Section 1. Chemical Product and Company Identification

Common Name  BCA-200 Protein Assay Kit
Code  0023226
Supplier  Pierce Chemical Company
P.O. Box 117
Rockford, IL 61105
USA
815.968.0747 or
1.800.874.3723
In Case of Emergency  CALL CHEMTREC:
800.424.9300
OUTSIDE US:
202.483.7616
Print Date  5/10/2001
Validation Date  5/10/2001
MSDS#  5044
Component/Item#  1) BCA-200 Protein Assay Reagent A, 400 Ml.  1856175
2) BCA Protein Assay Reagent B 0023224  0023224B
Manufacturer  Pierce Chemical Company
P.O. Box 117
Rockford, IL 61105
USA
815.968.0747 or
1.800.874.3723

Section 2. Composition and Information on Hazardous (OSHA) Ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>% by weight (in kit)</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Sodium Carbonate, Anhydrous</td>
<td>1-3</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

Section 3. Hazards Identification

Review the most current and approved institutional guideline, protocol, standard operating procedure(s) and MSDS(s) for the proper handling of institutional materials/equipment associated with the use of this Pierce product.

Emergency Overview  Avoid prolonged contact with eyes, skin, and clothing. Do not ingest. Avoid breathing vapor or mist. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

Routes of Entry  Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Potential Acute Health Effects  Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

Carcinogenic Effects Data  CARCINOGENIC EFFECTS: Classified None. by NIOSH [Sodium Bicarbonate]. Classified 4 (No evidence.) by NTP. None. by NIOSH [Sodium Tartrate Dihydrate].
MUTAGENIC EFFECTS: Not available.
TERATOGENIC EFFECTS: Not available.

Medical Conditions Aggravated by Overexposure:  Repeated or prolonged exposure is not known to aggravate medical condition.

See Toxicological Information (section 11)

Continued on Next Page
Section 4. First Aid Measures

SKIN: Wash contaminated skin with soap and water.
EYES: Flush with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.
Seek medical attention.
Inhalation: Move exposed person to fresh air. If irritation persists, get medical attention.
Ingestion: Do not induce vomiting. If affected person is conscious, give plenty of water to drink. Seek medical attention.

Section 5. Fire Fighting Measures

Flammability of the Product  May be combustible at high temperature.

Flash Points  1) BCA-200 Protein Assay Reagent A, 400 Ml. Not available.
               2) BCA Protein Assay Reagent B Not applicable.

Fire Hazards in Presence of Various Substances Not considered to be flammable.

Fire Fighting Media  SMALL FIRE: Use DRY chemical powder.
and Instructions  LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Protective Clothing (Fire)  Be sure to use an approved/certified respirator or equivalent.

Section 6. Accidental Release Measures

Small Spill and Leak  1) BCA-200 Protein Assay Reagent A, 400 Ml. Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
               2) BCA Protein Assay Reagent B Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Section 7. Handling and Storage

Handling  Avoid prolonged contact with eyes, skin, and clothing. Do not ingest. Avoid breathing vapors or spray mists. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.
Storage  Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls  Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.
Personal Protection  Safety glasses.
             Eyes  Lab coat.
             Body  Vapor respirator. Be sure to use an approved/certified respirator or equivalent.
             Respiratory  Gloves.
             Hands  Protective Clothing (Pictograms)

Consult local authorities for acceptable exposure limits.

Continued on Next Page
Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Component</th>
<th>Physical State and Appearance</th>
<th>Color</th>
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<tbody>
<tr>
<td>BCA-200 Protein Assay Reagent A, 400 Ml.</td>
<td>Liquid.</td>
<td>Not available.</td>
</tr>
<tr>
<td>BCA Protein Assay Reagent B</td>
<td>Liquid.</td>
<td>Blue. (Light.)</td>
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</table>

Section 10. Stability and Reactivity

Stability and Reactivity: The product is stable.
Incompatibility with Various Substances: Slightly reactive to reactive with metals, acids.

Section 11. Toxicological Information

Toxicity to Animals:
- BCA-200 Protein Assay Reagent A, 400 Ml.: Acute oral toxicity (LD50): 4090 mg/kg [Rat]. (Sodium Carbonate, Anhydrous).
- BCA Protein Assay Reagent B: Acute oral toxicity (LD50): 825 mg/kg (Mouse) (Calculated value for the mixture).
- Acute dermal toxicity (LD50): 52500 mg/kg (Rat) (Calculated value for the mixture).

Carcinogenic Effects: Classified None. by NIOSH [Sodium Bicarbonate]. Classified 4 (No evidence.) by NTP. None. by NIOSH [Sodium Tartrate Dihydrate].

Other Toxic Effects on Humans: Slightly hazardous in case of eye contact (irritant), of ingestion, of inhalation.

Section 12. Ecological Information

Toxicity of the Products of Biodegradation:
- BCA-200 Protein Assay Reagent A, 400 Ml.: The product itself and its products of degradation are not toxic.
- BCA Protein Assay Reagent B: The products of degradation are less toxic than the product itself.

Section 13. Disposal Considerations

Waste Information: Waste must be disposed of in accordance with federal, state and local environmental control regulations.
Waste Stream: Not available.
Consult your local or regional authorities.

Section 14. Transport Information

Contact Pierce for all transport information.

Section 15. Regulatory Information

HCS Classification CLASS: Target organ effects.

U.S. Federal Regulations:
- TSCA 8(b) inventory: Sodium Bicarbonate; BCA Reagent A Ingredient 3; Sodium Carbonate, Anhydrous
- TSCA 8(d) H and S data reporting: Sodium Bicarbonate
- SARA 302/304/311/312 extremely hazardous substances: No products were found.
- SARA 302/304 emergency planning and notification: No products were found.
- SARA 302/304/311/312 hazardous chemicals: Sodium Carbonate, Anhydrous; COPPER (II) SULFATE PENTAHYDRATE
- SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Sodium Carbonate, Anhydrous: immediate health hazard, delayed health hazard; COPPER (II) SULFATE PENTAHYDRATE: immediate health hazard, delayed health hazard
- SARA 313 toxic chemical notification and release reporting: No products were found.
- Clean Water Act (CWA) 307: No products were found.
- Clean Water Act (CWA) 311: No products were found.
- Clean air act (CAA) 112 accidental release prevention: No products were found.
- Clean air act (CAA) 112 regulated flammable substances: No products were found.

Continued on Next Page
Clean air act (CAA) 112 regulated toxic substances: No products were found.

WHMIS (Canada) Not controlled under WHMIS (Canada).

CEPA DSL: Sodium Bicarbonate; BCA Reagent A Ingredient 3; Sodium Carbonate, Anhydrous

International Regulations

EINECS Not available.

DSCL (EEC) R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

International Lists

Australia (NICNAS): Sodium Bicarbonate; Sodium Tartrate Dihydrate; Sodium Carbonate, Anhydrous; Milli-Q Water; Copper (II) Sulfate Pentahydrate

Korea (TCCL): Sodium Bicarbonate; Sodium Carbonate, Anhydrous; Milli-Q Water

Philippines (RA6969): Sodium Bicarbonate; Sodium Carbonate, Anhydrous; Milli-Q Water; Copper (II) Sulfate Pentahydrate

State Regulations No products were found.

California prop. 65: No products were found.

Section 16. Other Information

Hazardous Material Information System (U.S.A.)

<table>
<thead>
<tr>
<th>Health</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
<th>Personal Protection</th>
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<tr>
<td>*1</td>
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National Fire Protection Association (U.S.A.)

<table>
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<th>Health</th>
<th>Reactivity</th>
<th>Specific Hazard</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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Validated by Pierce Administration on 5/10/2001. Verified by Pierce Administration.


Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.