

# spectrum

chemicals & laboratory products

A Division of Spectrum Chemical Mfg. Corp.

Dear Customer,

## This File Contains Both The ANSI Material Safety Data Sheet and The GHS Safety Data Sheet For The Same Product

Spectrum is currently transitioning all chemical product labeling from the ANSI<sup>1</sup> format to the GHS<sup>2</sup> format (see note below). In order to ensure that you receive complete labeling during the transition, we have included both the ANSI MSDS and the GHS SDS in a single file. The ANSI MSDS is given first, followed by the GHS SDS. Please use whichever matches the container label.

### Why It Matters:

The complete precautionary labeling for this chemical consists of BOTH the label on the container AND the matching Material Safety Data Sheet (for ANSI labels) or Safety Data Sheet (for GHS labels). Both elements of the labeling [Label + (M)SDS] are written to be read and understood together, so as to provide complete precautionary information. It is intended for you to read and understood BOTH before handling or using the chemical.

### Picking the Right One: 2 Easy Ways To Tell Whether Your Container Has an ANSI Label or a GHS Label

- 1) GHS labels: any pictogram displayed in the upper left-hand corner will be inside a red diamond. ANSI labels: pictograms, if present, will be inside individual black boxes.
- 2) GHS labels: on the bottom of the right-hand panel of the label, locate the Lot Number. Directly to the left will be a string of control characters, followed by a single letter. For GHS labels, the string of characters will end in "GHS:"

**Label in ANSI Format**

**CAUTION!**  
MAY BE HARMFUL IF SWALLOWED  
MAY CAUSE EYE AND SKIN IRRITATION  
MAY AFFECT BEHAVIOR AND  
METABOLISM

Do not taste or swallow. Avoid contact with eyes, skin and clothing. Avoid breathing mist or vapor. Avoid prolonged or repeated exposure. Use with adequate ventilation. Wash thoroughly after handling.

**FIRST AID:** In case of contact, flush affected area with plenty of water for at least 15 minutes. Remove contaminated clothing and/or jewelry. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If irritation persists, call a physician.

**KEEP FROM CHILDREN**



**BE159      SIZ SY**

**Benzyl Benzoate**  
(Benzoic Acid  
Phenylmethyl Ester)

U.S.P.  
CAS 120-51-4

CAUTION: For manufacturing, processing or repacking. Read and understand the label and Material Safety Data Sheet (MSDS) prior to use.  
For chemical emergency, call (800)424-9300.

$C_{11}H_{12}O_2$       F.W. 212.24

Assay ..... 99.0-100.5%  
Specific Gravity  $\pm 25^{\circ}C$  ..... 1.116-1.120  
Congealing Temperature ..... Min. 18.0°C  
Refractive Index  $\pm 20^{\circ}C$  ..... 1.565-1.570  
Acidity ..... To pass test

**MAXIMUM LIMITS**  
Aldehyde ..... 0.05%  
Residual Solvents ..... To pass test

**FLUSHED WITH NITROGEN**

Lot No. XQ###

SPECTRUM CHEMICAL MFG. CORP.      Gardena, CA 90248 • New Brunswick, NJ 08901

CORPORATE OFFICES  
14422 South San Pedro Street  
Gardena, California 90248  
PHONE 310.516.8000  
FAX 310.516.9843

**Label in GHS Format**

**WARNING!**

- May irritate if swallowed • May cause central nervous system effects based on animal data
- Do not use or handle • Wear protective gloves
- After handling
- WASH AND: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Avoid mouth.

**KEEP FROM CHILDREN**

**SPECTRUM**

BE159      SIZ SY

**Benzyl Benzoate**

(Benzoic Acid Phenylmethyl Ester)

U.S.P.

CAS 129-51-4

CAUTION: For industrial use only. Do not use for food or feed. Do not use for medical purposes. Do not use for cosmetic purposes. Do not use for pharmaceutical purposes. Do not use for food or feed. Do not use for medical purposes. Do not use for cosmetic purposes. Do not use for pharmaceutical purposes.

Chemical Emergency: (800)424-9086

www.SpectrumChemical.com

$C_{15}H_{12}O_2$       F.W. 212.24

Assay: 99.0-100.5%  
 Specific Gravity @ 25°C: 1.115-1.120  
 Congealing Temperature: Min. 18.0°C  
 Refractive Index @ 20°C: 1.568-1.570  
 Acidity: To pass test

**MAXIMUM LIMITS**

Aldehyde: 0.05%  
 Residual Solvents: To pass test

**FLUSHED WITH NITROGEN**

**Lot No. XQ####**

Assay ..... 99.0-100.5%  
 Specific Gravity @ 25°C ..... 1.115-1.120  
 Congealing Temperature ..... Min. 18.0°C  
 Refractive Index @ 20°C ..... 1.568-1.570  
 Acidity ..... To pass test

**MAXIMUM LIMITS**  
 Aldehyde ..... 0.05%  
 Residual Solvents ..... To pass test

**LIGHT SENSITIVE:** Keep tightly closed in light-resistant containers.

**FLUSHED WITH NITROGEN**

**Lot No. XQ####**

<sup>1</sup> American National Standards Institute

<sup>2</sup> Globally Harmonized System for Hazard Communication

Sincerely,

Regulatory Affairs

## SAFETY DATA SHEET

**Preparation Date:** No data available

**Revision Date:** 03/25/2015

**Revision Number:** G1

**Product identifier**

**Product code:** CA142  
**Product Name:** CALCIUM CITRATE, TETRAHYDRATE, POWDER, FCC

**Other means of identification**

**Synonyms:** 2-Hydroxy-1,2,3-propanetricarboxylic Acid Calcium Salt; Tricalcium Citrate; Calcium Citrate  
**CAS #:** 5785-44-4  
**RTECS #** Not available  
**CI#:** Not available

**Recommended use of the chemical and restrictions on use**

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemicals and Laboratory Products, Inc.  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

**Label elements**

Not classified

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Calcium Citrate, Tetrahydrate 5785-44-4	5785-44-4	100	*

### 4. FIRST AID MEASURES

#### First aid measures

##### **General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

##### **Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

##### **Eye Contact:**

Flush eye with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.

##### **Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

##### **Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

#### Most important symptoms and effects, both acute and delayed

##### **Symptoms**

Health injuries are not known or expected under normal use.

#### Indication of any immediate medical attention and special treatment needed

##### **Notes to Physician:**

Treat symptomatically

#### Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

### 5. FIRE-FIGHTING MEASURES

#### Extinguishing Media

##### **Suitable Extinguishing Media:**

Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

##### **Unsuitable Extinguishing Media:**

No information available.

#### Specific hazards arising from the chemical

##### **Hazardous Combustion Products:**

Metallic Oxides

##### **Specific hazards:**

May be combustible at high temperatures  
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

#### Special Protective Actions for Firefighters

**Specific Methods:**

No information available.

**Special Protective Equipment for Firefighters:**

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

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and material for containment and cleaning up****Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up**

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

**Safe Handling Advice:**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities****Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Calcium Citrate, Tetrahydrate - 5785-44-4	None	None	None	None

**Canada**

Components	Alberta	British Columbia	Ontario	Quebec
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Calcium Citrate, Tetrahydrate - 5785-44-4	None	None	None	None
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### Australia and Mexico

Components	Australia	Mexico
Calcium Citrate, Tetrahydrate 5785-44-4	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

- Eye protection:** Safety glasses. Safety glasses with side-shields.
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Effective dust mask. Wear respirator with dust filter..
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state:</b> Solid.	<b>Appearance:</b> Crystalline. Granular. Powder.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available	<b>Molecular/Formula weight:</b> 570.50
<b>Formula:</b> C <sub>12</sub> H <sub>10</sub> Ca <sub>3</sub> O <sub>14</sub> •4H <sub>2</sub> O	<b>Flash point (°C):</b> No data available	<b>Flashpoint (°C/°F):</b> >93.3°C/200°F
<b>Flash Point Tested according to:</b> Closed cup	<b>Lower Explosion Limit (%):</b> No information available	<b>Upper Explosion Limit (%):</b> No information available
<b>Autoignition Temperature (°C/°F):</b> No information available	<b>pH:</b> No information available	<b>Melting point/range(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> No information available	<b>Decomposition temperature(°C/°F):</b> No information available	<b>Bulk density:</b> No information available
<b>Specific gravity:</b> No information available	<b>Density (g/cm<sup>3</sup>):</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> Very slightly soluble in cold water	

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents  
Loses all water at temperature above 120°C

### Chemical stability

**Stability:** Stable under recommended storage conditions

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Incompatible Materials:** Oxidizing agents.

**Hazardous decomposition products:** Metallic oxides.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Principal Routes of Exposure:

Ingestion. Inhalation.

#### Acute Toxicity

#### Component Information

*Calcium Citrate, Tetrahydrate - 5785-44-4*

**LD50/oral/rat** = No information available

**LD50/oral/mouse** = No information available

**LD50/dermal/rat** = No information available

**LD50/dermal/rabbit** = No information available

**LC50/inhalation/rat** = No information available

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = No information available

#### Product Information

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = No information available

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = No information available

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**

**VALUE-Vapor** = No information available

**VALUE-Gas** = No information available

**VALUE-Dust/Mist** = No information available

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

#### Symptoms

**Skin Contact:** May cause skin irritation.

**Eye Contact:** May cause eye irritation.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** May cause digestive (gastrointestinal) tract irritation.

**Aspiration hazard** No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** No information available

**Product code:** CA142

**Product name:** CALCIUM CITRATE,  
TETRAHYDRATE, POWDER, FCC



**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

Components	ACGIH - Carcinogens	IARC	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Calcium Citrate, Tetrahydrate	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available

**Developmental Effects:** No information available

**Teratogenic Effects:** No information available

#### **Specific Target Organ Toxicity**

**STOT - single exposure** No information available

**STOT - repeated exposure** No information available

**Target Organs:** No information available

## **12. ECOLOGICAL INFORMATION**

### **Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

## **13. DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

#### **Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

#### **Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Calcium Citrate, Tetrahydrate	None	None	None	None

## 14. TRANSPORT INFORMATION

### DOT

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	None
ERG No:	No information available
Marine Pollutant	No data available
DOT RQ (lbs):	No information available

### TDG (Canada)

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available

### ADR

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Packing Group:	No information available
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEPIC Tremcard No:	No information available

### IMO / IMDG

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Description:	No information available
IMDG Page:	No information available
Marine Pollutant	No information available
MFAG:	No information available
Maximum Quantity:	No information available

### RID

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	No information available
Classification Code:	No information available
Description:	No information available

### ICAO

UN-No:	Not Regulated
Proper Shipping Name:	No information available
Hazard Class:	No information available
Subsidiary Risk:	No information available

## 14. TRANSPORT INFORMATION

**Packing Group:** No information available  
**Description:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Calcium Citrate, Tetrahydrate	Not Listed	Not present	Present	Not present	Not present	Present	Not present

### U.S. Regulations

#### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

##### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

##### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Calcium Citrate, Tetrahydrate	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Calcium Citrate, Tetrahydrate	None	None	None	None	None

### U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Calcium Citrate, Tetrahydrate	Not Applicable	Not Applicable

### Canada

**WHMIS hazard class:**  
Non-controlled

#### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

## Inventory

Components	Canada (DSL)	Canada (NDSL)
Calcium Citrate, Tetrahydrate	Not Listed	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Calcium Citrate, Tetrahydrate	Not listed	Not listed

## EU Classification

### R-phrase(s)

R-phrase(s)

### S -phrase(s)

none

Components	Classification	Concentration Limits:	Safety Phrases
Calcium Citrate, Tetrahydrate		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

### Indication of danger:

None.

## 16. OTHER INFORMATION

## 16. OTHER INFORMATION

**Revision Date:** 03/25/2015  
**Prepared by:** Sonia Owen

**Disclaimer:** All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**



GARDENA, CA  
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>1</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	1	Fire Hazard	1	Reactivity	0	 See Section 15.
Health Hazard	1							
Fire Hazard	1							
Reactivity	0							

## Section 1. Chemical Product and Company Identification

Page Number: 1

<b>Common Name/ Trade Name</b>		<b>Calcium citrate, Tetrahydrate</b>		<b>Catalog Number(s).</b>	YY296, C1102, CA142, C1258, C1951
		<b>CAS#</b>	5785-44-4		
<b>Manufacturer</b>		SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		<b>RTECS</b>	Not available.
				<b>TSCA</b>	TSCA 8(b) inventory: No products were found. This product is exempt from TSCA 8(b) inventory listing since it is a hydrate. However, the anhydrous form (CAS number 813-94-5) is listed on the TSCA 8(b) inventory.
<b>Commercial Name(s)</b>		Not available.		<b>CI#</b>	Not available.
<b>Synonym</b>		2-Hydroxy-1,2,3-propanetricarboxylic acid calcium salt; Tricalcium citrate; Calcium Citrate;		<b><u>IN CASE OF EMERGENCY</u></b> <b><u>CHEMTREC (24hr) 800-424-9300</u></b>  CALL (310) 516-8000	
<b>Chemical Name</b>		Calcium Citrate, Tetrahydrate			
<b>Chemical Family</b>		Not available.			
<b>Chemical Formula</b>		Ca3(C6H5O7)2.4H2O			
<b>Supplier</b>		SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248			

## Section 2. Composition and Information on Ingredients

		Exposure Limits			
Name	CAS #	TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	% by Weight
1) Calcium citrate, Tetrahydrate	5785-44-4				100
<b>Toxicological Data on Ingredients</b>		<b>Calcium citrate, Tetrahydrate</b> LD50: Not available. LC50: Not available.			

Continued on Next Page

**Section 3. Hazards Identification**

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

**Potential Chronic Health Effects** **CARCINOGENIC EFFECTS:** Not available.  
**MUTAGENIC EFFECTS:** Not available.  
**TERATOGENIC EFFECTS:** Not available.  
**DEVELOPMENTAL TOXICITY:** Not available.  
 Repeated or prolonged exposure is not known to aggravate medical condition.

**Section 4. First Aid Measures**

**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. WARM water MUST be used. Get medical attention.

**Skin Contact** In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

**Serious Skin Contact** Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

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

**Serious Inhalation** Not available.

**Ingestion** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

**Serious Ingestion** Not available.

**Section 5. Fire and Explosion Data**

**Flammability of the Product** May be combustible at high temperature.

**Auto-Ignition Temperature** Not available.

**Flash Points** CLOSED CUP: Higher than 93.3°C (200°F).

**Flammable Limits** Not available.

**Products of Combustion** Some metallic oxides.

**Fire Hazards in Presence of Various Substances** Slightly flammable to flammable in presence of heat.  
Non-flammable in presence of shocks.

**Explosion Hazards in Presence of Various Substances** Slightly explosive in presence of open flames and sparks.  
Non-explosive in presence of shocks.

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

**Special Remarks on Fire Hazards** As with most organic solids, fire is possible at elevated temperatures

**Special Remarks on Explosion Hazards** Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

**Section 6. Accidental Release Measures**

<b>Small Spill</b>	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
<b>Large Spill</b>	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

**Section 7. Handling and Storage**

<b>Precautions</b>	Keep away from heat. Keep away from sources of ignition. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
<b>Storage</b>	Keep container tightly closed. Keep container in a cool, well-ventilated area.

**Section 8. Exposure Controls/Personal Protection**

<b>Engineering Controls</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection</b>	Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
<b>Personal Protection in Case of a Large Spill</b>	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
<b>Exposure Limits</b>	Not available.

**Section 9. Physical and Chemical Properties**

<b>Physical state and appearance</b>	Solid. (Crystalline powder. Powdered solid. Granular solid.)	<b>Odor</b>	Odorless.
<b>Molecular Weight</b>	570.5 g/mole	<b>Taste</b>	Not available.
<b>pH (1% soln/water)</b>	Not available.	<b>Color</b>	White.
<b>Boiling Point</b>	Not available.		
<b>Melting Point</b>	Not available.		
<b>Critical Temperature</b>	Not available.		
<b>Specific Gravity</b>	Not available.		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not available.		
<b>Volatility</b>	Not available.		
<b>Odor Threshold</b>	Not available.		
<b>Water/Oil Dist. Coeff.</b>	Not available.		
<b>Ionicity (in Water)</b>	Not available.		
<b>Dispersion Properties</b>	Not available.		
<b>Solubility</b>	Very slightly soluble in cold water.		



**Section 10. Stability and Reactivity Data**

<b>Stability</b>	The product is stable.
<b>Instability Temperature</b>	Not available.
<b>Conditions of Instability</b>	Excess heat, incompatible materials
<b>Incompatibility with various substances</b>	Reactive with oxidizing agents
<b>Corrosivity</b>	Non-corrosive in presence of glass
<b>Special Remarks on Reactivity</b>	Loses most of its water at 100 deg. C and all at 120 deg. C
<b>Special Remarks on Corrosivity</b>	Not available.
<b>Polymerization</b>	Will not occur.

**Section 11. Toxicological Information**

<b>Routes of Entry</b>	Inhalation. Ingestion.
<b>Toxicity to Animals</b>	LD50: Not available. LC50: Not available.
<b>Chronic Effects on Humans</b>	Not available.
<b>Other Toxic Effects on Humans</b>	Slightly hazardous in case of skin contact (irritant), of ingestion, of inhalation.
<b>Special Remarks on Toxicity to Animals</b>	Not available.
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.
<b>Special Remarks on other Toxic Effects on Humans</b>	Acute Potential Health Effects Skin: May cause skin irritation. Eye: May cause eye irritation. Inhalation: Irritation of the respiratory tract. Ingestion: None identified. Expected to be a low hazard. May cause digestive/gastrointestinal tract irritation or disturbances. Chronic Potential Health Effects: No information found.

**Section 12. Ecological Information**

<b>Ecotoxicity</b>	Not available.
<b>BOD5 and COD</b>	Not available.
<b>Products of Biodegradation</b>	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
<b>Toxicity of the Products of Biodegradation</b>	The product itself and its products of degradation are not toxic.
<b>Special Remarks on the Products of Biodegradation</b>	Not available.

**Section 13. Disposal Considerations****Waste Disposal****Section 14. Transport Information****DOT Classification** Not a DOT controlled material (United States).**Identification** Not applicable.**Special Provisions for Transport** Not applicable.**DOT (Pictograms)****Section 15. Other Regulatory Information and Pictograms****Federal and State Regulations** No products were found.

**California Proposition 65 Warnings** California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: No products were found.

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

**Other Regulations** EINECS: This product is not on the European Inventory of Existing Commercial Chemical Substances.  
 Canada: Not listed on Canadian Domestic Substance List (DSL) or Canadian Non- Domestic Substance List (NDSL).  
 China: Not listed on National Inventory.  
 Japan: Not listed on National Inventory (ENCS).  
 Korea: Not listed on National Inventory (KECI).  
 Philippines: Listed on National Inventory (PICCS).  
 Australia: Not listed on AICS.

**Other Classifications** **WHMIS (Canada)** Not controlled under WHMIS (Canada).**DSCL (EEC)** This product is not classified according to the EU regulations. Not applicable.**HMS (U.S.A.)**

Health Hazard	1
Fire Hazard	1
Reactivity	0
Personal Protection	E

**National Fire Protection Association (U.S.A.)****WHMIS (Canada) (Pictograms)****DSCL (Europe) (Pictograms)**

TDG (Canada)  
(Pictograms)ADR (Europe)  
(Pictograms)

## Protective Equipment



Gloves



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Safety glasses.

## Section 16. Other Information

MSDS Code C3270

References Not available.

**Other Special Considerations** Major Uses: Dietary supplement food additive; chemical intermediate for Citric acid; emulsifier and sequestering agent in foods; improvement of baking properties of flour; firming agent in foods

Validated by Sonia Owen on 5/28/2008.

Verified by Sonia Owen.

Printed 6/26/2008.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.