



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 31-Jan-2022

Version 1.1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Iron(III) sulfate
Product Code SC-252915

Recommended use of the chemical and restrictions on use

For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc.
10410 Finnell Street
Dallas, TX 75220
831.457.3800
800.457.3801
scbt@scbt.com

Emergency telephone number

Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).***

Classification

Acute toxicity - Oral
Skin corrosion/irritation
Serious eye damage/eye irritation
Corrosive to metals***

Category 4***
Category 2***
Category 1***
Category 1***

Label elements

Signal word
Hazard statements

Danger***
Harmful if swallowed
Causes skin irritation
Causes serious eye damage***
May be corrosive to metals***

Symbols/Pictograms



Precautionary Statements - Prevention
Precautionary Statements - Response

Wash hands thoroughly after handling
IF exposed or concerned: Get medical advice/attention

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

NFPA Health hazards 3
Flammability 0
Stability 0
Physical and chemical properties -



HMIS Health hazards 3
Flammability 0
Physical hazards 2
Personal protection -



3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 10028-22-5
 Molecular Weight 399.88
 Formula $\text{Fe}_2(\text{SO}_4)_3$

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Iron(III) sulfate	15244-10-7	>90	-	-	-
Sulfuric acid***	7664-93-9	3 - 7	= 2140 mg/kg (Rat) ***	-	85 - 103 mg/m ³ (Rat) 1 h***

4. FIRST AID MEASURES

First Aid Measures

General advice If symptoms persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Wash contaminated clothing before reuse. Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

Ingestion Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media No information available.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Hydrogen sulfide.***

Explosion data

Sensitivity to Mechanical Impact No information available.

Sensitivity to Static Discharge No information available.

Protective equipment and precautions for firefighters

Protective equipment and precautions 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 Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.
Methods for cleaning up Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions **Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Protect from moisture.***** Store at room temperature.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Iron(III) sulfate 15244-10-7	TWA: 1 mg/m ³ Fe***	(vacated) TWA: 1 mg/m ³ Fe***	TWA: 1 mg/m ³ Fe***
Sulfuric acid*** 7664-93-9	TWA: 0.2 mg/m ³ thoracic particulate matter***	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ ***	IDLH: 15 mg/m ³ TWA: 1 mg/m ³ ***

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment



Eye/face protection	Tight sealing safety goggles. Face protection shield.
Skin and Body Protection	Wear protective gloves and protective clothing.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
General Hygiene Considerations	When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	powder
Odor	No information available

Property

pH	No information available
Melting point/freezing point	No information available
Boiling point	No information available
Flash point	No information available
Liquid Density	No information available
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Values

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Exposure to air or moisture over prolonged periods.***
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Hydrogen sulfide.***

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.



Information on toxicological effects

Symptoms No information available.

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

Chronic Toxicity Avoid repeated exposure. May cause adverse liver effects.
 Target Organ Effects Gastrointestinal tract (GI), Eyes, Respiratory system, Liver, Skin, Teeth.
 Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
Sulfuric acid*** 7664-93-9	A2***	Group 1***	Known***	X***

ACGIH (American Conference of Governmental Industrial Hygienists) A2 - Suspected Human Carcinogen

IARC (International Agency for Research on Cancer) Group 1 - Carcinogenic to Humans

NTP (National Toxicology Program) Known - Known Carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor) X - Present

Numerical measures of toxicity - Product Information

Unknown acute toxicity No information available
 The following values are calculated based on chapter 3.1 of the GHS document
 ATEmix (oral) 520 mg/kg
 ATEmix (inhalation-dust/mist) 1 mg/l
 ATEmix (inhalation-vapor) 10200 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity May cause long lasting harmful effects to aquatic life

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Sulfuric acid*** 7664-93-9	-	500: 96 h Brachydanio rerio mg/L LC50 static***	-	29: 24 h Daphnia magna mg/L EC50***

Persistence and degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.
 Contaminated packaging Do not reuse container.
 Other Information Waste codes should be assigned by the user based on the application for which the product was used.
 US EPA Waste Number D002
 California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical name	California Hazardous Waste Status
Sulfuric acid*** 7664-93-9	Toxic Corrosive***

14. TRANSPORT INFORMATION



DOT	***
UN/ID no	UN3260***
Hazard Class	8***
Packing Group	III***
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.***
Reportable Quantity (RQ)	(Sulfuric acid: RQ (kg)= 454.00)***
Description	UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III***
Emergency Response Guide Number	154***
IMDG	***
UN/ID no	UN3260***
Hazard Class	8***
Packing Group	III***
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.***
Description	UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III***
Special Provisions	223, 274***
EmS-No	F-A, S-B***
IATA	***
UN/ID no	UN3260***
Hazard Class	8***
Packing Group	III***
Proper shipping name	Corrosive solid, acidic, inorganic, n.o.s.***
Description	UN3260, Corrosive solid, acidic, inorganic, n.o.s. (Sulfuric acid), 8, III***
ERG Code	8L***

15. REGULATORY INFORMATION

International Inventories

All of the components in the product are on the following Inventory lists

Australia (AICS) China (IECSC) ENCS (Japan):

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Iron(III) sulfate	-	-	-	-	-	-	X***	-	-	X***
Sulfuric acid***	X***	X***	-	X***	-	X***	X***	X***	X***	X***

X - Listed

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).



Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid*** 7664-93-9	1000 lb***			X***

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Sulfuric acid*** - 7664-93-9	Carcinogen***

U.S. State Right-to-Know Regulations

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid*** 7664-93-9	X***	X***	X***

16. OTHER INFORMATION

Revision note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet