



04/05/2010

Kit Components

Product code	Description
195-9580	UBz Reagent Kit

Components:

195-9512	UBz Extraction Cartridge
195-9522	UBz Check Mix
195-9562	UBz Alkaline Wash
195-9563	UBz Acid Wash
195-9564	UBz Conditioner
195-9565	UBz Internal Standard Diluent
195-9511	UBz Purification Cartridge
195-9513	UBz Analytical Cartridge

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Extraction Cartridge
- **Catalog or product number:** 195-9512
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **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.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
60676-86-0 Silica, vitreous
- **Identification number(s):**
- **EINECS Number:** 262-373-8
- **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** 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.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

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

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Trade name: UBz Extraction Cartridge

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· **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:**

60676-86-0 Silica, vitreous

PEL (United States)	see Quartz listing
REL (United States)	0.05* mg/m ³ *respirable dust (REL-Crystalline Silica)
TLV (United States)	TLV withdrawn

- **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: Clear

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Trade name: UBz Extraction Cartridge

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Odor:	Odorless
· Change in condition <i>Melting point/Melting range: undetermined</i> <i>Boiling point/Boiling range: undetermined</i>	
· 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 <i>Water:</i>	Insoluble
<i>Organic solvents:</i>	0.0 %
Solids content:	98.0 %

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:**
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:**
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.

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Trade name: **UBz Extraction Cartridge**

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13 Disposal considerations

- **Product:**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **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 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 listed.

· **Carcinogenic categories**

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

60676-86-0 Silica, vitreous

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· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

The substance is not subject to classification according to EU lists and other sources of literature known to us.

The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (GefStoffV).

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Trade name: UBz Extraction Cartridge

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- **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.**

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Check Mix
- **Catalog or product number:** 195-9522
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **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.

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:**

	Human Urine - Lyophilized		50-100%
6381-92-6	Ethylenediaminetetraacetic acid disodium salt dihydrate	Xn, Xi; R 22-36/37/38	35-50%

- **Additional information**
Contains components derived from human urine.
For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Irritant to eyes.
Irritant to skin.
Irritant to respiratory system.
Irritant to respiratory system and skin.
Xn Harmful
- **Routes of exposure:**
Ingestion
Inhalation
Skin
- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.
- **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.

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Trade name: UBz Check Mix

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· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 0

Reactivity = 0

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** 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** Immediately call a doctor.

· **Information for doctor**

· **The following symptoms may occur:** Breathing difficulty

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:** Avoid formation of dust.

· **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.

· **Measures for cleaning/collecting:**

Disinfectant

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage· **Handling**

· **Information for safe handling:** 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.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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Trade name: UBz Check Mix

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· **Components with limit values that require monitoring at the workplace:**

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures**

Follow the usual biosafety practices for handling potentially infectious materials.

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**

Form:	Solid.
Color:	Whitish
Odor:	Recognizable

· **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: Fully miscible

· **Solvent content:**

Organic solvents: 0.0 %

Solids content: 0.2 %

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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Trade name: UBz Check Mix

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- **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:**

6381-92-6 Ethylenediaminetetraacetic acid disodium salt dihydrate

Oral	LD50	2000 mg/kg (rat)
------	------	------------------

25332-39-2 Trazodone Hydrochloride

Oral	LD50	584 mg/kg (mus)
		690 mg/kg (rat)

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

12 Ecological information:

- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): 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

- **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.

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Trade name: **UBz Check Mix**

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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: -

15 Regulations

· **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):**

None of the ingredients is listed.

· **California Proposition 65:**

· **Chemicals known to cause cancer:**

604-75-1 Oxazepam

· **Developmental Toxicity**

28911-01-5 Triazolam

604-75-1 Oxazepam

846-49-1 Lorazepam

846-50-4 Temazepam

· **Carcinogenic categories**

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

604-75-1 Oxazepam

2B

846-50-4 Temazepam

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings 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

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Trade name: UBz Check Mix

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· Hazard-determining components of labelling:*Ethylenediaminetetraacetic acid disodium salt dihydrate***· Risk phrases:**

22 Harmful if swallowed.

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

· Safety phrases:

20 When using do not eat or drink.

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

28 After contact with skin, wash immediately with plenty of soap and water

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

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

· National regulations**· Water hazard class:** Water hazard class 2 (Self-assessment): 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.

Contains less than <0.05% of several chemicals listed in Section 15 that are known to the State of California to cause cancer or reproductive harm.

· 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 04/05/2010

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1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Alkaline Wash
- **Catalog or product number:** 195-9562
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **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.

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%
67-56-1	methanol	T, F; R 11-23/24/25-39/23/24/25	20-35%

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

3 Hazards identification

- **Emergency overview:**
Flammable.
T Toxic
- **Information pertaining to particular dangers for man and environment**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
R 10 Flammable.
R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- **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.
- **NFPA ratings (scale 0-4)**
Health = 3
Fire = 2
Reactivity = 0

4 First aid measures

- **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.

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Trade name: UBz Alkaline Wash

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· **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

- **Suitable extinguishing agents**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.

7 Handling and storage

- **Handling**
- **Information for safe handling:** 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:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

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:**

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

· **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

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Trade name: UBz Alkaline Wash

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Wash hands before breaks and at the end of work.

- **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**

Form:	liquid
Color:	Whitish
Odor:	Alcohol-like

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

· **Flash point:** 21 - 55°C

· **Ignition temperature:** 455°C

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

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower:	5.5 Vol %
Upper:	44.0 Vol %

· **Vapor pressure at 20°C:** 128 hPa

· **Density at 20°C:** 0.93743 g/cm³

· **Solubility in / Miscibility with**

Water: Fully miscible

· **pH-value at 20°C:** 10.7

· **Solvent content:**

Organic solvents:	25.1 %
Water:	74.1 %

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

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Trade name: UBz Alkaline Wash

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11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 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 shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

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

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**

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.

14 Transport information

· **DOT regulations:**

· **Hazard class:** 3

· **Identification number:** UN1230

· **Packing group:** II

· **Hazardous substance:** 5000 lbs, 2270 kg

· **Proper shipping name (technical name):** Methanol solution

· **Maritime transport IMDG:**

· **Marine pollutant:** No

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Trade name: UBz Alkaline Wash

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- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1230
- **Packing group:** II
- **Proper shipping name:** Methanol solution

15 Regulations

· **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):**

67-56-1 | methanol

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

All ingredients are listed.

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Markings 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:**

T Toxic

· **Hazard-determining components of labelling:**

methanol

· **Risk phrases:**

10 Flammable.

39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

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.

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	20-35

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Trade name: UBz Alkaline Wash

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- **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 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Acid Wash
- **Catalog or product number:** 195-9563
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 4000 Alfred Nobel Drive
 Hercules, California 94547 1(510)724-7000
- **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.

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:

67-56-1	methanol	T, F; R 11-23/24/25-39/23/24/25	2.5-5%
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3 Hazards identification

- **Emergency overview:**
 Irritant to skin.
 Xn Harmful
- **Routes of exposure:**
 Ingestion
 Inhalation
 Skin
- **Information pertaining to particular dangers for man and environment**
 R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- **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.
- **NFPA ratings (scale 0-4)**
 Health = 2
 Fire = 1
 Reactivity = 0

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Acid Wash

(Contd. of page 1)

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.**· After swallowing** Immediately call a doctor.**· Information for doctor****· The following symptoms may occur:** Breathing difficulty**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: Mount respiratory protective device.**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).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

7 Handling and storage**· Handling****· Information 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: 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.**8 Exposure controls and personal protection****· Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Acid Wash

(Contd. of page 2)

· Components with limit values that require monitoring at the workplace:

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

7664-38-2 phosphoric acid

PEL (United States)	1 mg/m ³
REL (United States)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³
TLV (United States)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³

· 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.
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:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves.

· Material of gloves Synthetic gloves

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Safety glasses

9 Physical and chemical properties:

· General Information

Form:	liquid
Color:	Colorless
Odor:	Odorless

· Change in condition

Melting point/Melting range: 0°C
Boiling point/Boiling range: 97°C

· Flash point: > 55°C

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

· Vapor pressure at 20°C: 23 hPa

· Density at 20°C: 1 g/cm³

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Acid Wash

(Contd. of page 3)

- **Solubility in / Miscibility with Water:** Fully miscible
- **pH-value at 20°C:** 4.5
- **Organic solvents:** 4.0 %
- **Water:** 95.8 %

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:**

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritant effect.
- **Sensitization:** No sensitizing effects known.
- **Target organs:**
Skin.
Respiratory tract.

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

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **Marine pollutant:** No

DUS

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Acid Wash

(Contd. of page 4)

15 Regulations

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

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

Substance not listed.

· **Section 313 (40CFR372.65):**

67-56-1 | methanol

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

Substance is listed.

· **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings according to EU guidelines:**

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

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

Xn Harmful

· **Risk phrases:**

20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

24/25 Avoid contact with skin and eyes.

37 Wear suitable gloves.

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

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	2.5-5

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.**

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Conditioner
- **Catalog or product number:** 195-9564
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **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.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
67-56-1 methanol
- **Identification number(s):**
- **EINECS Number:** 200-659-6
- **Index number:** 603-001-00-X
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

3 Hazards identification

- **Emergency overview:**
Flammable.
T Toxic
F Highly flammable
- **Information pertaining to particular dangers for man and environment**
R 11 Highly flammable.
R 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- **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.
- **NFPA ratings (scale 0-4)**
Health = 3
Fire = 3
Reactivity = 0

4 First aid measures

- **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.

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Conditioner

(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:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment (See section 8). Keep unprotected persons away.
- **Measures for environmental protection:**
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

- **Handling**
- **Information for safe handling:** 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.

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:**

67-56-1 methanol

PEL (United States)	260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm
	Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm
	Skin; BEI

- **Additional information:** The lists that were valid during the creation were used as basis.

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Conditioner

(Contd. of page 2)

- **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.
- **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**

Form: liquid
Color: Colorless
Odor: Alcohol-like

· **Change in condition**

Melting point/Melting range: -98°C
Boiling point/Boiling range: 64°C

· **Flash point:** ≤ 21°C

· **Ignition temperature:** 455°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· **Explosion limits:**

Lower: 5.5 Vol %
Upper: 44 Vol %

· **Vapor pressure at 20°C:** 128 hPa

· **Density at 20°C:** 0.79 g/cm³

· **Solubility in / Miscibility with**

Water: Fully miscible
Organic solvents: 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

DUS

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: **UBz Conditioner**

(Contd. of page 3)

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

67-56-1 methanol

Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rat)

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritant effect.

· **Sensitization:** No sensitizing effects known.

12 Ecological information:

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): 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**

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.

14 Transport information

· **DOT regulations:**

· **Hazard class:** 3

· **Identification number:** UN1230

· **Packing group:** II

· **Proper shipping name (technical name):** METHANOL

· **Label:** 3+6.1

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

· **ADR/RID class:** 3 Flammable liquids

· **Danger code (Kemler):** 336

· **UN-Number:** 1230

· **Packing group:** II

· **Label:** 3+6.1

· **Description of goods:** 1230 METHANOL

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Conditioner

(Contd. of page 4)

- **Maritime transport IMDG:**
- **IMDG Class:** 3
- **UN Number:** 1230
- **Label** 3+6.1
- **Packing group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** METHANOL

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1230
- **Label** 3+6.1
- **Packing group:** II
- **Proper shipping name:** METHANOL

15 Regulations

· **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 listed.

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

Substance is listed.

· **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

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

Substance is not listed.

· **Markings 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:**

T Toxic
F Highly flammable

· **Risk phrases:**

11 Highly flammable.
39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

· **Safety phrases:**

16 Keep away from sources of ignition - No smoking.
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.

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Conditioner

(Contd. of page 5)

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

- **National regulations**
- **Technical instructions (air):**

Class	Share in %
I	50-100

- **Water hazard class:** Water hazard class 1 (Assessment by list): 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 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Internal Standard Diluent
- **Catalog or product number:** 195-9565
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
 Bio-Rad Laboratories, Diagnostic Group
 4000 Alfred Nobel Drive
 Hercules, California 94547 1(510)724-7000
- **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.

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		35-50%
127-09-3	sodium acetate		20-35%
64-19-7	acetic acid, glacial	C; R 10-35	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.
- **NFPA ratings (scale 0-4)**
 Health = 0
 Fire = 0
 Reactivity = 0

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.

(Contd. on page 2)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Internal Standard Diluent

(Contd. of page 1)

- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

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

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground 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:**

64-19-7 acetic acid, glacial

PEL (United States)	25 mg/m ³ , 10 ppm
REL (United States)	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 10 ppm
TLV (United States)	Short-term value: 37 mg/m ³ , 15 ppm Long-term value: 25 mg/m ³ , 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.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves** Synthetic gloves

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Internal Standard Diluent

(Contd. of page 2)

- **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:	Whitish
Odor:	Mild

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

· **Ignition temperature:** 485°C

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

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

· **Explosion limits:**

Lower:	4.0 Vol %
Upper:	17.0 Vol %

· **Vapor pressure at 20°C:** 23 hPa

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Fully miscible

· **pH-value at 20°C:** 4.7

· **Solvent content:**

Organic solvents:	22.4 %
Water:	42.7 %

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

DUS

(Contd. on page 4)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Internal Standard Diluent

(Contd. of page 3)

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values for hazardous components per OSHA criteria:**

127-09-3 sodium acetate

Oral	LD50	3530 mg/kg (rat)
------	------	------------------

64-19-7 acetic acid, glacial

Oral	LD50	3310 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:

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.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **DOT regulations:**

· **Hazard class:** 8

· **Identification number:** UN2790

· **Packing group:** III

· **Proper shipping name (technical name):** ACETIC ACID SOLUTION

· **Label** 8

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

· **ADR/RID class:** -

(Contd. on page 5)

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Reviewed on 10/21/2009

Trade name: UBz Internal Standard Diluent

(Contd. of page 4)

- **Maritime transport IMDG:**
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 8
- **UN/ID Number:** 2790
- **Label:** 8
- **Packing group:** III
- **Proper shipping name:** ACETIC ACID SOLUTION

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

15 Regulations

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

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

None of the ingredients is listed.

· **Section 313 (40CFR372.65):**

None of the ingredients is listed.

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

All ingredients are listed.

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

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 %
II	20-35

· **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.

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Material Safety Data Sheet

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Trade name: UBz Internal Standard Diluent

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· 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.

DUS

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Purification Cartridge
- **Catalog or product number:** 195-9511
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547
1(510)724-7000
- **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.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
25777-71-3 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer
with methyl-2-methyl-2-propenoate
- **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** not applicable
- **Classification system**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Induce vomiting and call for medical help.

5 Fire fighting measures

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

6 Accidental release measures

- **Person-related safety precautions:** Not required
- **Measures for environmental protection:** No special measures required.

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Reviewed on 10/21/2009

Trade name: UBz Purification Cartridge

(Contd. of page 1)

- **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:** 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.
- **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 in various forms
Color:	Opaque
Odor:	Odorless

· **Change in condition**

Melting point/Melting range: undetermined
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

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Purification Cartridge

(Contd. of page 2)

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:**
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.

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:** -

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Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Purification Cartridge

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- **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 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 listed.

· **Carcinogenic categories**

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

Substance is not listed.

· **NTP (National Toxicology Program)**

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).

· **National regulations**

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

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.

· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

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

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

1 Identification of substance:

- **Product details:**
- **Trade name:** UBz Analytical Cartridge
- **Catalog or product number:** 195-9513
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **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.

2 Composition/Information on components:

- **Chemical characterization:**
- **CAS No. Description:**
60676-86-0 Silica, vitreous
- **Identification number(s):**
- **EINECS Number:** 262-373-8
- **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** 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.
- **NFPA ratings (scale 0-4)**
Health = 0
Fire = 0
Reactivity = 0

4 First aid measures

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

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Material Safety Data Sheet

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Trade name: UBz Analytical Cartridge

(Contd. of page 1)

· **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:**

60676-86-0 Silica, vitreous

PEL (United States)	see Quartz listing
REL (United States)	0.05* mg/m ³ *respirable dust (REL-Crystalline Silica)
TLV (United States)	TLV withdrawn

- **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: Clear

(Contd. on page 3)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Analytical Cartridge

(Contd. of page 2)

Odor:	Odorless
· Change in condition <i>Melting point/Melting range: undetermined</i> <i>Boiling point/Boiling range: undetermined</i>	
· 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 <i>Water:</i>	Insoluble
<i>Organic solvents:</i>	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:**
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.

13 Disposal considerations

- **Product:**
- **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.

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Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Analytical Cartridge

(Contd. of page 3)

- **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 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 listed.

· **Carcinogenic categories**

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

60676-86-0 Silica, vitreous

3

· **NTP (National Toxicology Program)**

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).

· **National regulations**

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

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(Contd. on page 5)

Material Safety Data Sheet

Printing date 04/05/2010

Reviewed on 10/21/2009

Trade name: UBz Analytical Cartridge

(Contd. of page 4)

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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