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03/16/2010

Kit Components

Product code	Description
7318350	**Biologic LP Starter Kit**

Components:

1250561	Protein Anion Exchange Standard
9702317	Chromatography System Buffer A
9702318	Chromatography System Buffer B
7324120	Bio-Scale™ Mini Macro-Prep® High Q Cartridge

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 01/20/2010

1 Identification of substance:

· **Product details:**

· **Trade name: Protein Anion Exchange Standard**

· **Catalog or product number:** 1250561, 1250561EDU, 9700926
· **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**
· **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**		
1391-06-6	Conalbumin from hen egg white	20-35%
100684-32-0	Myoglobin from horse skeletal muscle	20-35%
9006-59-1	Albumin from hen egg white	20-35%
9035-81-8	Trypsin inhibitor from soybean	20-35%

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

*

3 Hazards identification

· **Emergency overview:** not applicable
· **Information pertaining to particular dangers for man and environment**
The product does not have 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.

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.

(Contd. on page 2)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 01/20/2010

Trade name: Protein Anion Exchange Standard

(Contd. of page 1)

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:** No special measures required.
· **Measures for cleaning/collecting:** Pick up mechanically.
· **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:**
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.
· **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:	Solid.
Color:	According to product specification

(Contd. on page 3)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 01/20/2010

Trade name: Protein Anion Exchange Standard

(Contd. of page 2)

Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
· **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:	Insoluble
· **Solvent content:**	
Organic solvents:	0.0 %
Solids content:	100.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Materials to be avoided:**
· **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:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
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.
· **Target organs:** Not applicable.

*

12 Ecological information:

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

(Contd. on page 4)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 01/20/2010

Trade name: Protein Anion Exchange Standard

(Contd. of page 3)

13 Disposal considerations

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

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

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

· **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:** -

· **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):**
None of the ingredients is listed.

· **Section 313 (40CFR372.65):**
None of the ingredients is listed.

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

1391-06-6	Conalbumin from hen egg white
9006-59-1	Albumin from hen egg white

· **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.

(Contd. on page 5)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 01/20/2010

Trade name: Protein Anion Exchange Standard

(Contd. of page 4)

· **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.

· **Markings according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

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

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.**

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

*

1 Identification of substance:

· **Product details:**

· **Trade name: Chromatography System Buffer A**

· **Catalog or product number:** 9702317
· **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 15.

· **Chemical characterization**

· **Listing of dangerous and non-hazardous components:**		
1185-53-1	Tris(hydroxymethyl)aminomethane hydrochloride	2.5-5%

*

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.

(Contd. on page 2)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer A

(Contd. of page 1)

· **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.
· **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

(Contd. on page 3)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer A

(Contd. of page 2)

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
· **Solubility in / Miscibility with Water:**	Fully miscible Not miscible or difficult to mix
· **pH-value at 20°C:** · **Organic solvents:** · **Water:**	8.1 0.0 % 97.0 %
· **Solids content:**	3.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Materials to be avoided:**
· **Dangerous reactions** No dangerous reactions known
· **Dangerous products of decomposition:** No dangerous decomposition products known

*

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**		
1185-53-1 Tris(hydroxymethyl)aminomethane hydrochloride		
Oral	LD50	5900 mg/kg (rat)

· **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:

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

(Contd. on page 4)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer A

(Contd. of page 3)

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:** -

· **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:** -

· **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):**
Substance is 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.

(Contd. on page 5)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer A

(Contd. of page 4)

· **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).

· **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
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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

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1 Identification of substance:

· **Product details:**

· **Trade name: Chromatography System Buffer B**

· **Catalog or product number:** 9702318
· **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
1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.

*

2 Composition/Information on components:

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

· **Listing of dangerous and non-hazardous components:**			
7732-18-5	water		50-100%
7647-14-5	sodium chloride	Xi; R 36/38	20-35%
1185-53-1	Tris(hydroxymethyl)aminomethane hydrochloride		2.5-5%

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

*

3 Hazards identification

· **Emergency overview:** not applicable
· **Information pertaining to particular dangers for man and environment**
The product does not have 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.

*

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.

(Contd. on page 2)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer B

(Contd. of page 1)

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.
· **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:**
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:** 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

(Contd. on page 3)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer B

(Contd. of page 2)

*

9 Physical and chemical properties:

· **General Information**	
Form:	liquid
Color:	Colorless
Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	100°C
· **Flash point:**	Not applicable
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Vapor pressure at 20°C:**	23 hPa
· **Density at 20°C:**	1.17643 g/cm³
· **Solubility in / Miscibility with**	
Water:	Fully miscible
· **pH-value at 20°C:**	8.1
· **Solvent content:**	
Organic solvents:	0.0 %
Water:	68.0 %
Solids content:	32.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Materials to be avoided:**
· **Dangerous reactions** No dangerous reactions known
· **Dangerous products of decomposition:** No dangerous decomposition products known

*

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**		
1185-53-1 Tris(hydroxymethyl)aminomethane hydrochloride		
Oral	LD50	5900 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritant effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

(Contd. on page 4)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer B

(Contd. of page 3)

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.

· **Target organs:** *Not applicable.*

*

12 Ecological information:

· **Additional 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:** -

· **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:** -

· **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):**

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 5)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Chromatography System Buffer B

(Contd. of page 4)

· **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.

· **Markings according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

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

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

1 Identification of substance:

· **Product details:**

· **Trade name: Bio-Scale™ Mini Macro-Prep® High Q Cartridge**

· **Catalog or product number:** 7324120, 7324122, 7324124, 10004752, 10004753
· **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**
· **Description:** Mixture of the substances listed below with non-hazardous additions.

· **Listing of dangerous and non-hazardous components:**		
72642-12-7	2-Propenoic acid, 2-methyl-, oxiranylmethyl ester, polymer with oxydi-2,1-ethanediyl bis(2-methyl-2-propenoate)	35-50%
7732-18-5	water	35-50%
64-17-5	ethanol F; R 11	5-10%

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

*
3 Hazards identification

· **Emergency overview:** not applicable
· **Information pertaining to particular dangers for man and environment**
The product does not have 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.

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.

(Contd. on page 2)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Bio-Scale™ Mini Macro-Prep® High Q Cartridge

(Contd. of page 1)

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:** Do not allow to enter sewers/ surface or ground water.
· **Measures for cleaning/collecting:** Pick up mechanically.
· **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:**	
64-17-5 ethanol	
PEL	1900 mg/m³, 1000 ppm
REL	1900 mg/m³, 1000 ppm
TLV	1880 mg/m³, 1000 ppm

· **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.
· **Protection of hands:** Protective gloves.
· **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.
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.

(Contd. on page 3)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Bio-Scale™ Mini Macro-Prep® High Q Cartridge

(Contd. of page 2)

· **Eye protection:** Safety glasses

*

9 Physical and chemical properties:

· **General Information**	
Form:	Solid.
Color:	Silver grey
Odor:	Odorless
· **Change in condition**	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	78°C
· **Flash point:**	Not applicable
· **Ignition temperature:**	425°C
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Vapor pressure at 20°C:**	23 hPa
· **Density at 20°C:**	0.99334 g/cm³
· **Solubility in / Miscibility with**	
Water:	Insoluble
· **Solvent content:**	
Organic solvents:	8.0 %
Water:	42.0 %
Solids content:	50.0 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Materials to be avoided:**
· **Dangerous reactions** No dangerous reactions known
· **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**		
64-17-5 ethanol		
Oral	LD50	7060 mg/kg (rat)
Inhalative	LC50/4 h	20000 mg/l (rat)

· **Primary irritant effect:**
· **on the skin:** No irritant effect.
· **on the eye:** No irritant effect.
· **Sensitization:** No sensitizing effects known.

(Contd. on page 4)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Bio-Scale™ Mini Macro-Prep® High Q Cartridge

(Contd. of page 3)

· **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
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.
· **Target organs:** Not applicable.

12 Ecological information:

· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

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

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

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

· **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:** -

· **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):**
None of the ingredients is listed.

· **Section 313 (40CFR372.65):**
None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**
7732-18-5 water

(Contd. on page 5)

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Material Safety Data Sheet

Printing date 03/16/2010 Reviewed on 10/08/2009

Trade name: Bio-Scale™ Mini Macro-Prep® High Q Cartridge

(Contd. of page 4)

64-17-5	ethanol

· **California Proposition 65:**

· **Developmental Toxicity**

64-17-5	ethanol

· **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)**

64-17-5	ethanol	A4

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

64-17-5	ethanol	5

· **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.

· **Markings according to EU guidelines:**
Observe the general safety regulations when handling chemicals
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
NK	5-10

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly 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.**

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