

Conforms to 93/112/EC and ISO 11014-1

Responsible Name Pierce Administration

? **Section 1. Chemical Product and Company Identification**

Product name **Micro BCA Reagent C (MC)**

Product No. 0023234 1859068

Supplier	<i>In USA:</i>	<i>In Europe:</i>	Manufacturer	Pierce Biotechnology
	Pierce	Perbio Science		P.O. Box 117
	P.O. Box 117	Industriezone III		Rockford, IL 61105
	Rockford, IL 61105	Industrielaan 27		USA
	USA	9320 Erembodegem-Aalst		815.968.0747 or
	815.968.0747 or	Belgium		1.800.874.3723
	1.800.874.3723	Tel:+32 53 83 44 04		
		Fax:+32 53 83 76 38		

In Case of Emergency CALL CHEMTREC:

800.424.9300
OUTSIDE US:
202.483.7616

Print Date 12/1/2003

Validation Date **12/1/2003**

MSDS# 1422

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

 **Section 2. Composition, Information on Ingredients**

Substance/Preparation : Preparation

<u>Ingredient Name</u>	<u>CAS No.</u>	<u>%</u>	<u>EC Number</u>	<u>Symbol</u>	<u>R-Phrases</u>
1) COPPER (II) SULFATE PENTAHYDRATE	7758-99-8	3-5	Not available.	T+	R26/27/28, R36

 **Section 3. Hazards Identification**

United States 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 product.

Emergency Overview WARNING!

HARMFUL IF INHALED, ABSORBED THROUGH SKIN OR SWALLOWED.
CONTAINS MATERIAL WHICH CAUSES DAMAGE TO THE FOLLOWING ORGANS:
BLOOD, KIDNEYS, LIVER, GASTROINTESTINAL TRACT, EYES.

Avoid 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 Hazardous in case of ingestion, . Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant). Severe over-exposure can result in death.

Carcinogenic Effects Data **CARCINOGENIC EFFECTS:** Not available.

MUTAGENIC EFFECTS: Not available.

TERATOGENIC EFFECTS: Not available.

Medical Conditions Aggravated by Overexposure: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Overexposure /Signs/Symptoms Not available.

Europe

Classification **R23/24/25**

Physical/chemical hazards Not applicable.

Human health hazards Toxic by inhalation, in contact with skin and if swallowed.

Environmental hazards Not applicable.

See Toxicological Information (section 11)

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+ Section 4. First Aid Measures

Notice to Reader Get immediate medical attention.

Effects and symptoms

Inhalation May be fatal if inhaled.

Ingestion May be fatal if swallowed.

Skin Contact Sensitization of the product: Not available.

Slightly hazardous in case of skin contact (irritant). Severe over-exposure can result in death. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Eye Contact Slightly hazardous in case of eye contact (irritant).

Aggravating conditions Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

First-Aid Measures

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Ingestion If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Skin Contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Eye Contact Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Notes to Physician Not available.

Protection of first-aiders Not available.

Section 5. Fire Fighting Measures

Flammability of the Product Non-flammable.

Flash Points Not applicable.

Fire Hazards in Presence of Various Substances Not applicable.

Fire Fighting Media and Instructions Not applicable.

Protective Clothing (Fire) Not applicable.

Hazardous thermal (de)composition products Not applicable.

Section 6. Accidental Release Measures

Personal precautions Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Environmental Precautions and Poisonous liquid.

Clean-up Methods Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Small Spill and Leak Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Section 7. Handling and Storage

Handling Avoid 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.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Packaging materials

Suitable / Not suitable Use original container.

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.

Exposure Limit Values

<u>Ingredient Name</u>	<u>Occupational Exposure Limits</u>
United States	
1) COPPER (II) SULFATE PENTAHYDRATE	Not available.
Sweden	
1) COPPER (II) SULFATE PENTAHYDRATE	TWA: 0.2 (mg/m ³) [Sweden]
Denmark	
1) COPPER (II) SULFATE PENTAHYDRATE	TWA: 0.1 (ppm) [Denmark] Inhalation
Norway	
1) COPPER (II) SULFATE PENTAHYDRATE	Not available.
France	
1) COPPER (II) SULFATE PENTAHYDRATE	TWA: 0.2 (ppb) [France] Inhalation
Netherlands	
1) COPPER (II) SULFATE PENTAHYDRATE	TWA: 0.2 (mg/m ³) [Netherlands]
Germany	
1) COPPER (II) SULFATE PENTAHYDRATE	TWA: 0.1 (mg/m ³) [Germany]

Personal Protection

Eyes Splash goggles.

Body Lab coat.

Hands Gloves.

Respiratory Respirator is not needed under normal and intended conditions of use, if exposures are kept below established limits.

Protective Clothing
(Pictograms)





Section 9. Physical and Chemical Properties

<i>Physical State and Appearance</i>	Liquid.	<i>Odor</i>	Strong.
<i>Molecular Weight</i>	Not applicable.	<i>Taste</i>	Not available.
<i>pH (1% Soln/Water)</i>	Neutral.	<i>Color</i>	Blue. (Light.)
<i>Boiling/Condensation Point</i>	The lowest known value is 100°C (212°F) (Milli-Q Water).		
<i>Melting/Freezing Point</i>	May start to solidify at -0.1°C (31.8°F) based on data for: Milli-Q Water.		
<i>Specific Gravity</i>	Weighted average: 1.02 (Water = 1)		
<i>Vapor Pressure</i>	The highest known value is 2.3 kPa (@ 20°C) (Milli-Q Water).		
<i>Vapor Density</i>	The highest known value is 0.62 (Air = 1) (Milli-Q Water).		
<i>Evaporation Rate</i>	0.36 (Milli-Q Water) compared to Butyl acetate.		
<i>Dispersion Properties</i>	Not available.		
<i>Solubility</i>	Easily soluble in cold water. Very slightly soluble in hot water.		



Section 10. Stability and Reactivity

<i>Stability and Reactivity</i>	The product is stable.
<i>Conditions to avoid</i>	Not available.
<i>Materials to avoid</i>	Slightly reactive to reactive with metals.
<i>Hazardous Polymerization</i>	Will not occur.
<i>Hazardous Decomposition Products</i>	Not applicable.



Section 11. Toxicological Information

<i>Toxicity to Animals</i>	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).
<i>Chronic Effects on Humans</i>	Not available.
<i>Other Toxic Effects on Humans</i>	Hazardous in case of ingestion, . Slightly hazardous in case of eye contact (irritant), of inhalation (lung irritant).
<i>Special Remarks on Toxicity to Animals</i>	Not available.
<i>Special Remarks on Chronic Effects on Humans</i>	Not available.
<i>Special Remarks on Other Toxic Effects on Humans</i>	Not available.



Section 12. Ecological Information

<i>Mobility</i>	Not available.
<i>Persistence/degradability</i>	Not available.
<i>Bioaccumulative potential</i>	Not available.
<i>Ecotoxicity</i>	Not available.

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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 the supplier for all information regarding the proper transportation method for this material.



Section 15. Regulatory Information

Label Requirements (Europe)

R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.

S1/2- Keep locked up and out of the reach of children.

S36/37- Wear suitable protective clothing and gloves.

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).



Toxic

HCS Classification Target organ effects.

U.S. Federal Regulations TSCA 8(b) inventory: Milli-Q Water

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: COPPER (II) SULFATE PENTAHYDRATE

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: 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.

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

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

CEPA DSL: Milli-Q Water

International Regulations

EINECS Not available.

DSCL (EEC) R23/24/25- Toxic by inhalation, in contact with skin and if swallowed.

International Lists

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Australia (NICNAS): COPPER (II) SULFATE PENTAHYDRATE; Milli-Q Water

Germany water class: COPPER (II) SULFATE PENTAHYDRATE

VCI WGK: No products were found.

Korea (TCCL): Milli-Q Water

Philippines (RA6969): COPPER (II) SULFATE PENTAHYDRATE; Milli-Q Water

State Regulations No products were found.

California prop. 65: No products were found.

Section 16. Other Information

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

Health	*	2
Fire Hazard		0
Reactivity		0
Personal Protection		g

National Fire Protection Association (U.S.A.)



References Not available.

History of Document Changes Any information changes since last document version are marked with a triangle symbol.

Full text of R-Phrases Very toxic by inhalation, in contact with skin and if swallowed.
referenced under headings 2 and 3: Irritating to eyes.

Intended Use Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific applications.

Validated by Pierce Administration on 12/1/2003.

Verified by Pierce Administration.

Date of Previous Issue No Previous Validation

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Version 0.02

Notice to Reader

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