*Phyto*Technology Laboratories®

SAFETY DATA SHEET

1. CHEMICAL IDENTIFICATION AND COMPANY INFORMATION

PRODUCT NAME: Tetracycline Solution (10 mg/mL)

PRODUCT NUMBER: T859

COMPANY INFO: *Phyto*Technology Laboratories®
PO Box 12205, Shawnee, KS 66282-2205
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
www.phytotechlab.com

EMERGENCY PHONE NUMBER: 1-800-535-5053 - US Only
1-352-323-3500 - International

RECOMMENDED USE: For Research Use Only

RESTRICTIONS ON USE: Products sold by *Phyto*Technology Laboratories® are intended for research and laboratory use only. Products are not to be used as human or animal therapeutics, cosmetics, agricultural or pesticidal products, food additives, or as household chemicals.

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification:

H227 – Flammable liquids (Category 4)
H315 – Skin irritation (Category 2)
H319 – Eye irritation (Category 2A)
H335 – Specific target organ toxicity – single exposure (Category 3), Respiratory system.
H361 – Reproductive toxicity (Category 2)
H362 – Effects on or via lactation.

GHS Label elements, including hazard and precautionary statements:

Pictogram: 

Signal Word: Warning

Hazard Statements:

H227 – Combustible liquid.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H361 – Suspected of damaging the unborn child.
H362 – May cause harm to breast-fed children.

Precautionary Statements:

P202 – Do not handle until all safety precautions have been read and understood.
P263 – Avoid contact during pregnancy/while nursing.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 – IF exposed or concerned: Get medical advice/ attention.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: [4S-(4a,4aα,5aα,6β,12aα)]-4-(Dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-6-methyl-1,11-dioxo-2-naphthacenecarboxamide Hydrochloride

CAS No: 64-75-5

Formula: $C_{22}H_{24}N_2O_8 \cdot HCl$

Molecular Weight: 480.94

Ingredient	CAS Number	Percent	Hazardous
Tetracycline Hydrochloride	64-75-5	1%	No exposure limits established by OSHA or ACGIH
DMSO	67-68-5	99%	No exposure limits established by OSHA or ACGIH

4. FIRST AID MEASURES

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Entry	Symptoms	First Aid Procedures
Ingestion	May cause irritation if swallowed	If swallowed, wash out mouth with water. Never give anything by mouth to an unconscious person. **Get medical attention.**
Inhalation	May cause irritation to respiratory tract	Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. **Get medical attention.**
Eye Contact	Direct contact may cause irritation. May cause redness, tearing, or blurred vision.	Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. **Get medical attention if irritation persists.**
Skin Contact	Irritating. May cause reddening, itching or inflammation.	Wash area thoroughly with soap and water. Remove and wash contaminated clothing. **Get medical attention if irritation persists.**

Most Important Symptoms or Effects, Both Acute and Delayed:

See section 2 and/or section 11

Recommendation for Immediate Medical Care and Special Treatment Needed:

No data available

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water spray, carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing media suitable for surrounding fire.

Special Protective Equipment and Precaution for Firefighters: In the event of a fire, wear full protective clothing and NIOSH approved self-contained breathing apparatus. Evacuate the area and fight fire from a safe distance.

Hazardous Combustion Products: May emit toxic fumes under fire conditions.

Toxic Gases Produced: Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protection recommended in Section 8. Avoid breathing vapors, mist or gas. Ensure adequate ventilation, especially in confined areas. Evacuate personnel to safe areas.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method of Containment and Cleanup: Clean-up personnel should wear proper protective equipment and clothing. Contain spilled material and do not let product enter drains. Soak up with inert absorbent material and place in a suitable, closed container for disposal in accordance with all local, state/provincial, and national requirements. Ventilate the area if necessary.

7. HANDLING AND STORAGE

Precaution for Safe Handling: Avoid contact with skin and eyes. Avoid aerosols. Avoid incompatible substances. Do not breathe fume. Keep away from sources of ignition. Wash thoroughly after use.

Conditions for Safe Storage:	Keep in a tightly closed container and store in a cool, dry, and well-ventilated area. Avoid direct light.
Recommended Storage Temperature:	-20 to 0 ^{o}C
Incompatibilities:	Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA's Permissible Exposure Limits (PELs):	No data available
Threshold Limit Values (TLVs):	No data available
Engineering Controls:	Handle in accordance to general industrial hygiene and safety practice.

Personal Protective Equipment (PPE):

Eye/Face Protection:	Chemical safety glasses or goggles. Have eye-washing facilities readily available where eye contact can occur.
Skin Protection:	Protective gloves
Body Protection:	Lab coat
Respiratory Protection:	Wear appropriate respirator

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid
pH:	Under Development
Solubility:	Miscible with Water or DMSO
Melting Range:	No data available
Vapor Density:	No data available
Vapor Pressure:	No data available
Odor:	Odorless
Odor Threshold:	No data available
Viscosity:	No data available
Relative Density:	No data available
Evaporation Rate:	No data available
Initial Boiling Point and Boiling Range:	No data available
Flammability (solid, gas):	No data available
Partition coefficient: n-octanol/water):	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flash Point (Closed Cup):	No data available
Flammable Limits:	Upper (%) – No data available Lower (%) – No data available

10. STABILITY AND REACTIVITY

Reactivity:	No data available
Chemical Stability:	Stable under normal conditions of use
Possibility of Hazard Reactions:	Will not occur
Conditions to Avoid:	May be light sensitive
Incompatibles Materials:	Acid chlorides, Phosphorus halides, Strong acids, Strong oxidizing agents, Strong reducing agents

Hazardous Decomposition Products: Carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Toxicity:	LD_{50} (Oral-Rat)(mg/Kg):	6443
	LD_{50} (IV-Rat)(mg/Kg):	128
	LD_{50} (Oral-Mouse)(mg/Kg):	2759

Carcinogenicity:	NTP:	No
	IARC:	No
	Z List:	No
	OSHA Reg:	No

Respiratory or skin sensitization: May cause allergic reactions in certain sensitive individuals.

Reproductive Toxicity: Suspected human reproductive toxicant – Effects on or via lactation.

Symptoms Associated with Overexposure: Phototoxic reactions, Gastrointestinal disturbance, yellowing of teeth, reduced mineralization

Specific Target Organ Toxicity:	Single Exposure:	Inhalation – may cause respiratory irritation
	Repeated Exposure:	No data available

Target Organs: Liver, respiratory system, reproductive system, eye

Medical Conditions Aggravated By Exposure: Pre-existing conditions

Routes of Entry: Ingestion, inhalation, skin and eye contact

NIOSH/RTECS NO: QI9100000

The toxicological properties of this product have not been thoroughly investigated

12. ECOLOGICAL INFORMATION

Ecotoxicity: Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 34,000 mg/l - 96 h
LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates - EC50 - Daphnia magna (Water flea) - 24,600 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae EC50 - Pseudokirchneriella subcapitata (green algae) - 17,000 mg/l - 72 h (OECD Test Guideline 201)

Persistence and Degradability: No data available

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATION

Disposal Procedure: Dispose in accordance with all applicable federal, state, and local environmental regulations.

EPA Hazardous Waste Number: No data available

14. TRANSPORT INFORMATION

Domestic (D.O.T.):	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A

International:

IMDG:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A
IATA:	Proper Shipping Name:	CHEMICALS, N.O.S. (NON-REGULATED)
	Hazard Class:	N/A
	UN/NA:	N/A
	Labels:	N/A

15. REGULATORY INFORMATION

TSCA:	No
SARA TITLE III:	
Section 302 (EHS) Ingredients:	No
Section 313 Ingredients:	Yes
Section 304 (EHS/CERCLA) Ingredients:	No
Section 311/312 Hazard:	Fire Hazard, Acute Health Hazard, Chronic Health Hazard
Massachusetts Right to Know Components:	No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right to Know Components:	CAS No.: 64-75-5 Tetracycline hydrochloride CAS No.: 67-68-5 Dimethyl sulfoxide
New Jersey Right to Know Components:	CAS No.: 64-75-5 Tetracycline hydrochloride CAS No.: 67-68-5 Dimethyl sulfoxide
California Prop. 65 Components:	CAS No.: 64-75-5 Tetracycline hydrochloride WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

16. OTHER INFORMATION

HMIS Rating:	**Health Hazard**	**Chronic Health Hazard**	**Flammability**	**Physical Hazard**
	3	*	2	1
NFPA Rating:	**Health Hazard**	**Fire Hazard**	**Reactivity Hazard**	**Special Hazard**
	3	2	1	

*Chronic Hazard: Chronic (long-term) health effects may result from repeated overexposure.

***Phyto*Technology Laboratories® provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. The above information is intended to be used only as a guide to the appropriate precautionary handling of this material by a properly trained person. *Phyto*Technology Laboratories® shall not be held liable for any damage resulting from handling or from contact with the above product. This product is intended for LABORATORY USE ONLY. Our products may NOT BE USED as drugs, cosmetics, agricultural or pesticidal products, food additives or as household chemicals.**

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