

**BIO-RAD**  
**Safety Data Sheet**  
acc. to OSHA HCS

Reviewed on 05/15/2018

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**1 Identification**

- Product identifier
- Trade name: E. coli HB101 Lyophilized
- Catalog or product number: 1660408, 1660409EDU
- Application of the substance / the mixture Laboratory chemicals
- Details of the supplier of the safety data sheet
- Manufacturer/Supplier:  
Bio-Rad Laboratories, Life Science Group  
2000 Alfred Nobel Drive  
Hercules, California 94547
- Information department: lsg\_techserv\_us@bio-rad.com
- Emergency telephone number:  
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.
- 510-741-1000

**2 Hazard(s) identification**

- Classification of the substance or mixture
- Acute Tox. 4 H302 Harmful if swallowed.
- Label elements
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms



GHS07

- Signal word Warning
- Hazard-determining components of labeling:  
escherichia coli bacteria - freeze dried
- Hazard statements  
H302 Harmful if swallowed.
- Precautionary statements  
P264 Wash thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.  
P303 Rinse mouth.
- Emergency overview:  
Dispose of contents/container in accordance with local/regional/national/international regulations.
- Routes of exposure: Ingestion
- Other hazards
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

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**Trade name: E. coli HB101 Lyophilized**

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**3 Composition/information on ingredients**

- Chemical characterization: Substances
- CAS No. Description:  
escherichia coli bacteria - freeze dried
- 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
- 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.
- After swallowing  
Immediately call a doctor.  
Rinse mouth with water. Seek medical attention and appropriate follow-up.
- 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 Wear protective clothing.
- Environmental precautions: No special measures required.
- Methods and material for containment and cleaning up: Dispose contaminated material as waste according to item 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:**

Substance is not listed.

**PAC-2:**

Substance is not listed.

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PAC-3:	(Contd. of page 2)
Substance is not listed.	

## 7 Handling and storage

- **Handling**
  - Precautions for safe handling: No special precautions are necessary if used correctly.
  - Information about protection against explosions and fires: No special measures required.
  - Conditions for safe storage, including any incompatibilities
- **Storage**
  - Requirements to be met by storerooms and receptacles: According to product specification
  - 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

- **Additional information** about design of technical systems: No further data; see item 7.
- **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.
      - Wash hands before breaks and at the end of work.
    - Protection of hands: Protective gloves.
    - Material of gloves: Synthetic gloves
    - 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:** Safety glasses

## 9 Physical and chemical properties

Information on basic physical and chemical properties	
General information	
• <b>Appearance:</b>	Solid
• <b>Form:</b>	Light yellow
• <b>Color:</b>	Odorless
• <b>Odor:</b>	Not determined.
• <b>Odor threshold:</b>	Not applicable.
• <b>pH value:</b>	undetermined
• <b>Change in condition</b>	
• <b>Melting point/melting range:</b>	

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Boiling point/boiling range:	undetermined	(Contd. of page 3)
• <b>Flash point:</b>	Not applicable	
• <b>Flammability (solid, gaseous)</b>	Product is not flammable.	
• <b>Decomposition temperature:</b>	Not determined.	
• <b>Auto ignition:</b>	Not determined.	
• <b>Danger of explosion:</b>	Product does not present an explosion hazard.	
• <b>Explosion limits:</b>		
• <b>Lower:</b>	Not determined.	
• <b>Upper:</b>	Not determined.	
• <b>Vapor pressure:</b>	Not applicable.	
• <b>Density:</b>	Not determined	
• <b>Relative density</b>	Not determined.	
• <b>Vapor density</b>	Not applicable.	
• <b>Evaporation rate</b>	Not applicable.	
• <b>Solubility in / miscibility with</b>	Fully miscible	
• <b>Water:</b>		
• <b>Partition coefficient (n-octanol/water):</b>	Not determined.	
• <b>Viscosity:</b>		
• <b>dynamic:</b>	Not applicable.	
• <b>kinematic:</b>	Not applicable.	
• <b>Solids content:</b>	100.0 %	
• <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:**
  - **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

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Additional toxicological information:	
Carcinogenic categories	
IARC (International Agency for Research on Cancer)	
Substance is not listed.	
NTP (National Toxicology Program)	
Substance is not listed.	
OSHA-Ca (Occupational Safety & Health Administration)	
Substance is not 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
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- Dispose of waste in accordance to applicable national, regional, or local regulations.
- 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	
DOT, ADR, IMDG, IATA	Void
UN proper shipping name	
DOT, ADR, IMDG, IATA	Void
Transport hazard class(es)	
DOT, ADR, IMDG, IATA	Void
Class	

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Packing group	
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL 73/78 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 (Superfund Amendments and Reauthorization Act of 1986 - USA)
- Section 302/304 (40CFR355.30 / 40CFR355.40):
- Substance not listed.
- Section 313 (40CFR372.69):
- Substance is not listed.
- TSCA (Toxic Substances Control Act):
- Substance is not listed.
- California Proposition 65:
- Substance is not listed.
- Chemicals known to cause cancer:
- Substance is not listed.
- Developmental Toxicity
- Substance is not listed.
- Carcinogenic categories
- EPA (Environmental Protection Agency)
- Substance is not listed.
- TLV (Threshold Limit Value established by ACGIH)
- Substance is not listed.
- MAK (German Maximum Workplace Concentration)
- Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health)
- Substance is not listed.
- National regulations
- Water hazard class: Generally not hazardous for water.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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**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:** Environmental Health and Safety.

• **Contact:**  
Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547. 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547. 1(510) 724-7000

• **Date of preparation / last revision** 05/15/2018 / -

• **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

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

PBT: Persistent, Bioaccumulative and Toxic

YPM6: Very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety and Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity - Category 4

\* **Data compared to the previous version altered.**

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