Section 1 Identification of the Substance/mixture and of the Company/undertaking

1.1 Product Identifier
   Product Name: pH10.01 Buffer
   Part Number: 3019

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Product Use: For laboratory use. See product literature for details.

1.3 Details of the supplier of the safety data sheet
   Manufacturer: Beckman Coulter, Inc.
   250 S. Kraemer Blvd
   Brea, CA 92821, U.S.A.
   Tel: 800-854-3633
   EC REP Address: Beckman Coulter Eurocenter S.A.
   22, rue Juste-Oliver, Case Postale 1044,
   CH-1260 Nyon 1, Switzerland.
   Telephone +41 (0)22 365 36 11
   e-mail address: SDSNT@beckman.com

1.4 Emergency telephone number
   Telephone number (24H): Chemtrec Emergency Tel No. U.S.A. 800-424-9300, International (001)
   703-527-3887
   Distributor and Emergency Phone No.: Refer to attached list, Document ID: 472050, for local distributor and emergency phone numbers.

Section 2 Hazards Identification

2.1 Classification of substance or mixture
   Product Description: Mixture
   White; Opaque; Crystalline powder or small crystals; Mild odor

   Classification according to EC 1272/2008 (CLP/GHS)
   Eye Irritation Category 2

   Classification according to EC Directives 1999/45/EC and 67/548/EEC
   Xi;R36

   Classification according to US-OSHA (HCS 29 CFR 1910.1200) and UN GHS
   Eye Irritation Category 2
Section 2 Hazards Identification (Continued)

2.2 Label Elements

According to EC 1272/2008 (CLP/GHS), US-OSHA and UN GHS

Hazardous Ingredients
Sodium Carbonate

Pictogram

![Pictogram]

Signal Word
WARNING

Hazard Statements
H319 Causes serious eye irritation.

Precautionary Statements
P280 Wear protective gloves, protective clothing and eye/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

Product label will display most significant precautionary statements.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

See Section 11 Toxicological Information for more detailed health information.

Section 3 Composition and Information on Ingredients

3.2 Mixtures

<table>
<thead>
<tr>
<th>Hazardous Ingredients:</th>
<th>Hazard Classification of Pure Ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical Name</td>
<td>% by wt.</td>
</tr>
<tr>
<td>Sodium Carbonate</td>
<td>50 - 60</td>
</tr>
</tbody>
</table>

CAS # 497-19-8
EINECS # 207-838-8
Index # 011-005-00-2

See section 8 for available Occupational exposure limits
See Section 15 for additional regulatory information
See Section 16 for hazard class, hazard statements and risk phrase description

Section 4 First Aid Measures

4.1 Description of first aid measures

Inhalation
If product is inhaled, move exposed individual to fresh air. If individual is not breathing, begin artificial respiration immediately and obtain medical attention.

Eye Contact
If product enters eyes, wash eyes gently under running water for 15 minutes or longer, making sure that the eyelids are held open. If pain or irritation occur, obtain medical attention.
Section 4 First Aid Measures (Continued)

| Skin Contact | In case of skin contact, flush with copious amounts of water for at least 15 minutes. If pain or irritation occur, obtain medical attention. |
| Ingestion    | If ingested, wash mouth out with water. If irritation or discomfort occurs, seek medical attention. |

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye irritation. See Section 11 Toxicological Information for more detailed health information.

4.3 Indication of any immediate medical attention and special treatment needed

No specific medical attention or treatment required.

Section 5 Fire Fighting Measures

<table>
<thead>
<tr>
<th>Flammable Properties</th>
<th>Nonflammable</th>
</tr>
</thead>
</table>

5.1 Extinguishing Media

In case of fire use carbon dioxide (CO2), dry chemical, water spray or foam. For large fires use extinguishing media suitable for surrounding fire.

5.2 Special hazards arising from the substance or mixture

Special Fire and Explosion Hazards

No special hazards determined.

Hazardous Combustion Products

No combustion products posing significant hazards are expected from this product.

5.3 Advice for fire fighters

Protective Equipment

Self-contained breathing apparatus is recommended for firefighters in all chemical fire situations.

5.4 Additional information

No further relevant information available.

Section 6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Precautions

Observe general safety guidelines for protection; avoid eye and skin contact. Wear protective gloves, protective clothing and eye/face protection.

6.2 Environmental Precautions

Contain spill to prevent migration. Do not allow to enter sewer/surface or ground water.

6.3 Methods and material for containment and cleaning up

Spill and Leak Procedures

Vacuum or carefully sweep up spilled material and place in container for suitable disposal. Avoid generating dust. Dispose of all waste material in accordance with local guidelines.

6.4 Reference to other sections

Refer sections 8 and 13.
Section 7 Handling and Storage

7.1 Precautions for safe handling Use good laboratory procedures; avoid eye and skin contact.

7.2 Conditions for safe storage, including any incompatibilities

To maintain product quality, store according to the instructions in the product labeling.
Store away from strong acids, strong bases, strong oxidizers and incompatible materials (section 10).

7.3 Specific end uses No further relevant information available.

Section 8 Exposure Controls and Personal Protection

8.1 Control parameters

Exposure Limits

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US OSHA</td>
<td>None established</td>
</tr>
<tr>
<td>ACGIH</td>
<td>None established</td>
</tr>
<tr>
<td>DFG MAK</td>
<td>None established</td>
</tr>
<tr>
<td>Ireland</td>
<td>None established</td>
</tr>
<tr>
<td>IOELVs</td>
<td>None established</td>
</tr>
<tr>
<td>NIOSH</td>
<td>None established</td>
</tr>
<tr>
<td>Japan</td>
<td>None established</td>
</tr>
</tbody>
</table>

8.2 Exposure controls

Engineering Controls No special engineering controls are required. Use with good general ventilation.

Eye Protection Safety glasses or chemical goggles should be worn to prevent eye contact.
Refer U.S. OSHA 29 CFR 1910.133, European Standard EN166 or appropriate government standards.

Skin Protection Impervious gloves, such as Nitrile or equivalent, should be worn to prevent skin contact.

Respiratory Protection Under normal conditions, the use of this product should not require respiratory protection. If overexposure should occur and ventilation is not adequate to maintain airborne concentrations at acceptable levels, the use of respiratory protection should be evaluated by a qualified professional.

Section 9 Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Crystalline powder or small crystals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>(Water=1.0) Not determined</td>
</tr>
</tbody>
</table>
Section 9 Physical and Chemical Properties (Continued)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Transparency</td>
<td>Opaque</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild odor</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability Limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temp.</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Percent Volatiles</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

9.2 Other Information

No further relevant information available.

Section 10 Stability and Reactivity

10.1 Reactivity

No further relevant information available.

10.2 Chemical Stability

The product is stable in accordance with recommended storage conditions.

10.3 Possibility of hazardous reactions

No further relevant information available.

10.4 Conditions to Avoid

To maintain product performance keep away from strong acids, strong bases, strong oxidizers. Avoid exposure to heat and direct sunlight.

10.5 Incompatible materials

No further relevant information available.

10.6 Hazardous Decomposition Products

When stored as labeled, no known hazardous decomposition products are formed during the shelf-life of this product.

Section 11 Toxicological Information

11.1 Information on toxicological effects

Toxicity Data for Hazardous Ingredients

Sodium Carbonate

CAS # 497-19-8

Oral LD50 Rat 4090 mg/kg; Dermal LD50 Mouse 2210 mg/kg

Primary Routes of Exposure

Eye contact, ingestion, inhalation, and skin contact.
Section 11 Toxicological Information (Continued)

<table>
<thead>
<tr>
<th>Toxicological Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
<td>No data available.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>May cause eye irritation.</td>
</tr>
<tr>
<td>Respiratory/skin sensitization</td>
<td>No data available.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No ingredients in this product are listed as carcinogens by ACGIH, IARC, NTP, OSHA or 1272/2008 EC regulation.</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>No data available.</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>No data available.</td>
</tr>
<tr>
<td>Specific target organ toxicity – repeated exposure</td>
<td>No data available.</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available.</td>
</tr>
<tr>
<td>Other Information</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>

Section 12 Ecological Information

12.1 Ecotoxicity

**Fresh Water Species**

Sodium Carbonate  
CAS # 497-19-8

96 h LC50 Lepomis macrochirus: 300 mg/L [static]; 96 h LC50 Pimephales promelas: 310 - 1220 mg/L [static]

Microtox

No information available.

**Water Flea**

Sodium Carbonate  
CAS # 497-19-8

48 h EC50 Daphnia magna: 265 mg/L

**Fresh Water Algae**

No information available.

12.2 Persistence and degradability

Not determined for the product.

12.3 Bioaccumulation

Not determined for the product.

12.4 Mobility in soil

Not determined for the product.
Section 12 Ecological Information (Continued)

12.5 Results of PBT and vPvB assessment
Not determined for the product. PBT: Not applicable, vPvB: Not applicable.

12.6 Other Adverse Effects
No further relevant information available.

Section 13 Disposal Considerations

13.1 Waste treatment methods
Product Waste Disposal
Chemical residues and remains should be routinely handled as special waste. This must be disposed of in compliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

Package disposal
Dispose of waste product, unused product and contaminated packaging in compliance with federal, state and local regulations. If unsure of the applicable requirements, contact the authorities for information.

13.2 Additional information
Suggested European waste catalogue 18 01 06* - chemicals consisting of or containing dangerous substances. Dispose in accordance with national, state and local waste regulations.

Section 14 Transport Information
Transportation of this product is not regulated under ICAO, IMDG, US DOT, European ADR or Canadian TDG.

Section 15 Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
US Federal and State Regulations
SARA 313 No ingredients listed.
California Proposition 65 No ingredients listed.
Massachusetts MSL No ingredients listed.
New Jersey Dept. of Health RTK List
No ingredients listed.
Pennsylvania RTK No ingredients listed.

EU Regulations
This SDS complies with EC Regulations 1907/2006 (REACH) and amendments.
Water Hazard Class (Germany) WGK 1, low water endangering
REACH 1907/2006 EC - Annex XIV - list of substances subject to authorization.
No ingredients listed.
Section 15 Regulatory Information (Continued)

According to EC Directives (1999/45/EC and 67/548 EEC)

<table>
<thead>
<tr>
<th>Irritant</th>
<th>Risk and Safety Phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xi</td>
<td>R36 - Irritating to eyes.</td>
</tr>
<tr>
<td></td>
<td>S22 - Do not breathe dust.</td>
</tr>
<tr>
<td></td>
<td>S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.</td>
</tr>
</tbody>
</table>

Canada

WHMIS Classification: D2B - Poisonous and Infectious Material: Division 2 - Other Toxic Effects: Toxic (Eye Irritation)

PIN Not applicable

Ingredients on Ingredient Disclosure List

Sodium Carbonate

Ingredients with unknown toxicological properties

None

15.2 Chemical Safety Assessment A Chemical Safety Assessment has not been carried out.

Some hazardous ingredients listed in Section 15 are below OSHAs and WHMIS’ 1.0% w/w (0.1% for carcinogens) or EU’s ingredient specific concentrations required for reporting in Section 3.

Section 16 Other Information

<table>
<thead>
<tr>
<th>Beckman Coulter Safety Rating</th>
<th>Flammability: 0</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health: 2</td>
<td>0=None</td>
</tr>
<tr>
<td></td>
<td>Reactivity with Water: 0</td>
<td>1=Slight</td>
</tr>
<tr>
<td></td>
<td>Contact: 2</td>
<td>2=Caution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3=Severe</td>
</tr>
</tbody>
</table>

Revision Changes Updated to GHS.

Hazard Class, hazard statements and risk phrase description from section 3

Xi - Irritant

R36 - Irritating to eyes.

Eye Irrit. 2 - Eye Irritation Category 2

H319 - Causes serious eye irritation.

Abbreviations and Acronyms

ACGIH - American Conference of Governmental Industrial Hygienists

ADR - European Agreement Concerning The International Carriage Of Dangerous Goods By Road

CERCLA - The Comprehensive Environmental Response, Compensation, and Liability Act

CLP - Classification, Labeling and Packaging

DFGMAK - Republic Germany’s maximum exposure limit

GHS - Globally Harmonized System

HCS - Hazard Communication Standard

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

ICAO - International Civil Aviation Organization

IMDG - International Maritime Dangerous Goods

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Global SDS – English
Section 16 Other Information (Continued)

IOELVs - European Unions' Indicative Occupational Exposure Limit Values
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety and Health Administration
PBT - Persistent bioaccumulative and toxic substances
SARA - Superfund Amendments and Reauthorization Act
TDG - Canadian Transportation Of Dangerous Goods Regulations.
UN GHS - United Nations Globally Harmonized System
US DOT - United States Department of Transportation
WHMIS - Workplace Hazardous Material Information System
vPvB - Very persistent and very bioaccumulative substances
LD50 - Lethal Dose, 50%
LC50 - Lethal Concentration, 50%
EC50 - Effective Concentration, 50%

For further information, please contact your local Beckman Coulter, Inc. representative.

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