

Printing date 08/05/2011

Reviewed on 08/05/2011

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

- **Product identifier**
- **Product name:** Solution B, NADPH Regenerating System
- **Catalog number:** 451200

- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
BD Biosciences, Discovery Labware
6 Henshaw Street
Woburn, MA 01801
Tel: 877.232.8995
email: labware@bd.com
- **Information department:**
For further information, please call Technical Services at (877)232-8995
Technical Services
- **Emergency telephone number:**
In case of a chemical emergency, spill, fire, exposure, or accident contact BD Biosciences Discovery Labware at 800.334.5229, or ChemTrec at 800.424.9300.

2 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description:**
Dehydrogenase, glucose 6-phosphate
- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

CAS NO.	Description	% Void
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3 Hazards identification

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

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200 and the European Directive 91/155/EEC, and 93/112/EC.
- **Void**
- **Information concerning particular hazards for human and environment:** Not applicable
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations pertaining to regulations on hazardous materials.

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- **Classification system**
- **NFPA ratings (scale 0-4)**



Health = 0
Flammability = 0
Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for 15 minutes under running water. Then consult a doctor.
- **After swallowing** If swallowed, rinse mouth with water (only if the person is conscious)
- **Information for doctor** Show the product label or this MSDS.

5 Firefighting measures

- **Suitable extinguishing agents**
CO₂, ABC multipurpose dry chemical 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

- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections**
No dangerous substances are released.
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:** -20° C
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed containers.
- **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.

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- **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**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

9 Physical and chemical properties

· **General Information**

· **Appearance:**

- | | |
|------------------|-----------------|
| Form: | Liquid |
| Color: | Clear |
| Odor: | Characteristic |
| Odour threshold: | Not determined. |

· **pH-value:** Not applicable.

· **Change in condition**

- | | |
|------------------------------|----------------|
| Melting point/Melting range: | Not determined |
| Boiling point/Boiling range: | Not determined |

· **Flash point:** Not applicable

· **Auto igniting:** Product is not self igniting.

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

· **Vapor pressure:** Not applicable.

· **Density:** Not determined

· **Solubility in / Miscibility with**

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

· **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:** Incompatible material: strong oxidizers.
- **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
 - on the skin: No irritating effect.
 - on the eye: No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to OSHA classification according to internally approved calculation methods for preparations.
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological information

- **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.
- **Ecotoxicological effects:**
- **Other information:**
The ecological effects have not been thoroughly investigated, but currently none have been identified.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Smaller quantities can be disposed of with solid waste.
This product is not considered a RCRA hazardous waste.
Dispose of material in accordance with federal (40 CFR 261), state and local requirements.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to state and federal 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 | |
| · ADR, ADN | Void |
| · Transport hazard class(es) | |
| · DOT, ADR, ADN, IMDG, IATA | |
| · Class | Void |

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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
MARPOL73/78 and the IBC Code Not applicable.

15 Regulatory information

· SARA Section 355 (extremely hazardous substances)
None of the ingredients is listed.

· SARA Section 313 (specific toxic chemical listings)
None of the ingredients is listed.

· TSCA (Toxic Substances Control Act)
9001-40-5 | Glucose-6-phosphate dehydrogenase
7732-18-5 | water

· California Proposition 65 - Chemicals known to cause cancer
None of the ingredients is listed.

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

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

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

· Carcinogenic categories

· 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.

· Product related hazard information:
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations pertaining to regulations on hazardous materials.

· National regulations

· Water hazard class: Generally not hazardous for water.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of

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Material Safety Data Sheet
acc. to ISO/11014:2009

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the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Department issuing MSDS: Safety and Environment Department**

· **Contact: Technical Service Representative**

· **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)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

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

NFPA: National Fire Protection Association (USA)

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