



## Material Safety Data Sheet Benedict's Qualitative Solution

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Benedict's Qualitative Solution

**Catalog Numbers:**

LC11650

**Synonyms:**

None

**Company Identification:**

LabChem Inc  
200 William Pitt Way  
Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

### Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
6132-04-3	Sodium citrate dihydrate	17.3
497-19-8	Sodium carbonate anhydrous	10
7758-99-8	Cupric sulfate pentahydrate	1.73

### Section 3 - Hazards Identification

#### Emergency Overview

**Appearance:** *Clear, blue solution***Caution.** *May cause irritation to eyes, skin, respiratory and gastrointestinal tracts.***Target Organs:** *Blood, kidneys, liver.***Potential Health Effects****Eye:**

May cause eye irritation. May cause conjunctivitis

**Skin:**

May cause skin irritation.

**Ingestion:**

May cause gastrointestinal tract irritation with nausea, vomiting, low blood pressure, and jaundice.  
May cause systemic toxic effects to the kidneys and liver.

**Inhalation:**

May cause irritation of the respiratory tract.



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### **Chronic:**

Individuals with Wilson's disease are unable to metabolize copper. Thus, copper accumulates in various tissues and may result in liver, kidney, and brain damage. May cause dermatitis and conjunctivitis. Prolonged intake could impair calcium and iron absorption.

## Section 4 - First Aid Measures

### **Eyes:**

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

### **Skin:**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.

### **Ingestion:**

Do not induce vomiting. Get medical aid at once.

### **Inhalation:**

Move victim to fresh air. Give artificial respiration if necessary. Get medical aid.

### **Notes to Physician:**

Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

### **General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

### **Extinguishing Media:**

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

### **Autoignition Temperature:**

Not applicable.

### **Flash Point:**

Not applicable.

### **NFPA Rating:**

CAS# 7732-18-5: Health- 0, Flammability- 0, Instability- 0.

CAS# 6132-04-3: Health- 1, Flammability- 0, Instability- 0.

CAS# 497-19-8: Health- 2, Flammability- 0, Instability- 0.

CAS# 7758-99-8: Health- 2, Flammability- 0, Instability- 1.

### **Explosion Limits:**

Lower: n/a      Upper: n/a

## Section 6 - Accidental Release Measures

### **General Information:**

Use proper personal protective equipment as indicated in Section 8.

### **Spills/Leaks:**

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in suitable containers labeled for later disposal.



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### Section 7 - Handling and Storage

**Handling:**

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin and clothing.

**Storage:**

Store capped at room temperature. Protect from heat and incompatibles.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Facilities using or storing this material should be equipped with an eyewash and safety shower. Provide local exhaust or general dilution ventilation.

**Exposure Limits:**

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium citrate, dihydrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Sodium carbonate monohydrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Copper (ii) sulfate pentahydrate (1:1:5)	None of the components are on this list.	1 mg/m <sup>3</sup> TWA (as Cu except Copper fume) (listed as Copper compounds, n.o.s.)	None of the components are on this list.

**OSHA Vacated PELs:**

None

**Personal Protective Equipment****Eyes:**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

**Skin:**

Wear appropriate gloves to prevent skin exposure.

**Clothing:**

Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

**Physical State:** Clear liquid  
**Color:** Blue  
**Odor:** Odorless  
**pH:** Alkaline  
**Vapor Pressure:** Not available



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<b>Vapor Density:</b>	Not available
<b>Evaporation Rate:</b>	Not available
<b>Viscosity:</b>	Not available
<b>Boiling Point:</b>	Not available
<b>Freezing/Melting Point:</b>	Not available
<b>Decomposition Temperature:</b>	Not available
<b>Solubility in water:</b>	Soluble
<b>Specific Gravity/Density:</b>	1.2
<b>Molecular Formula:</b>	Not available
<b>Molecular Weight:</b>	Not available

### Section 10 - Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials, excess heat.

**Incompatibilities with Other Materials:**

Hydroxylamine, magnesium, hydrazine, nitromethane, hydrogen peroxide, sulfuric acid, oxidizers.

**Hazardous Decomposition Products:**

Carbon monoxide, carbon dioxide, copper fume.

**Hazardous Polymerization:**

Has not been reported.

### Section 11 - Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.

CAS# 6132-04-3: unlisted.

CAS# 497-19-8: VZ4050000.

CAS# 7758-99-8: GL8900000.

**LD50/LC50:**

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 6132-04-3:

No information found.

CAS# 497-19-8:

Draize test, rabbit, eye: 100 mg/24H Moderate

Inhalation, rat: LC50 = 2300 mg/m<sup>3</sup>/2H

Oral, rat: LD50 = 4090 mg/kg.

CAS# 7758-99-8:

Oral, rat: LD50 = 300 mg/kg.

**Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 6132-04-3: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 497-19-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.



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CAS# 7758-99-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

**Epidemiology:**

No information found

**Teratogenicity:**

No information found

**Reproductive:**

No information found

**Mutagenicity:**

No information found

**Neurotoxicity:**

No information found

### Section 12 - Ecological Information

No information found

### Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

### Section 14 - Transport Information

**US DOT**

**Shipping Name:** Not regulated.

**Hazard Class:**

**UN Number:**

**Packing Group:**

### Section 15 - Regulatory Information

**US Federal**

**TSCA:**

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 6132-04-3 is considered to be listed on the TSCA Inventory because its anhydrous form is listed.

CAS# 497-19-8 is listed on the TSCA Inventory.

CAS# 7758-99-8 is considered to be listed on the TSCA Inventory because its anhydrous form is listed.

**SARA Reportable Quantities (RQ):**

None of the components are on this list.

**CERCLA/SARA Section 313:**

This material contains Copper sulfate pentahydrate (listed as Copper compounds, n.o.s.), (CAS# 7758-99-8), 1.7%, which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

**OSHA - Highly Hazardous:**

None of the components are on this list.



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### US State

#### State Right to Know:

CAS# 7758-99-8 can be found on the following state Right-to-Know lists: California, Pennsylvania.

#### California Regulations:

None.

### European/International Regulations

#### Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 6132-04-3 is not listed on Canada's DSL or NDSL Lists.

CAS# 497-19-8 is listed on Canada's DSL List.

CAS# 7758-99-8 is listed on Canada's DSL List.

#### Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 6132-04-3 is not listed on Canada's Ingredient Disclosure List.

CAS# 497-19-8 is listed on Canada's Ingredient Disclosure List.

CAS# 7758-99-8 is listed on Canada's Ingredient Disclosure List.

## Section 16 - Other Information

MSDS Creation Date: October 21, 1997

Revision Date: March 31, 2010

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