Material Safety Data Sheet

Printing date 05/17/2008 Reviewed on 01/09/2008

1 Identification of substance:

· **Product details:**

· **Trade name:** DNA Standard Lambda Hind III Digest

· **Catalog or product number:** 9702941
· **Application of the substance / the preparation** Laboratory chemicals

· **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 information:**
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 components:

· **Chemical characterization:**
· **CAS No. Description:**
7732-18-5 water
· **Identification number(s):**
· **EINECS Number:** 231-791-2
· **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

· **Emergency overview:** not applicable
· **Information pertaining to particular dangers for man 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.

4 First aid measures

· **General information** No special measures required.
· **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** Induce vomiting and call for medical help.

5 Fire fighting measures

· **Suitable extinguishing agents** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Protective equipment:** No special measures required.

6 Accidental release measures

· **Person-related safety precautions:** Not required
· **Measures for environmental protection:** Dilute with plenty of water.

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· **Measures for cleaning/collecting:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
· **Additional information:** No dangerous substances are released.

7 Handling and storage

· **Handling**
· **Information for safe handling:**
No special measures required.
No special precautions are necessary if used correctly.
· **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.

8 Exposure controls and 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** The usual precautionary measures for handling chemicals should be followed.
· **Breathing equipment:** Not required.
· **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**	
Form:	liquid
Color:	Colorless
Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	0°C
Boiling point/Boiling range:	100°C
· **Flash point:**	Not applicable
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Vapor pressure at 20°C:**	23 hPa
· **Density at 20°C:**	1 g/cm³

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· **Solubility in / Miscibility with Water:**	Fully miscible
· **pH-value at 20°C:**	8
· **Organic solvents:**	0.0 %
· **Water:**	99.1 %
· **Solids content:**	0.9 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Dangerous reactions** No dangerous reactions known
· **Dangerous products of decomposition:** 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.
· **Additional toxicological information:**
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.
The substance is not subject to classification according to the latest version of the EU lists.
· **Target organs:** Not applicable.

12 Ecological information:

· **General notes:** Generally not hazardous for water.

13 Disposal considerations

· **Product:**
· **Recommendation** Hand over to hazardous waste disposers.

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

14 Transport information

· **DOT regulations:**
· **Hazard class:** -

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· **Land transport ADR/RID (cross-border)**
· **ADR/RID class:** -

· **Maritime transport IMDG:**
· **IMDG Class:** -
· **Marine pollutant:** No

· **Air transport ICAO-TI and IATA-DGR:**
· **ICAO/IATA Class:** -

· **UN "Model Regulation":** -

· **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulations

· **SARA (Superfund Amendents 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):**

7732-18-5	water
7647-14-5	sodium chloride
77-86-1	Tris(hydroxymethyl)aminomethane
27565-41-9	(R*,R*)-(±)-1,4-dimercaptobutane-2,3-diol

· **Cancerogenity 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.

· **Markings according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The substance is not subject to classification according to EU lists and other sources of literature known to us.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

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· **Safety phrases:**
60 This material and its container must be disposed of as hazardous waste.

· **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
· **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: Reglement internationale concernent le transport des merchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
· *** Data compared to the previous version altered.**