

MATERIAL SAFETY DATA SHEET

BENEDICT'S REAGENT
CAROLINA BIOLOGICAL

Revised: 10/11/07
Replaces: 07/10/07
Printed: 11/27/07

1. PRODUCT DESCRIPTION

Product Name: Benedict Reagent
Product Code(s): 84-7091, 85-0090
Size: N/A
Chemical Name: Benedict Reagent
CAS Number: See section 2
Formula: See section 2
Synonyms: None known
Distributor: Carolina Biological Supply Company
2700 York Road
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components:
Sodium Carbonate (CAS#497-19-8) 35%
Cupric Sulfate (CAS#7758-99-8) 6%
Sodium Citrate (CAS#6132-04-3) 59%
TLV and PEL units: None established for Sodium Carbonate and Sodium Citrate. For Cupric Sulfate, both OSHA PEL and ACGIH TLV are 1 mg/m³ (TWA) for copper dusts and mists (as Cu).

3. HAZARD IDENTIFICATION

Emergency Overview: Harmful if inhaled or swallowed.
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:
Eyes - Flush thoroughly with plenty of water. Get medical attention if irritation persists.
Skin - Thoroughly wash exposed area with soap and water. Get medical attention if irritation persists.
Ingestion - If swallowed, if conscious, give plenty of water to dilute. If large amounts were ingested, get medical attention.
Inhalation - Move to fresh air. Get medical attention if breathing is difficult.

5. FIREFIGHTING PROCEDURES

Flash Point(Method Used): None
NFPA Rating (est): Health: 1
Fire: 0
Reactivity: 0

Extinguisher Media:

Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by Volume: N/A

Autoignition Temperature: N/A

Special Firefighting Procedures:

Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Thermal decomposition produces

MATERIAL SAFETY DATA SHEET

BENEDICT'S REAGENT
CAROLINA BIOLOGICAL

Revised: 10/11/07
Replaces: 07/10/07
Printed: 11/27/07

toxic fumes.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing: Keep container tightly closed and store in cool dry area.

Other Precautions: Do not breathe dust. Wash thoroughly after handling.

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection(Specify Type):

None needed under normal conditions of use with adequate ventilation.

NIOSH approved equipment should be worn if PELs are exceeded.

Ventilation:

Local Exhaust: Yes

Mechanical(General): Yes

Special: No

Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab coat, eye wash, and safety shower.

9. PHYSICAL DATA

Molecular Weight:	No data available
Melting Point:	No data available
Boiling Point:	No data available
Vapor Pressure:	No data available
Vapor Density(Air=1):	No data available
Specific Gravity(H2O=1):	No data available
Percent Volatile by Volume:	No data available
Evaporation Rate(H2O=1):	No data available
Solubility in Water:	Soluble
Appearance and Odor:	Blue powder

10. REACTIVITY DATA

Stability: Stable

Conditions to Avoid: High temperatures and contact with strong acids

Incompatibility(Materials to Avoid): Acids and Oxidizers

Hazardous Decomposition Products: SO_x, CO_x

Hazardous Polymerization: Will not occur

11. TOXICITY DATA

Toxicity Data:

Cupric Sulfate: orl-rat LD50: 300 mg/kg

Sodium Carbonate: orl-rat LD50: 4090 mg/kg

Sodium Citrate: Not available

Effects of Overexposure:

Acute: See section 3

Chronic: Cupric Sulfate: Tests on laboratory animals indicate

MATERIAL SAFETY DATA SHEET

BENEDICT'S REAGENT
CAROLINA BIOLOGICAL

Revised: 10/11/07
Replaces: 07/10/07
Printed: 11/27/07

material may produce adverse mutagenic and reproductive effects.

Sodium Carbonate and Sodium Citrate: None

Conditions Aggravated by Overexposure: No data available

Target Organs: No data available

Primary Route(s) of Entry: Inhalation, ingestion

12. ECOLOGICAL DATA

EPA Waste Numbers: None

13. DISPOSAL INFORMATION

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations.

Always contact a permitted waste disposer (TSD) to assure compliance.

14. TRANSPORT INFORMATION

Not regulated

15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313		CERCLA Sec. 103 RQ lbs.	RCRA Sec. 261.33
		Name List	Chemical Category		
Sodium Carbonate	No	No	No	No	No
Cupric Sulfate	No	No	No	10	No
Sodium Citrate	No	No	No	No	No

16. ADDITIONAL INFORMATION

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH.....American Conference of Governmental Industrial Hygienists

CAS Number..Chemical Abstracts Service Number

CERCLA.....Comprehensive Environmental Response, Compensation, and Liability Act

DOT.....U.S. Department of Transportation

IARC.....International Agency of Research on Cancer

mppcf.....million particles per cubic foot

N/A.....Not Available

NTP.....National Toxicology Program

OSHA.....Occupational Safety and Health Administration

PEL.....Permissible Exposure Limit

ppm.....parts per million

RCRA.....Resource Conservation and Recovery Act

SARA.....Superfund Amendments and Reauthorization Act

TLV.....Threshold Limit Value

TSCA.....Toxic Substances Control Act

MATERIAL SAFETY DATA SHEET

BENEDICT'S REAGENT
CAROLINA BIOLOGICAL

Revised: 10/11/07
Replaces: 07/10/07
Printed: 11/27/07
