

# Material Safety Data Sheet

## Benedict's Qualitative Solution

ACC# 75022

### Section 1 - Chemical Product and Company Identification

MSDS Name: Benedict's Qualitative Solution

Catalog Numbers: LC11650

Synonyms:

Company Identification:

Labchem Inc.

200 William Pitt Way

Pittsburgh, PA 15238

For information, call: 412-826-5230

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
5968-11-6	Sodium carbonate monohydrate	10	unlisted
6132-04-3	Sodium citrate, dihydrate	15	unlisted
7732-18-5	Water	balance	231-791-2
7758-99-8	Copper (ii) sulfate pentahydrate (1:1:5)	1.5	unlisted

Hazard Symbols: None listed.

Risk Phrases: None listed.

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: blue. Caution! May cause respiratory tract irritation. May cause skin irritation.

May cause eye irritation.

Target Organs: None known.

#### Potential Health Effects

Eye: May cause eye irritation. May cause conjunctivitis.

Skin: May cause skin irritation.

Ingestion: Abdominal pain, vomiting, hematemesis, diarrhea, coma, death may occur on ingestion of large quantities. May cause nausea, vomiting, abdominal pain, diarrhea with blood.

Inhalation: May cause irritation of the upper respiratory tract and nasal membranes, coughing, sore throat, and possibly pulmonary edema.

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

**Ingestion:** Give conscious victim water or milk immediately to dilute alkali, allowing vomiting to occur. Do not use gastric lavage or emesis if tissue corrosion has occurred. If vomiting occurs, keep head lower than hips to prevent aspiration. Treat for shock, maintain airway and blood pressure. Examine victim for corrosive injury to mouth or throat. If necessary, irrigate with 1% acetic acid until alkali is neutralized.

**Inhalation:** Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Firefighting Measures

**General Information:** Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible, avoid breathing vapors or dust.

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

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb spills with 1/2 inch of 90% calcium sulfate, full 6.28114 and 184858432

Engineering Controls: Provide local exhaust or general dilution ventilation.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium carbonate monohydrate	none listed	none listed	none listed
Sodium citrate, dihydrate	none listed	none listed	none listed
Water	none listed	none listed	none listed
Copper (ii) sulfate pentahydrate (1:1:5)	none listed	none listed	none listed

OSHA Vacated PELs: Sodium carbonate monohydrate: No OSHA Vacated PELs are listed for this chemical. Sodium citrate, dihydrate: No OSHA Vacated PELs are listed for this chemical. Water: No OSHA Vacated PELs are listed for this chemical. Copper (ii) sulfate pentahydrate (1:1:5): No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode. High levels- supplied-air respirator with full facepiece, helmet, or hood.

## Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Appearance: blue

Odor: odorless

pH: alkaline

Vapor Pressure: Not available.

Vapor Density: Not available.

Evaporation Rate: < ether

Viscosity: Not available.

Boiling Point: 212 deg F

Freezing/Melting Point: 32 deg F

Decomposition Temperature: Not available.

Autoignition Temperature: Not available.

Flash Point: Not available.

NFPA Rating: Not published.

Explosion Limits, Lower: Not available.

Upper: Not available.

Solubility: Soluble.

Specific Gravity/Density: 1.2

Molecular Formula: Not available.

Molecular Weight: Not available.

## Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.  
Conditions to Avoid: Heating to decomposition.  
Incompatibilities with Other Materials: Not available.  
Hazardous Decomposition Products: Oxides of carbon, toxic fumes of sodium.  
Hazardous Polymerization: Has not been reported

## Section 11 - Toxicological Information

RTECS#:

CAS# 5968-11-6 unlisted.

CAS# 6132-04-3 unlisted.

CAS# 7732-18-5 unlisted.

CAS# 7758-99-8 unlisted.

LD50/LC50:

Not available.

Not available.

CAS# 7732-18-5:

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

CAS# 7758-99-8:

Oral, rat: LD50 = 300 mg/kg;

Carcinogenicity:

CAS# 5968-11-6: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 6132-04-3: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 7758-99-8: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: No data available.

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

## Section 14 - Transport Information

US DOT	IATA	RID/ADR	IMO
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of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 5968-11-6 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 6132-04-3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 7758-99-8 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 5968-11-6: 1

CAS# 6132-04-3: 0

CAS# 7732-18-5: No information available.

CAS# 7758-99-8: 2

Canada

Canada

Canada

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

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

WHMIS: Not available.

CAS# 5968-11-6 is not listed on Canada's Ingredient Disclosure List.

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

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

CAS# 7758-99-8 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 7758-99-8: OEL-ARAB Republic of Egypt:TWA 0.1 mg(Cu)/m<sup>3</sup> (fume)

OEL-AUSTRALIA:TWA 0.2 mg(Cu)/m<sup>3</sup> (fume) OEL-AUSTRALIA:TWA 1 mg(Cu)/m<sup>3</sup>

(dust) OEL-BELGIUM:TWA 0.2 mg(Cu)/m<sup>3</sup> (fume) OEL-BELGIUM:TWA 1 mg(Cu)

/m<sup>3</sup> (dust) OEL-DENMARK:TWA 0.1 mg(Cu)/m<sup>3</sup> (fume) OEL-DENMARK:TWA 1 m

g(Cu)/m<sup>3</sup> (dust) OEL-FINLAND:TWA 0.2 mg(Cu)/m<sup>3</sup> (fume) OEL-FINLAND:TWA

1 mg(Cu)/m<sup>3</sup> OEL-FINLAND:TWA 1 mg(Cu)/m<sup>3</sup> (dust) OEL-FRANCE:TWA 0.2 m

g(Cu)/m<sup>3</sup> (fume) OEL-FRANCE:TWA 1 mg(Cu)/m<sup>3</sup>;STEL 2 mg(Cu)/m<sup>3</sup> (dust OE

L-GERMANY:TWA 0.1 mg(Cu)/m<sup>3</sup> (fume) OEL-GERMANY:TWA 1 mg(Cu)/m<sup>3</sup> OEL-G

ERMANY:TWA 1 mg(Cu)/m<sup>3</sup> (dust) OEL-HUNGARY:TWA 0.2 mg(Cu)/m<sup>3</sup>;STEL 0.4

mg(Cu)/m<sup>3</sup> (dust) OEL-INDIA:TWA 0.2 mg(Cu)/m<sup>3</sup> (fume) OEL-THE NETHERLA

NDS:TWA 02 mg(Cu)/m<sup>3</sup> (fume) OEL-THE NETHERLANDS:TWA 1 mg(Cu)/m<sup>3</sup> (dust

) OEL-THE PHILIPPINES:TWA 1.0 mg(Cu)/m<sup>3</sup> (fume) JAN9 OEL-POLAND:TWA 0

.1 mg(Cu)/m<sup>3</sup> (fume) OEL-RUSSIA:STEL 0.5 ppm (1 mg(Cu)/m<sup>3</sup>) (dust) JAN9

OEL-SWEDEN:TWA 0.2 mg(Cu)/m<sup>3</sup> (resp. dust) OEL-SWEDEN:TWA 0.2 mg(Cu)

/m<sup>3</sup> (fume) OEL-SWEDEN:TWA 1 mg(Cu)/m<sup>3</sup> (total dust) OEL-SWITZERLAND:T

WA 0.1 mg(Cu)/m<sup>3</sup>;STEL 0.2 mg(Cu)/m<sup>3</sup> (fume) OEL-SWITZERLAND:TWA 1 mg(C

u)/m<sup>3</sup>;STEL 1 mg(Cu)/m<sup>3</sup> OEL-THAILAND:TWA 0.1 mg(Cu)/m<sup>3</sup> (fume) OEL-THA

ILAND:TWA 1 mg(Cu)/m<sup>3</sup> OEL-U

