



09/29/2011

Kit Components

Product code	Description
1665020 1665020EDU 1665030 1665030EDU 10012357 1665021 1665021EDU 10012358	Microbial Culture Reagents Kit

Components:

1660407	Ampicillin, lyophilized
1660412	LB Broth, Capsules
1660600	LB Nutrient Agar Powder
1660408	E. coli HB101 lyophilized

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Ampicillin, lyophilized
- **Catalog or product number:** 1660407, 1660407EDU, 9702928
- **CAS Number:**
69-52-3
- **EC number:**
200-708-1
- **Application of the substance / the preparation** 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
(510)741-1000
- **Information department:** Technical services, customer support.
- **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 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
69-52-3 sodium [2S-[2alpha,5alpha,6beta(S*)]]-6-(aminophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate
- **Identification number(s):**
- **EC number:** 200-708-1
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Irritant to eyes.
Irritant to skin.
Irritant to respiratory system.
Irritant to respiratory system and skin.
Xi; Irritant
R36/37/38: Irritating to eyes, respiratory system and skin.
- **Information concerning particular hazards for human and environment:** not applicable
- **Classification system:**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

(Contd. on page 2)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: Ampicillin, lyophilized

(Contd. of page 1)

· **Code letter and hazard designation of product:**

Xi Irritant

· **Risk phrases:**

36/37/38 Irritating to eyes, respiratory system and skin.

· **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

· **Emergency overview:**· **Routes of exposure:**

Inhalation

Skin

* **4 First aid measures**

- **After inhalation** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

* **5 Firefighting measures**

- **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** No further relevant information available.
- **Protective equipment:** Wear self-contained respiratory protective device.

* **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment (See section 8). Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

* **7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 3)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: Ampicillin, lyophilized

(Contd. of page 2)

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

9 Physical and chemical properties

- **General Information**
- **Appearance:**
 - Form:** Crystalline
 - Color:** Light yellow
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
 - Melting point/Melting range:** 240°C
 - Boiling point/Boiling range:** undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Not determined.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: Ampicillin, lyophilized

(Contd. of page 3)

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

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

· **Vapor pressure:** Not applicable.

· **Density:** Not determined
 · **Relative density** Not determined.
 · **Vapour density** Not applicable.
 · **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with Water:** Fully miscible

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

· **Viscosity:**
 dynamic: Not applicable.
 kinematic: Not applicable.
 Organic solvents: 0.0 %

Solids content: 100.0 %
 · **Other information** No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Target organs:**
 Skin.
 Eye.

12 Ecological information

- **Acquatic 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.

(Contd. on page 5)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: Ampicillin, lyophilized

(Contd. of page 4)

- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Hand over to hazardous waste disposers.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **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, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · DOT, ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · 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 MARPOL73/78 and the IBC Code | Not applicable. |

15 Regulatory information

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**
- **Section 302/304 (40CFR355.30 / 40CFR355.40):**
Substance not listed.
- **Section 313 (40CFR372.65):**
Substance is not listed.
- **TSCA (Toxic Substances Control Act):**
Substance is not listed.

(Contd. on page 6)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: Ampicillin, lyophilized

(Contd. of page 5)

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

Substance is not listed.

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

Substance is not listed.

· **NTP (National Toxicology Program)**

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.

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

Substance is not listed.

· **National regulations**· **Water hazard class:** Generally not hazardous for water.**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 MSDS:** 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

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

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** LB Broth, Capsules
- **Catalog or product number:** 1660412, 1660412EDU, 10011390, 9703004, 9704235, 10012359
- **Application of the substance / the preparation** 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 (510)741-1000
- **Information department:** Technical services, customer support.
- **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 Composition/information on ingredients

- **Chemical characterization:** *Mixtures*
- **Description:** *Mixture of the substances listed below with non-hazardous additions.*

· **Listing of dangerous and non-hazardous components:**

91079-40-2	Peptones, casein		35-50%
8013-01-2	Yeast Extract		20-35%
7647-14-5	sodium chloride	Xi R36/38	20-35%

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

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Irritant to eyes.
Irritant to skin.
Irritant to respiratory system and skin.
Xi; Irritant
R36/38: Irritating to eyes and skin.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

(Contd. on page 2)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Broth, Capsules

(Contd. of page 1)

· **Code letter and hazard designation of product:**

Xi Irritant

· **Risk phrases:**

36/38 Irritating to eyes and skin.

· **Safety phrases:**

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37 Wear suitable protective clothing and gloves.

60 This material and its container must be disposed of as hazardous waste.

· **Emergency overview:**· **Routes of exposure:** Skin* **4 First aid measures**

- **After inhalation** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

* **5 Firefighting measures**

- **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** No further relevant information available.
- **Protective equipment:** Wear self-contained respiratory protective device.

* **6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment (See section 8). Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **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.

* **7 Handling and storage**

- **Handling**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification

(Contd. on page 3)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Broth, Capsules

(Contd. of page 2)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **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.
- **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.
- **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.
- **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
Tightly sealed goggles.

9 Physical and chemical properties

- **General Information**
- **Appearance:**

Form:	Tablets
	Solid.
Color:	Light brown
- **Odor:** Sweetish
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**

Melting point/Melting range:	undetermined
Boiling point/Boiling range:	> 999°C
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Not determined.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.

(Contd. on page 4)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Broth, Capsules

(Contd. of page 3)

· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined
· Relative density	Not determined.
· Vapour density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with Water:	Fully miscible
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not applicable.
kinematic:	Not applicable.
· Solvent content:	
Organic solvents:	0.0 %
Solids content:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant
- **Target organs:**
Skin.
Eye.

USA

(Contd. on page 5)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Broth, Capsules

(Contd. of page 4)

* 12 Ecological information

- **Acquatic 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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Hand over to hazardous waste disposers.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **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 | |
| · ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | Void |
| · Transport hazard class(es) | |
| · ADR, ADN, IMDG, IATA | |
| · Class | Void |
| · Packing group | |
| · ADR, IMDG, IATA | 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. |

* 15 Regulatory information

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**
- **Section 302/304 (40CFR355.30 / 40CFR355.40):**
None of the ingredients is listed.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Broth, Capsules

(Contd. of page 5)

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

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

8013-01-2 Yeast Extract

7647-14-5 sodium chloride

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **National regulations**· **Water hazard class:** Generally not hazardous for water.**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 MSDS:** 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

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

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** LB Nutrient Agar Powder
- **Catalog or product number:**
1660600, 1660403, 1660403EDU, 1660600EDU, 9702926, 1660472, 1660472EDU, 9704355
- **Application of the substance / the preparation** 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 (510)741-1000
- **Information department:** Technical services, customer support.
- **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 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**

9002-18-0	Agar		35-50%
73049-73-7	Tryptone		20-35%
7647-14-5	sodium chloride	Xi R36/38	20-35%
8013-01-2	Yeast Extract		10-20%

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

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Irritant to eyes.
Irritant to skin.
Irritant to respiratory system and skin.
Xi; Irritant
R36/38: Irritating to eyes and skin.
- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals

(Contd. on page 2)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Nutrient Agar Powder

(Contd. of page 1)

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

Code letter and hazard designation of product:

Xi Irritant

Risk phrases:

36/38 Irritating to eyes and skin.

Safety phrases:

25 Avoid contact with eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37 Wear suitable protective clothing and gloves.

60 This material and its container must be disposed of as hazardous waste.

Emergency overview:**Routes of exposure:** Skin**4 First aid measures**

- **After inhalation** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

5 Firefighting measures

- **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** No further relevant information available.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment (See section 8). Keep unprotected persons away.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
No special measures required.
No special precautions are necessary if used correctly.

(Contd. on page 3)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Nutrient Agar Powder

(Contd. of page 2)

- **Information about protection against explosions and fires:** No special measures required.
- **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:** Keep receptacle tightly sealed.
- **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.
- **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.
- **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.
- **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
Tightly sealed goggles.

* 9 Physical and chemical properties

- **General Information**
- **Appearance:**
 - Form:** Solid.
 - Color:** Whitish
 - Odor:** Odorless
- **Change in condition**
 - Melting point/Melting range:** undetermined
 - Boiling point/Boiling range:** > 999°C
- **Flash point:** Not applicable
- **Auto igniting:** Product is not selfigniting.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with Water:** Fully miscible

(Contd. on page 4)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Nutrient Agar Powder

(Contd. of page 3)

- | | |
|----------------------------|--|
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| · Solids content: | |
| | 100.0 % |
| · Other information | |
| | No further relevant information available. |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values for hazardous components per OSHA criteria:**

9002-18-0 Agar

Oral LD50 11000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Irritant

- **Target organs:**
- Skin.
- Eye.

12 Ecological information

- **Acquatic 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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

USA

(Contd. on page 5)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Nutrient Agar Powder

(Contd. of page 4)

* 13 Disposal considerations

· Waste treatment methods

· Recommendation

Can be disposed of with household garbage after consulting with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.

Hand over to hazardous waste disposers.

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

· Uncleaned packagings:

· Recommendation: Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

* 14 Transport information

· UN-Number

· DOT, ADR, ADN, IMDG, IATA

Void

· UN proper shipping name

· DOT, ADR, ADN, IMDG, IATA

Void

· Transport hazard class(es)

· DOT, ADR, ADN, IMDG, IATA

· Class

Void

· 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 MARPOL73/78 and the IBC Code

Not applicable.

* 15 Regulatory information

· SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

· Section 302/304 (40CFR355.30 / 40CFR355.40):

None of the ingredients is listed.

· Section 313 (40CFR372.65):

None of the ingredients is listed.

· TSCA (Toxic Substances Control Act):

All ingredients are listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

None of the ingredients is listed.

(Contd. on page 6)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: LB Nutrient Agar Powder

(Contd. of page 5)

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **National regulations**· **Water hazard class:** Generally not hazardous for water.**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 MSDS:** 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

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

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011


1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** E. coli HB101 lyophilized
- **Catalog or product number:** 1660408, 1660408EDU, 9702924
- **Application of the substance / the preparation** 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 (510)741-1000
- **Information department:** Technical services, customer support.
- **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 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.

3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R22: Harmful if swallowed.
- **Information concerning particular hazards for human and environment:** not applicable
- **Classification system:**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
- **Code letter and hazard designation of product:**
 Xn Harmful
- **Risk phrases:**
22 Harmful if swallowed.
- **Safety phrases:**
20 When using do not eat or drink.
22 Do not breathe dust.
25 Avoid contact with eyes.

(Contd. on page 2)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: *E. coli* HB101 lyophilized

(Contd. of page 1)

- **Emergency overview:**
- **Routes of exposure:** Ingestion

4 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.

5 Firefighting measures

- **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** No further relevant information available.
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment (See section 8). Keep unprotected persons away.

- **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.

7 Handling and storage

- **Handling**

- **Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **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.
- **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.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: *E. coli* HB101 lyophilized

(Contd. of page 2)

- **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.
- **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.
- **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

- **General Information**
- **Appearance:**
 - Form:** Solid in various forms
 - Color:** Light yellow
- **Odor:** Odorless
- **Odour threshold:** Not determined.
- **pH-value:** Not applicable.
- **Change in condition**
 - Melting point/Melting range:** undetermined
 - Boiling point/Boiling range:** undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Ignition temperature:**
- **Decomposition temperature:** Not determined.
- **Auto igniting:** Not determined.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Explosion limits:**
 - Lower:** Not determined.
 - Upper:** Not determined.
- **Vapor pressure:** Not applicable.
- **Density:** Not determined
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **Evaporation rate** Not applicable.
- **Solubility in / Miscibility with**
 - Water:** Fully miscible
- **Segregation coefficient (n-octanol/water):** Not determined.

(Contd. on page 4)

USA

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: *E. coli* HB101 lyophilized

(Contd. of page 3)

- | | |
|----------------------------|--|
| · Viscosity: | |
| dynamic: | Not applicable. |
| kinematic: | Not applicable. |
| Organic solvents: | 0.0 % |
| · Solids content: | 100.0 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Acquatic 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.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Hand over to hazardous waste disposers.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

— USA —

(Contd. on page 5)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: *E. coli* HB101 lyophilized

(Contd. of page 4)

* 14 Transport information

· UN-Number	
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN, IMDG, IATA	
· Class	Void
· 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 MARPOL73/78 and the IBC Code	Not applicable.

* 15 Regulatory information

· SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)

· Section 302/304 (40CFR355.30 / 40CFR355.40):

Substance not listed.

· Section 313 (40CFR372.65):

Substance is not listed.

· TSCA (Toxic Substances Control Act):

Substance is not listed.

· Carcinogenic categories

· EPA (Environmental Protection Agency)

Substance is not listed.

· IARC (International Agency for Research on Cancer)

Substance is not listed.

· NTP (National Toxicology Program)

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.

· OSHA-Ca (Occupational Safety & Health Administration)

Substance is not listed.

(Contd. on page 6)

Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: E. coli HB101 lyophilized

(Contd. of page 5)

- **National regulations**
- **Water hazard class:** Generally not hazardous for water.

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 MSDS:** 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
- *** Data compared to the previous version altered.**

USA