 Trypsin
      - Oral LD50 5000 mg/kg (Rat)
Trade name: Trypsin Gold-Mass Spec Grade

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

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

Carcinogenic categories

<table>
<thead>
<tr>
<th>Agency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC (International Agency for Research on Cancer)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>NTP (National Toxicology Program)</td>
<td>Substance is not listed.</td>
</tr>
<tr>
<td>OSHA-Ca (Occupational Safety &amp; Health Administration)</td>
<td>Substance is not listed.</td>
</tr>
</tbody>
</table>

12 Ecological information

Toxicity
- Aquatic toxicity: Not harmful to the aquatic environment

Persistence and degradability: Not available

Behavior in environmental systems:
- Bioaccumulative potential: Not known
- Mobility in soil: Not known

Ecotoxicological effects:
- Remark: Not 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:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Not hazardous for transportation</td>
</tr>
<tr>
<td></td>
<td>Void</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UN proper shipping name</th>
<th>DOT, ADR, ADN, IMDG, IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Void</td>
</tr>
</tbody>
</table>
### Transport hazard class(es)

**DOT, ADR, ADN, IMDG, IATA**

Class: None

**Packing group**

**DOT, ADR, IMDG, IATA**

Class: Void

### Environmental hazards:

- **Marine pollutant:** No

### Special precautions for user

Not applicable.

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

### UN "Model Regulation"

Void

### 15 Regulatory information

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

**Sara**

- **Section 355 (extremely hazardous substances):** Substance is not listed.
- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):** Substance is listed.
- **Proposition 65**
  - **Chemicals known to cause cancer:** Substance is not listed.
  - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
  - **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
  - **Chemicals known to cause developmental toxicity:** Substance is not listed.

**Cancerogenity categories**

- **EPA (Environmental Protection Agency)**: Substance is not listed.
- **TLV (Threshold Limit Value established by ACGIH)**: Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**: Substance is not listed.

**GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Signal word** Danger
Hazard-determining components of labeling:

Trypsin

Hazard statements

Causes skin irritation.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary statements

Wash thoroughly after handling.
[In case of inadequate ventilation] wear respiratory protection.
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves / eye protection / face protection.
Use only outdoors or in a well-ventilated area.
IF ON SKIN: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Call a POISON CENTER/doctor if you feel unwell.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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.
Take off contaminated clothing and wash it before reuse.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

Water hazard class: Generally not hazardous for water.
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:
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph:(608)274-4330

Date of preparation / last revision 03/20/2017 /

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: Internation Civil Aviation Organization
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
Trade name: Trypsin Gold-Mass Spec Grade

LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
sPvB: 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

Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Rapid Digest Buffer

Article number: VA106
Application of the substance / the mixture Laboratory chemicals

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

Information department: SDS author: Regulatory.Affairs@promega.com
Emergency telephone number:
For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-527-3887 (collect calls accepted)

2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified as hazardous 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)
Health = 0
Fire = 1
Reactivity = 0

HMIS-ratings (scale 0 - 4)
Health = 0
Fire = 1
Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Not applicable
Target Organ(s): Not applicable or unknown

Other hazards
This mixture has not been tested to determine the overall health hazard; therefore in accordance with 29CFR1910.1200, the data reported above pertains to the hazardous ingredients of this mixture.

Results of PBT and vPvB assessment
PBT: Not applicable.
Trade name: Rapid Digest Buffer

vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances. The exact concentration percentages of the hazardous substances may be withheld as a Promega Corp. trade secret.

Dangerous components: Void
Additional information: For the wording of the listed risk phrases refer to section 15.

4 First-aid measures

Description of first aid measures
General information: No special measures required.
After inhalation: If the patient feels unwell or is concerned, obtain medical advice.
After skin contact: Generally the product does not irritate the skin.
After eye contact: Rinse opened eye for several minutes under running water.
After swallowing: If the patient feels unwell or is concerned, obtain medical advice.
Information for doctor:
Most important symptoms and effects, both acute and delayed: None
Indication of any immediate medical attention and special treatment needed: None
No further relevant information available.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Special hazards arising from the substance or mixture: None known
Advice for firefighters:
Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures: Not required.
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).
Reference to other sections:
See Section 7 for information on safe handling.
See Section 13 for disposal information.
Protective Action Criteria for Chemicals

PAC-1:

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Chemical Name</th>
<th>Concentration</th>
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<tbody>
<tr>
<td>1185-53-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride</td>
<td>12 mg/m³</td>
</tr>
<tr>
<td>10043-52-4</td>
<td>Calcium chloride</td>
<td>12 mg/m³</td>
</tr>
<tr>
<td>77-86-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediol</td>
<td>18 mg/m³</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
Trade name: Rapid Digest Buffer

### 44.1.5 Components

<table>
<thead>
<tr>
<th>PAC-2:</th>
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<tbody>
<tr>
<td>1185-53-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride</td>
<td>130 mg/m³</td>
</tr>
<tr>
<td>10043-52-4</td>
<td>Calcium chloride</td>
<td>130 mg/m³</td>
</tr>
<tr>
<td>77-86-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediol</td>
<td>190 mg/m³</td>
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</table>

<table>
<thead>
<tr>
<th>PAC-3:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1185-53-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediolhydrochloride</td>
<td>790 mg/m³</td>
</tr>
<tr>
<td>10043-52-4</td>
<td>Calcium chloride</td>
<td>790 mg/m³</td>
</tr>
<tr>
<td>77-86-1</td>
<td>2-Amino-2-(hydroxymethyl)-1,3-propanediol</td>
<td>1,200 mg/m³</td>
</tr>
</tbody>
</table>

### 7 Handling and storage

**Handling:**

No special measures required.

**Precautions for safe handling**

No special measures required.

**Information about protection against explosions and fires**

No special measures required.

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

**Storage:**

No special requirements.

**Information about storage in one common storage facility**

Not required.

**Further information about storage conditions**

None.

**Specific end use(s)**

No further relevant information available.

### 8 Exposure controls/personal protection

**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:**

Not required.

**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.

**Eye protection:**

Not required.

### 9 Physical and chemical properties

**Information on basic physical and chemical properties**

**General Information**

**Appearance:**

- **Form:** Fluid
- **Color:** Colorless
**Odor:** Not determined
**Odor threshold:** Not determined.

**Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** > 100 °C (> 212 °F)

**Flammability (solid, gaseous):** Not applicable.

**Ignition temperature:**
- **Decomposition temperature:** Not determined.

**Auto igniting:** Product is not selfigniting.

**Danger of explosion:** Product does not present an explosion hazard.

**Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Vapor pressure:** Not determined.

**Density at 20 °C (68 °F):** 1.00392 g/cm³ (8.378 lbs/gal)
**Relative density:** Not determined.
**Vapor density:** Not determined.
**Evaporation rate:** Not determined.

**Solubility in / Miscibility with**
- **Water:** Not miscible or difficult to mix.

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

**Viscosity:**
- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

**Organic solvents:** 0.0 %
**Water:** 97.0 %
**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:**
- **LD/LC50 values that are relevant for classification:** No data available

**Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.

**Sensitzation:** 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 are listed.

NTP (National Toxicology Program)
None of the ingredients are listed.

OSHA-Ca (Occupational Safety & Health Administration)
None of the ingredients are listed.

12 Ecological information

Toxicity
Aquatic toxicity: Not harmful to the aquatic environment
Persistence and degradability: Not available
Behavior in environmental systems:
Bioaccumulative potential: Not known
Mobility in soil: Not known
Ecotoxical effects:
Remark: Not 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:
Disposal should be in accordance with applicable regional, national and local laws and regulations.
Refer to Section 7: Handling and Storage and Section 8: Exposure Control/Personal Protection for additional handling information and protection of employees.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

14 Transport information

UN-Number: Not hazardous for transportation
DOT, ADR, IMDG, IATA: Void
UN proper shipping name: None
Trade name: Rapid Digest Buffer

DOT, ADR, IMDG, IATA  Void
Transport hazard class(es)  None
DOT, ADR, IMDG, IATA  Void
Class
Packing group
DOT, ADR, IMDG, IATA  Void
Environmental hazards:  Not applicable.
Special precautions for user  Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  Not applicable.
UN "Model Regulation":  Void

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 are listed.
Section 313 (Specific toxic chemical listings):
None of the ingredients are listed.
TSCA (Toxic Substances Control Act):
All ingredients are listed.
Proposition 65
Chemicals known to cause cancer:
None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for females:
None of the ingredients are listed.
Chemicals known to cause reproductive toxicity for males:
None of the ingredients are listed.
Chemicals known to cause developmental toxicity:
None of the ingredients are listed.
Cancerogenity categories
EPA (Environmental Protection Agency)
None of the ingredients are listed.
TLV (Threshold Limit Value established by ACGIH)
None of the ingredients are listed.
NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients are listed.
GHS label elements Void
Signal word Void
Hazard statements Void

(Contd. on page 7)
Safety Data Sheet  
acc. to OSHA HCS

Trade name: Rapid Digest Buffer

National regulations:

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
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:
Promega Corporation
Environmental Health and Safety Department
2800 Woods Hollow Road
Madison, WI
Ph: (608)274-4330

Date of preparation / last revision 03/20/2017 / -

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)
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)
LD50: Lethal concentration, 50 percent
LC50: Lethal concentration, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
REL: Recommended Exposure Limit
PEL: Permissible Exposure Limit
TLV: Threshold Limit Value