



MATERIAL SAFETY DATA SHEET

Section 1: Product & Company Identification	
Product Name:	Ochratoxin A
Product #:	O-1034
Synonyms:	(-)-N-((5-Chloro-8-hydroxy-3-methyl-1-oxo-7-isochromanyl)carbonyl)-3-phenylalanine; N-[(3R)-(5-Chloro-8-hydroxy-3-methyl-1-oxo-7-isochromanyl)carbonyl]- <SC> L-phenylalanine
Supplier:	A.G. Scientific, Inc. 6450 Lusk Blvd E102 San Diego CA 92121 Tele# + 858-452-9925 Fax# + 858-452-9926
Emergency Tele#:	Chemtrec, Tele# in USA 1-800-424-9300, International 1-703-527-3887

Section 2: Composition / Information on Ingredients					
Component	CAS#	EC #	%	Classification	R Phrases
	303-47-9	206-143-7			R26,R28,R36, R40,R63

Section 3: Hazards Identification	
Symbols	
HMIS Classification	<p style="text-align: center;">FLAMMABILITY</p> <p style="text-align: center;">HEALTH REACTIVITY</p> <p style="text-align: center;">OTHER</p>

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NFPA Classification	<p>FLAMMABILITY</p> <p>HEALTH REACTIVITY</p> <p>OTHER</p>
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Section 4: First Aid Measures

General Overview:	Avoid contact, wear suitable protective clothing, gloves and eye/face protection.
Inhalation:	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration, seek medical attention.
Skin:	Wash immediately with water for 15 minutes. Remove contaminated clothing. Wash contaminated clothing before reuse. Seek medical attention if symptoms appear.
Eyes:	In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes. Remove contacts. Assure adequate flushing of the eyes by separating the eyelids with fingers.
Ingestion:	If swallowed, wash out mouth with water provided person is conscious. DO NOT induce vomiting. Seek medical attention if symptoms appear. Loosen tight clothing like collar, tie, belt or waistband.
<i>See section 11 for more detailed information on health effects & symptoms</i>	

SECTION 5: Fire Fighting Measures

Flammability of the product:	May be combustible at high temperatures.
Extinguishing Media:	Dry Chemical Powder for SMALL FIRES and carbon dioxide or water spray, fog or foam for LARGE FIRES. Do not use water jet.
Hazardous thermal (de)composition products:	These products are carbon oxides (CO, CO ₂), nitrogen oxides (NO, NO ₂).
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus (SCBA) and protective clothing to prevent contact with skin and eyes. Be sure to use an approved/certified respirator or equivalent.
Flash Point:	N/A






Section 6: Accidental Release Measures

Personal Precautions:	Use Personal Protection Equipment. Splash goggles. Full suit. Boots. Gloves. Avoid dust formation.
Environmental Precautions:	Do not let product enter drains
Methods for Clean-up:	Sweep up & shovel into suitable disposal container. Ventilate area and wash spill site after material pickup is complete.

SECTION 7: Handling & Storage

Storage:	+4°C. Keep container tightly closed and in a well ventilated area. Do not store above +4°C. Storage under inert gas is recommended.
Handling:	Use only in area provided with appropriate exhaust ventilation. Keep away from heat and source of ignition. Empty containers pose a fire risk, evaporate residue under fume hood. Ground all equipment containing material. Do not breathe dust.


SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>Wear appropriate government (NIOSH/MSHA) approved respirator. Do not breathe vapor.</p>
Skin and Body:	  <p>Chemical-resistant gloves and lab coat/other protective clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling.</p>

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Eyes:	 Safety goggles.
Ventilation/Engineering Measures:	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.
Hygiene:	Wash hands after handling compound and before eating, smoking, using lavatory and at the end of the day.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Solid
Color:	Yellow crystals.
Formula:	$C_{20}H_{18}ClNO_6$
Molecular Wt.	404 g/mole
Melting Pt.	105-110°C
Boiling Pt.	N/A
Density:	N/A
Vapor Pressure:	N/A
Evaporation Rate:	N/A
Vapor Density:	N/A
Solubility:	DMSO, Methanol, Ethanol
Flash Point:	N/A
Autoignition Temp:	N/A

SECTION 10: Stability and Reactivity

Stability:	Stable
Hazardous decomposition products:	N/A
Materials to Avoid:	Reactive with acids, alkalis, oxidizing agents.
Conditions to avoid:	Excess heat, incompatible components, strong oxidizing agents

SECTION 11: Toxicological Information

RTECS#:	AY4375000
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ACUTE Toxicity:	TOXIC, MUTAGENIC, TERATOGENIC, CARCINOGENIC. LD ₅₀ : 20 mg/kg, (oral, rat) Very hazardous in case of ingestion, of inhalation. Hazardous in case of skin contact (permeator), of eye contact (irritant). Slightly hazardous in case of skin contact (irritant). Severe over-exposure can result in death. Target organs: mucous membranes, skin, eyes. Target organ: kidneys
CHRONIC Toxicity:	Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive: Other:	This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies. Laboratory experiments have shown mutagenic effects. Laboratory experiments have shown teratogenic effects. No data available. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. IARC: 2B - Group 2B: Possibly carcinogenic to humans ((-)-Ochratoxin A) Laboratory experiments have shown teratogenic effects. NTP: Reasonably anticipated to be a human carcinogen ((-)-Ochratoxin A) OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or, potential human carcinogen by OSHA. EPA: No classification on carcinogenic data is available from EPA





SECTION 12: Ecological Information

Ecotoxicity:	N/A
Mobility:	N/A
Persistence and degradability:	N/A
Bioaccumulative potential:	N/A
Other adverse effects:	N/A
Corrosivity Characteristic:	N/A
General Notes:	Do not allow undiluted product or large quantities of it to reach groundwater, water course or sewer system. Do not allow materials to be released into the environment without proper government permits.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	<i>Only professional staff trained in such techniques must undertake waste disposal. Observe all appropriate federal, provincial or state and local regulations.</i>
Contaminated Packaging:	Do not re-use empty containers. Dispose of as unused product.

SECTION 14: Transportation Information

UN ID#:	UN2811
ADR / RID (LAND): Proper shipping name: Hazard Class: Packaging Group: Proper shipping name: Label:	 UN2811 6.1 II TOXIC, SOLID, ORGANIC, N.O.S. (OCHRATOXIN A) 6
DOT regulations: Hazard Class: Identification number: Packaging Group: Proper shipping name: Label:	 6.1 UN2811 II TOXIC, SOLID, ORGANIC, N.O.S. (OCHRATOXIN A) 6
IMDG/IMO (SEA): Hazard Class: Identification number: Packaging Group: Proper shipping name: Label: Marine Pollutant:	 6.1 UN2811 II TOXIC, SOLID, ORGANIC, N.O.S. (OCHRATOXIN A) 6 No
IATA/DGR (AIR): IATA Class: UN/ID Number:	 6.1 2811


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Label:	6
Packaging Group:	II
Proper shipping name:	TOXIC, SOLID, ORGANIC, N.O.S. (OCHRATOXIN A)

SECTION 15: Regulatory Information

EU Regulations:	T, Toxic, UN2811
SYMBOLS:	
Risk Phrases:	R26: Very toxic by inhalation. R28: Very toxic if swallowed. R36: Irritating to eyes. R40: Possible risks of irreversible effects. R63: Possible risk of harm to the unborn child.
Safety Phrases:	S28: After contact with skin, wash immediately with plenty of water. S36/37: Wear suitable protective clothing, gloves and eye/face protection. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S46: If swallowed, seek medical advice immediately and show this container or label.
U.S. Federal Regulations:	<p>TSCA: No products were found.</p> <p>SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.</p> <p>SARA 313: This material does not contain any chemical components</p> <p>311/312: Acute Health Hazard, Chronic Health Hazard</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Carcinogen, Highly toxic by ingestion, Teratogen</p> <p>Massachusetts Right To Know Components (-)-Ochratoxin A CAS-No.303-47-9 Revision Date 1993-04-24</p> <p>Pennsylvania Right To Know Components (-)-Ochratoxin A CAS-No.303-47-9 Revision Date 1993-04-24</p> <p>New Jersey Right To Know Components (-)-Ochratoxin A CAS-No. 303-47-9 Revision Date 1993-04-24</p> <p>California Prop. 65 Components WARNING! This product contains a chemical known to the State of California to cause cancer. (-)-Ochratoxin A CAS-No. 303-47-9 Revision Date 2007-09-28</p>
WHMIS (Canada):	Not controlled under the WHMIS (Canada) No products were found.

SECTION 16: Other Information

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LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. A.G. Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. A.G. Scientific products are for research purposes only. Not for human use or consumption.*

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