Kit Components

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V8791</td>
<td>P450-Glo™ CYP2C9 Assay, 10ml</td>
</tr>
</tbody>
</table>

Components:

<table>
<thead>
<tr>
<th>Product code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>V859</td>
<td>Luciferin Detection Reagent</td>
</tr>
<tr>
<td>V865</td>
<td>Reconstitution Buffer</td>
</tr>
<tr>
<td>V864</td>
<td>Luciferin-H</td>
</tr>
</tbody>
</table>
# 1 Identification

**Product identifier**

*Trade name: Luciferin Detection Reagent*

**Article number:** V859

**Application of the substance / the mixture** For Laboratory Use

**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: ChemicalRegulatory@promega.com  
Promega Corporation  
2800 Woods Hollow Road  
Madison, WI 53711  
U.S.A.  
1-800-356-9526 or (608)-274-4330

**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** Not applicable  
**Hazard pictograms** Not applicable  
**Signal word** Not applicable  
**Hazard statements** Not applicable  
**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

(Contd. on page 2)
Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Chemical characterization: Mixtures

Description:
The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components: Not applicable

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

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

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

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

No further relevant information available.

Advice for firefighters

No special advice

Protective equipment: No special measures required.

Personal precautions, protective equipment and emergency procedures Not required.

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).

Reference to other sections

No dangerous substances are released.
7 Handling and storage

Handling:
Precautions for safe handling No special measures required.
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): 7.2

Change in condition
Melting point/Melting range: 0 °C (32 °F)
Boiling point/Boiling range: 100 °C (212 °F)
Flash point: Not applicable.
Trade name: Luciferin Detection Reagent

51.1.1 Flammability (solid, gaseous): Not applicable.
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 g/cm³ (8.345 lbs/gal)
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: 0.0 %
Water: 99.6 %
VOC content: 0.00 %
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: No 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.
Trade name: Luciferin Detection Reagent

12 Ecological information

Toxicity
Aquatic toxicity:
Not available
No further relevant information available.
Persistence and degradability
Not available
No further relevant information available.
Bioaccumulative potential
Not known
No further relevant information available.
Mobility in soil
No further relevant information available.
Ecotoxicological effects:
Remark: Not available
Additional ecological information:
General notes: Not known to be hazardous to 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>Not hazardous for transportation</td>
<td>Not applicable</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>None</td>
</tr>
<tr>
<td>DOT, ADR, ADN, IMDG, IATA</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Trade name: Luciferin Detection Reagent

Transport hazard class(es) | None
---|---
DOT, ADR, ADN, IMDG, IATA Class | Not applicable

Packing group | None
---|---
DOT, ADR, IMDG, IATA | Not applicable

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": | Not applicable

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.

Hazardous Air Pollutants
None of the 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
Not applicable
Signal word
Not applicable
Hazard statements
Not applicable

Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
## Trade name: Luciferin Detection Reagent

### 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
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph: (608)274-4330

**Date of preparation / last revision:**
11/04/2020 / 1.0

**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
- 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

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Reconstitution Buffer

Article number: V865
Application of the substance / the mixture For Laboratory Use

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: ChemicalRegulatory@promega.com
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

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

STOT SE 1 H370 Causes damage to the central nervous system and the visual organs.

GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

Label elements
GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).
Trade name: Reconstitution Buffer

Hazard pictograms

GHS07  GHS08

Signal word Danger

Hazard-determining components of labeling:
methanol

Hazard statements
Causes serious eye irritation.
Causes damage to the central nervous system and the visual organs.

Precautionary statements
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed: Call a POISON CENTER or doctor/physician.
If eye irritation persists: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)
Health = 2
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)
Health     = *2
Fire       = 0
Reactivity = 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200): Irritant
Primary route(s) of entry: Dermal
Target Organ(s): Not applicable or unknown
Other hazards

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

* 3 Composition/information on ingredients

Chemical characterization: Mixtures
Description:
The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.

Dangerous components:

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>67-56-1</td>
<td>methanol</td>
<td>1-5%</td>
</tr>
<tr>
<td>127087-87-0</td>
<td>Nonylphenol Ethoxylate</td>
<td>1-5%</td>
</tr>
</tbody>
</table>

(Contd. on page 3)
**Trade name: Reconstitution Buffer**

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

---

### 4 First-aid measures

**Description of first aid measures**
- **After inhalation:** If the patient feels unwell or is concerned, obtain medical advice.
- **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.
- **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
- No further relevant information available.

**Advice for firefighters**
- No special advice

---

### 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
- Remove persons from danger area.
- Wear protective clothing.

**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).

**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 precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** The product is not flammable.
Trade name: Reconstitution Buffer

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 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.

67-56-1 methanol

<table>
<thead>
<tr>
<th></th>
<th>PEL</th>
<th>Long-term value: 260 mg/m³, 200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>REL</td>
<td>Short-term value: 325 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin</td>
</tr>
<tr>
<td></td>
<td>TLV</td>
<td>Short-term value: 328 mg/m³, 250 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Skin; BEI</td>
</tr>
</tbody>
</table>

Ingredients with biological limit values:

67-56-1 methanol

<table>
<thead>
<tr>
<th>BEI</th>
<th>15 mg/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium</td>
<td>urine</td>
</tr>
<tr>
<td>Time</td>
<td>end of shift</td>
</tr>
</tbody>
</table>
| Parameter: Methanol (background, nonspecific)

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 skin.
Avoid contact with the eyes and skin.
Do not eat or drink while working.
Clean skin thoroughly immediately after handling the product.
Breathing equipment: Not required.
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. 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.
Trade name: Reconstitution Buffer

Eye protection:
Safety glasses
Use equipment for eye protection tested and approved under government NIOSH standards.

9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Information on basic physical and chemical properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Information</td>
</tr>
<tr>
<td>Appearance:</td>
</tr>
<tr>
<td>Form: Fluid</td>
</tr>
<tr>
<td>Color: Colorless</td>
</tr>
<tr>
<td>Odor: Not determined</td>
</tr>
<tr>
<td>Odor threshold: Not determined</td>
</tr>
<tr>
<td>pH-value at 20 °C (68 °F): 8.4</td>
</tr>
<tr>
<td>Change in condition</td>
</tr>
<tr>
<td>Melting point/Melting range: Undetermined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: 98 °C (208.4 °F)</td>
</tr>
<tr>
<td>Flash point: Not applicable.</td>
</tr>
<tr>
<td>Flammability (solid, gaseous): Not applicable.</td>
</tr>
<tr>
<td>Decomposition temperature: Not determined.</td>
</tr>
<tr>
<td>Auto igniting: Product is not selfigniting.</td>
</tr>
<tr>
<td>Danger of explosion: Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>Explosion limits:</td>
</tr>
<tr>
<td>Lower: Not determined.</td>
</tr>
<tr>
<td>Upper: Not determined.</td>
</tr>
<tr>
<td>Vapor pressure: Not determined.</td>
</tr>
<tr>
<td>Density at 20 °C (68 °F): 1.014 g/cm³ (8.46183 lbs/gal)</td>
</tr>
<tr>
<td>Relative density: Not determined.</td>
</tr>
<tr>
<td>Vapor density: Not determined.</td>
</tr>
<tr>
<td>Evaporation rate: Not determined.</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water: Fully miscible.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water): Not determined.</td>
</tr>
<tr>
<td>Viscosity:</td>
</tr>
<tr>
<td>Dynamic: Not determined.</td>
</tr>
<tr>
<td>Kinematic: Not determined.</td>
</tr>
<tr>
<td>Organic solvents: 2.4 %</td>
</tr>
<tr>
<td>Water: 91.6 %</td>
</tr>
<tr>
<td>VOC content: 2.40 %</td>
</tr>
<tr>
<td>Solids content: 3.8 %</td>
</tr>
<tr>
<td>Other information 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.
Trade name: Reconstitution Buffer

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: Irritant to skin and mucous membranes.
on the eye: No data available.
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)
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 available
No further relevant information available.

Persistence and degradability
Not available
No further relevant information available.

Bioaccumulative potential
Not known
No further relevant information available.

Mobility in soil No further relevant information available.

Ecotoxicological effects:

Remark: Not available

Additional ecological information:

General notes: No data available.

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

| **UN proper shipping name** | None |
| **DOT, ADR, ADN, IMDG, IATA** | Not applicable |

| **Transport hazard class(es)** | None |
| **DOT, ADR, ADN, IMDG, IATA** | Not applicable |

| **Packing group** | None |
| **DOT, ADR, IMDG, IATA** | Not applicable |

| **Environmental hazards:** |

| **Marine pollutant:** | No |
| **DOT, ADR, IMDG, IATA** | 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":** | Not applicable |

## 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):**
- 67-56-1 methanol
- 127087-87-0 Nonylphenol Ethoxylate

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

**Hazardous Air Pollutants**
- 67-56-1 methanol

---

(Contd. on page 8)
Trade name: Reconstitution Buffer

**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:**

| 67-56-1 methanol |

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

**Signal word** Danger

**Hazard-determining components of labeling:**

methanol

**Hazard statements**

Causes serious eye irritation.

Causes damage to the central nervous system and the visual organs.

**Precautionary statements**

Do not breathe dust/ffume/gas/mist/vapors/spray.

Wash thoroughly after handling.

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

Wear eye protection / face protection.

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

If exposed: Call a POISON CENTER or doctor/physician.

If eye irritation persists: Get medical advice/attention.

Store locked up.

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

Chemical Regulatory Department

2800 Woods Hollow Road

Madison, WI

Ph: (608) 274-4330

**Date of preparation / last revision** 11/04/2020 / 2.0

(Contd. on page 9)
**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)
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
BEI: Biological Exposure Limit
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

* Data compared to the previous version altered.
1 Identification

Product identifier
Trade name: Luciferin-H

Article number: V864
Application of the substance / the mixture For Laboratory Use

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: ChemicalRegulatory@promega.com
Promega Corporation
2800 Woods Hollow Road
Madison, WI 53711
U.S.A.
1-800-356-9526 or (608)-274-4330

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 Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
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

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

**Chemical characterization:** Mixtures  
**Description:**  
The product is made up of a mixture of non-hazardous components. The exact concentration percentages and components name may be withheld as a Promega Corp. trade secret.  
**Dangerous components:** Not applicable  
**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.
7 Handling and storage

Handling:
Precautions for safe handling: No special measures required.
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): 5.5

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.
## 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):
1.005 g/cm³ (8.38673 lbs/gal)

### 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.
- **Water:** 99.7 %
- **VOC content:** 0.00 %

### Solids content:
0.1 %

### 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:** No 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.
Trade name: Luciferin-H

12 Ecological information

Toxicity
Aquatic toxicity:
Not available
No further relevant information available.

Persistence and degradability
Not available
No further relevant information available.

Bioaccumulative potential
Not known
No further relevant information available.

Mobility in soil
No further relevant information available.

Ecotoxicological effects:
Remark: Not available

Additional ecological information:
General notes:
Not available.
Not known to be hazardous to 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

UN-Number: Not hazardous for transportation
DOT, ADR, ADN, IMDG, IATA: Not applicable

UN proper shipping name: None
DOT, ADR, ADN, IMDG, IATA: Not applicable

Transport hazard class(es): None
**Trade name:** Luciferin-H

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

<table>
<thead>
<tr>
<th>Class</th>
<th>Not applicable</th>
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**Packing group**

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<thead>
<tr>
<th>DOT, ADR, IMDG, IATA</th>
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**Environmental hazards:**

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<tr>
<th>Marine pollutant:</th>
<th>No</th>
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**Special precautions for user**

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<th>Not applicable.</th>
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**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

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**UN "Model Regulation":**

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<th>Not applicable.</th>
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**15 Regulatory information**

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

**Sara**

<table>
<thead>
<tr>
<th>Section 355 (extremely hazardous substances):</th>
<th>None of the ingredients are listed.</th>
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<table>
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<th>Section 313 (Specific toxic chemical listings):</th>
<th>None of the ingredients are listed.</th>
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**Hazardous Air Pollutants**

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<th>None of the ingredients are listed.</th>
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**Proposition 65**

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<tr>
<th>Chemicals known to cause cancer:</th>
<th>None of the ingredients are listed.</th>
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<th>Chemicals known to cause reproductive toxicity for females:</th>
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<tr>
<th>Chemicals known to cause reproductive toxicity for males:</th>
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<tr>
<th>Chemicals known to cause developmental toxicity:</th>
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**Cancerogenity categories**

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<tr>
<th>EPA (Environmental Protection Agency)</th>
<th>None of the ingredients are listed.</th>
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<tr>
<th>TLV (Threshold Limit Value established by ACGIH)</th>
<th>None of the ingredients are listed.</th>
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<table>
<thead>
<tr>
<th>NIOSH-Ca (National Institute for Occupational Safety and Health)</th>
<th>None of the ingredients are listed.</th>
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<table>
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<tr>
<th>GHS label elements Not applicable</th>
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<th>Signal word Not applicable</th>
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<tr>
<th>Hazard statements Not applicable</th>
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**National regulations:**

<table>
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<th>No information available</th>
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<tr>
<th>Water hazard class:</th>
<th>Generally not hazardous for water.</th>
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* (Contd. of page 5)
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
Chemical Regulatory Department
2800 Woods Hollow Road
Madison, WI
Ph: (608) 274-4330

Date of preparation / last revision 11/04/2020 / 1.0

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