



09/29/2011

### Kit Components

Product code	Description
<b>C7000068R</b>	<b>ProteinChip Refrigerated Components</b>

Components:

K2000003	ProteinChip® CM Low Stringency Buffer
10013875	ProChip Acetonitrile, 2 ml
10013877	1% Trifluoroacetic Acid Solution
C7000070	ProteinChip® Peptide Mass Calibration Kit
C3000002	ProteinChip® SPA EAM
1632110	ReadyPrep™ E. coli Protein Sample

## 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:** ProteinChip® CM Low Stringency Buffer
- **Catalog or product number:** K2000003, K2000007, K2030003, 10007908, 10007902, 10007903, 10013887, 10013888
- **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:**  
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization: Mixtures**
- **Listing of dangerous and non-hazardous components:** Void

**3 Hazards identification**

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Void
- **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:**  
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:**  
35 This material and its container must be disposed of in a safe way.

**4 First aid measures**

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.

(Contd. on page 2)

USA

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® CM Low Stringency Buffer**

(Contd. of page 1)

- **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 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:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.
- **Reference to other sections** No dangerous substances are released.

**7 Handling and storage**

- **Handling**
- **Precautions 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.
- **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:**

**64-19-7 acetic acid, glacial**

PEL	25 mg/m <sup>3</sup> , 10 ppm
REL	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 ppm
TLV	Short-term value: 37 mg/m <sup>3</sup> , 15 ppm Long-term value: 25 mg/m <sup>3</sup> , 10 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.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® CM Low Stringency Buffer**

(Contd. of page 2)

- **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**
- **Appearance:**
  - Form: liquid
  - Color: Colorless
  - Odor: Odorless
- **pH-value at 20°C:** 4
- **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/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - Water: Fully miscible
- **Solvent content:**
  - Organic solvents: 0.5 %
  - Water: 99.2 %
- **Solids content:** 0.3 %
- **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.

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® CM Low Stringency Buffer**

(Contd. of page 3)

**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**

**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.

**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.

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

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® CM Low Stringency Buffer**

(Contd. of page 4)

**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):**

7732-18-5	water
64-19-7	acetic acid, glacial
78491-02-8	Diazolidinyl Urea

· **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**

· **Technical instructions (air):**

Class	Share in %
II	0.1-1.0

· **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 09/09/2010

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

- **Product identifier**
- **Trade name:** ProChip Acetonitrile, 2 ml
- **Catalog or product number:** 10013875, 10013876
- **CAS Number:**  
75-05-8
- **EC number:**  
200-835-2
- **Index number:**  
608-001-00-3
- **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:**  
75-05-8 acetonitrile
- **Identification number(s):**
- **EC number:** 200-835-2
- **Index number:** 608-001-00-3
- **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.  
Flammable.  
Xn; Harmful  
R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.  
Xi; Irritant  
R36: Irritating to eyes.  
F; Highly flammable  
R11: Highly flammable.
- **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.

(Contd. on page 2)

USA

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/09/2010

Trade name: ProChip Acetonitrile, 2 ml

(Contd. of page 1)

· **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  
F Highly flammable

· **Risk phrases:**

11 Highly flammable.  
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
36 Irritating to eyes.

· **Safety phrases:**

1/2 Keep locked up and out of the reach of children.  
16 Keep away from sources of ignition - No smoking.  
36/37 Wear suitable protective clothing and gloves.

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

Ingestion  
Inhalation  
Skin

#### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.  
In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact** Generally the product does not irritate the skin.· **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.· **After swallowing** Immediately call a doctor.

#### 5 Firefighting measures

· **Suitable extinguishing agents**

CO<sub>2</sub>, 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:**

Mount respiratory protective device.  
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.

(Contd. on page 3)



**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: ProChip Acetonitrile, 2 ml**

(Contd. of page 2)

- **Environmental precautions:**  
Prevent seepage into sewage system, workpits and cellars.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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**  
Ensure good ventilation/exhaustion at the workplace.  
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.
- **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:**

**75-05-8 acetonitrile**

PEL	70 mg/m <sup>3</sup> , 40 ppm
REL	34 mg/m <sup>3</sup> , 20 ppm
TLV	34 mg/m <sup>3</sup> , 20 ppm
	Skin

- **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.  
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.

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: ProChip Acetonitrile, 2 ml**

(Contd. of page 3)

- **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:** liquid
  - Color:** Colorless
  - Odor:** Aromatic
- **Change in condition**
  - Melting point/Melting range:** -46°C
  - Boiling point/Boiling range:** 81°C
- **Flash point:** ≤ 21°C
- **Ignition temperature:** 525°C
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Explosion limits:**
  - Lower:** 4.4 Vol %
  - Upper:** 16 Vol %
- **Vapor pressure at 20°C:** 97 hPa
- **Density at 20°C:** 0.7822 g/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - Water:** Fully miscible
  - Organic solvents:** 0.0 %
- **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:**

**75-05-8 acetonitrile**

Oral	LD50	2730 mg/kg (rat)
Dermal	LD50	1250 mg/kg (rbt)

(Contd. on page 5)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: ProChip Acetonitrile, 2 ml**

(Contd. of page 4)

- **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.  
Respiratory tract.

**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:**  
Water hazard class 2 (Assessment by list): hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

**13 Disposal considerations**

- **Waste treatment methods**
- **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**

· <b>UN-Number</b>	
· <b>DOT</b>	UN1648
· <b>ADR, IMDG, IATA</b>	1648
· <b>UN proper shipping name</b>	
· <b>DOT, IMDG, IATA</b>	ACETONITRILE
· <b>ADR</b>	1648 ACETONITRILE
· <b>Transport hazard class(es)</b>	
· <b>DOT, IMDG, IATA</b>	
· <b>Class</b>	3 Flammable liquids.
· <b>Label</b>	3
· <b>ADR</b>	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3

(Contd. on page 6)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: ProChip Acetonitrile, 2 ml**

(Contd. of page 5)

- **Packing group**  
· **DOT, ADR, IMDG, IATA** II
- **Environmental hazards:**  
· **Marine pollutant:** No
- **Special precautions for user** Warning: Flammable liquids  
· **Danger code (Kemler):** 33  
· **EMS Number:** F-E,S-D
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

**15 Regulatory information**

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

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

Substance not listed.

· **Section 313 (40CFR372.65):**

Substance is listed.

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

Substance is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

75-05-8 | acetonitrile

CBD

· **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)**

75-05-8 | acetonitrile

A4

· **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:** Water hazard class 2 (Assessment by list): hazardous for water.

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: ProChip Acetonitrile, 2 ml**

(Contd. of page 6)

**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 09/09/2010

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

- **Product identifier**
- **Trade name:** 1% Trifluoroacetic Acid Solution
- **Catalog or product number:** 10013877, 10013878
- **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:**  
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.
- **Chemical characterization: Mixtures**

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

76-05-1	trifluoroacetic acid	C R35 Xn R20 R52/53	0.1-1.0%
---------	----------------------	---------------------------	----------

**3 Hazards identification**

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
Corrosive.  
May cause irreversible eye damage.  
C; Corrosive  
R34: Causes burns.
- **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)

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/09/2010

Trade name: 1% Trifluoroacetic Acid Solution

(Contd. of page 1)

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

C Corrosive

· **Risk phrases:**

34 Causes burns.

· **Safety phrases:**

9 Keep container in a well-ventilated place.

20 When using do not eat or drink.

23 Do not breathe gas/fumes/vapour/spray.

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

27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately.

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

#### 4 First aid measures

- **General information** Immediately remove any clothing soiled by the product.
- **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.  
Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Drink copious amounts of water and provide fresh air. Immediately call a doctor.

#### 5 Firefighting measures

- **Suitable extinguishing agents**  
CO<sub>2</sub>, 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:**  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: 1% Trifluoroacetic Acid Solution**

(Contd. of page 2)

See Section 13 for disposal information.

**7 Handling and storage**

- **Handling**
- **Precautions for safe handling**  
 No special measures required.  
 Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.  
 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:** 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.
- **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  
 Tightly sealed goggles.

**9 Physical and chemical properties**

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

<b>Form:</b>	liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Odorless
- **pH-value at 20°C:** 0.8

(Contd. on page 4)



## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/09/2010

Trade name: 1% Trifluoroacetic Acid Solution

(Contd. of page 3)

- **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/cm<sup>3</sup>
- **Solubility in / Miscibility with Water:** Fully miscible
- **Solvent content:**
  - Organic solvents: 1.0 %
  - Water: 99.0 %
- **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:** Caustic effect on skin and mucous membranes.
  - **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:** Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Target organs:** Skin.

## 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.
- **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.
  - Must not reach bodies of water or drainage ditch undiluted or unneutralized.

(Contd. on page 5)

USA

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/09/2010

**Trade name: 1% Trifluoroacetic Acid Solution**

(Contd. of page 4)

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

**13 Disposal considerations**

- **Waste treatment methods**
- **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**

· <b>UN-Number</b>	
· <b>DOT</b>	UN2699
· <b>ADR, IMDG, IATA</b>	2699
· <b>UN proper shipping name</b>	
· <b>DOT, IMDG, IATA</b>	TRIFLUOROACETIC ACID
· <b>ADR</b>	2699 TRIFLUOROACETIC ACID
· <b>Transport hazard class(es)</b>	
· <b>DOT, IMDG, IATA</b>	
· <b>Class</b>	8 Corrosive substances.
· <b>Label</b>	8
· <b>ADR</b>	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	I
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Danger code (Kemler):</b>	88
· <b>EMS Number:</b>	F-A,S-B
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	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 09/09/2010

**Trade name: 1% Trifluoroacetic Acid Solution**

(Contd. of page 5)

· **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.

· **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**

· **Technical instructions (air):**

Class	Share in %
NK	0.1-1.0

· **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.**

## 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:** ProteinChip® Peptide Mass Calibration Kit
- **Catalog or product number:** C7000070, 10010605
- **CAS Number:**  
530-59-6
- **EC number:**  
208-487-3
- **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:**  
530-59-6 3,5-Dimethoxy-4-hydroxycinnamic acid, predominantly trans isomer
- **Identification number(s):**
- **EC number:** 208-487-3
- **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.
- **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:**  
Observe the general safety regulations when handling chemicals  
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials

(Contd. on page 2)

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ProteinChip® Peptide Mass Calibration Kit

(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**  
CO<sub>2</sub>, 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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Ensure adequate ventilation.
- **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.
- **Information about protection against explosions and fires:** No special measures required.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® Peptide Mass Calibration Kit**

(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:	Solid.
Color:	Light yellow
- **Odor:** Odorless
- **Change in condition**

Melting point/Melting range:	202°C
Boiling point/Boiling range:	undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with**

Water:	Insoluble
Organic solvents:	0.0 %
- **Solids content:** 100.0 %

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® Peptide Mass Calibration Kit**

(Contd. of page 3)

· **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**

- **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.
- **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**

- **Waste treatment methods**
- **Recommendation**  
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.

**14 Transport information**

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** Void

(Contd. on page 5)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® Peptide Mass Calibration Kit**

(Contd. of page 4)

- **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.

· **National regulations**

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

USA

(Contd. on page 6)



**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® Peptide Mass Calibration Kit**

(Contd. of page 5)

**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

## 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:** ProteinChip® SPA EAM
- **Catalog or product number:** C3000002, 10007826, 10007827, 40031001
- **CAS Number:**  
530-59-6
- **EC number:**  
208-487-3
- **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:**  
530-59-6 3,5-Dimethoxy-4-hydroxycinnamic acid, predominantly trans isomer
- **Identification number(s):**
- **EC number:** 208-487-3
- **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.
- **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)

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ProteinChip® SPA EAM

(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.

35 This material and its container must be disposed of in a safe way.

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**  
CO<sub>2</sub>, 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:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **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.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® SPA EAM**

(Contd. of page 2)

- 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:** 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:** Solid.
  - Color:** Light yellow
  - Odor:** Odorless
- **Change in condition**
  - Melting point/Melting range:** 202°C
  - Boiling point/Boiling range:** undetermined
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density:** Not determined
- **Solubility in / Miscibility with**
  - Water:** Fully miscible

(Contd. on page 4)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ProteinChip® SPA EAM**

(Contd. of page 3)

**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.
- **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**

- **Waste treatment methods**
- **Recommendation**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
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.

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ProteinChip® SPA EAM

(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: ProteinChip® SPA EAM**

(Contd. of page 5)

- **National regulations**
- **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.**

USA

**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:** ReadyPrep™ E. coli Protein Sample
- **Catalog or product number:** 1632110, 9703999
- **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:**

6138-23-4	d-trehalose		50-100%
	Protein Extract		2.5-5%
1185-53-1	Tris(hydroxymethyl)aminomethane hydrochloride		2.5-5%
77-86-1	Tris(hydroxymethyl)aminomethane	Xn R22 Xi R36	1.0-2.5%

- **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** Void
  - **Information concerning particular hazards for human 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.
- 
- **Label elements**
  - **Labelling 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).

(Contd. on page 2)



## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ReadyPrep™ E. coli Protein Sample

(Contd. of page 1)

· **Safety phrases:**

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

**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 Firefighting measures**

- **Suitable extinguishing agents**  
CO<sub>2</sub>, 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:** Pick up mechanically.
- **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:** 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:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

(Contd. on page 3)

**Material Safety Data Sheet**

Printing date 09/29/2011

Reviewed on 09/29/2011

**Trade name: ReadyPrep™ E. coli Protein Sample**

(Contd. of page 2)

- **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**

· **Appearance:**

- **Form:** Solid.
- **Color:** Whitish
- **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)** Not determined.

· **Ignition temperature:**

· **Decomposition temperature:** Not determined.

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

· **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.

· **Solvent content:**

· **Organic solvents:** 0.0 %

(Contd. on page 4)

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ReadyPrep™ E. coli Protein Sample

(Contd. of page 3)

· **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.
- **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

- **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: ReadyPrep™ E. coli Protein Sample

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

**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):**

1185-53-1 Tris(hydroxymethyl)aminomethane hydrochloride

77-86-1 Tris(hydroxymethyl)aminomethane

7786-30-3 Magnesium 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.

(Contd. on page 6)

## Material Safety Data Sheet

Printing date 09/29/2011

Reviewed on 09/29/2011

Trade name: ReadyPrep™ E. coli Protein Sample

(Contd. of page 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.

· **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.**