Safety Data Sheet

acc. to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 regulations

Printing date: September 22, 2017 Revision: September 22, 2017

1 Identification

· **Product identifier**

· **Trade name: Collagenase Kits – Stop Solution**
· **Product code:** 300410

· **Recommended use and restriction on use**
· **Recommended use:** Laboratory chemicals
· **Restrictions on use:** For Research Use Only – Not Human or Therapeutic Use

· **Details of the supplier of the Safety Data Sheet**
· **Manufacturer/Supplier:**
Chondrex, Inc.
16928 Woodinville-Redmond Rd NE Suite B-101
Woodinville, WA 98072
USA
425-702-6365
support@chondrex.com
· **Emergency telephone number:**
ChemTel LLC
800-255-3924 (North America)
(+1) 813-248-0585 (International)

2 Hazard(s) identification

· **Classification of the substance or mixture**
Flam. Liq. 2 H225 Highly flammable liquid and vapor.
Eye Irrit. 2A H319 Causes serious eye irritation.

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS07

· **Signal word:** Danger
· **Hazard statements:**
H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
· **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P264	Wash thoroughly after handling.
P280	Wear protective gloves and eye protection.

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P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.
P370+P378 In case of fire: Use for extinction: Alcohol resistant foam or water spray.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Components:**

64-17-5	ethanol	Flam. Liq. 2, H225 Eye Irrit. 2A, H319	>95%
5144-89-8	1, 10-phenanthroline monohydrate	Acute Tox. 3, H301	0.15-<0.25%

· **Additional information:** For the wording of the listed Hazard Statements refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **After inhalation:** Supply fresh air; consult doctor in case of complaints.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
· **Most important symptoms and effects, both acute and delayed:**
Causes eye irritation.
May cause drowsiness or dizziness.
Gastric or intestinal disorders when ingested.
· **Indication of any immediate medical attention and special treatment needed:**
If medical advice is needed, have product container or label at hand.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Alcohol resistant foam

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Fire-extinguishing powder
Water fog / haze
Water spray
Carbon dioxide
Gaseous extinguishing agents

· **For safety reasons unsuitable extinguishing agents:** None.

· **Special hazards arising from the substance or mixture**
Highly flammable liquid and vapor.
Formation of toxic gases is possible during heating or in case of fire.

· **Advice for firefighters**

· **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

· **Additional information:**
Eliminate all ignition sources if safe to do so.
Use large quantities of foam as it is partially destroyed by the product.
Cool endangered product with water spray.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
Ensure adequate ventilation.
Keep away from ignition sources.
Protect from heat.

· **Environmental precautions**
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **Methods and material for containment and cleaning up**
Absorb with non-combustible liquid-binding material (sand, diatomite, acid binders, universal binders).
Send for recovery or disposal in suitable receptacles.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling**

· **Precautions for safe handling:**
Open and handle receptacle with care.
Prevent formation of aerosols.
Avoid splashes or spray in enclosed areas.
Use only in well ventilated areas.

· **Information about protection against explosions and fires:**
Highly flammable liquid and vapor.

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Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Flammable gas-air mixtures may be formed in empty containers/receptacles.

· **Conditions for safe storage, including any incompatibilities**
· **Storage**
· **Requirements to be met by storerooms and receptacles:**
Store in cool, dry conditions in well sealed receptacles.
Avoid storage near extreme heat, ignition sources or open flame.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from oxidizing agents.
· **Further information about storage conditions:** This product is hygroscopic.
· **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**	
64-17-5 ethanol	
PEL (USA)	Long-term value: 1900 mg/m³, 1000 ppm
REL (USA)	Long-term value: 1900 mg/m³, 1000 ppm
TLV (USA)	Short-term value: 1880 mg/m³, 1000 ppm
EL (Canada)	Short-term value: 1000 ppm
EV (Canada)	Long-term value: 1900 mg/m³, 1000 ppm
LMPE (Mexico)	Long-term value: 1000 ppm A3

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
Avoid breathing mist, vapors, or spray.
· **Engineering controls:** Provide adequate ventilation.
· **Breathing equipment:** Not required under normal conditions of use.
· **Protection of hands:**
Gloves are advised for repeated or prolonged contact.
Wear protective gloves to handle contents of damaged or leaking units.
· **Material of gloves** Latex, nitrile or neoprene gloves are recommended.

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· **Eye protection:**

Safety glasses

Follow relevant national guidelines concerning the use of protective eyewear.

· **Body protection:** Protection may be required for spills.

· **Limitation and supervision of exposure into the environment**
No relevant information available.

· **Risk management measures** See Section 7 for additional information.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **Appearance:**	
Form:	Liquid
Color:	Colorless
· **Odor:**	Alcohol-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Melting point/Melting range:**	~ -114.5°C (238.1 °F)
· **Boiling point/Boiling range:**	~78°C (~172.4 °F)
· **Flash point:**	~13°C (~55.4 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Auto-ignition temperature:**	~425°C (~797 °F)
· **Decomposition temperature:**	Not determined.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
· **Explosion limits**	
Lower:	~3.5Vol %
Upper:	~15Vol %
· **Oxidizing properties:**	Non-oxidizing.
· **Vapor pressure at 20°C (68 °F):**	~59hPa (~44.3 mm Hg)
· **Density:**	
Relative density:	~0.79
Vapor density:	Not determined.
Evaporation rate:	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.

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· **Viscosity**
Dynamic: Not determined.
Kinematic: Not determined.
· **Other information** No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.
· **Chemical stability:** Stable under normal temperatures and pressures.
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Avoid extreme heat.
Avoid open flame, ignition sources, contact with incompatibile substances.
· **Possibility of hazardous reactions**
Highly flammable liquid and vapor.
Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.
Used empty containers may contain product gases which form explosive mixtures with air.
Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomized.
Toxic fumes may be released if heated above the decomposition point.
· **Conditions to avoid** Keep ignition sources away - Do not smoke.
· **Incompatible materials** Oxidizers
· **Hazardous decomposition products**

Under fire conditions only:
Carbon monoxide and carbon dioxide

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**		
ATE (Acute Toxicity Estimate)		
Oral	LD50	>5000 mg/kg (rat)

5144-89-8 1, 10-phenanthroline monohydrate		
Oral	LD50	132 mg/kg (rat)

· **Primary irritant effect:**
· **On the skin:** Based on available data, the classification criteria are not met.
· **On the eye:** Irritating effect.
· **Sensitization:** Based on available data, the classification criteria are not met.

· **IARC (International Agency for Research on Cancer):**		
64-17-5	ethanol	1

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· **NTP (National Toxicology Program):**
None of the ingredients are listed.
· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

· **Probable route(s) of exposure:**
Ingestion.
Inhalation.
Eye contact.
Skin contact.
· **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
· **Carcinogenicity:** Based on available data, the classification criteria are not met.
· **Reproductive toxicity:** Based on available data, the classification criteria are not met.
· **STOT-single exposure:** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
· **Aspiration hazard:** Based on available data, the classification criteria are not met.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity** The product contains materials that are harmful to the environment.
· **Persistence and degradability** No relevant information available.
· **Bioaccumulative potential:** No relevant information available.
· **Mobility in soil:** No relevant information available.
· **Additional ecological information**
· **General notes:** Do not allow product to reach ground water, water course or sewage system.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

· **Uncleaned packagings**
· **Recommendation:** Disposal must be made according to official regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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14 Transport information

· **UN-Number**	
· **DOT, ADR, IMDG, IATA**	UN1170
· **UN proper shipping name**	
· **DOT, IATA**	Ethanol
· **ADR, IMDG**	ETHANOL (ETHYL ALCOHOL)
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	3 Flammable liquids
· **Label**	3
· **ADR**	
· **Class**	3 (F1) Flammable liquids
· **Label**	3
· **IMDG, IATA**	
· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	

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Excepted Quantities (EQ)
EQ Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· **DOT**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

· **ADR**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

· **IMDG**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 1 L each.

· **IATA**

Limited Quantity for packages less than 30 kg gross and inner packagings less than 0.5 L each / 1 L net.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **United States (USA)**
· **SARA**

· **Section 302 (extremely hazardous substances):**
None of the ingredients are listed.
· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.
· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.
· **TSCA (Toxic Substances Control Act)**
Not all ingredients listed.

· **Proposition 65 (California)**
· **Chemicals known to cause cancer:**
Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

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64-17-5	ethanol

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
Ethanol - listing refers specifically to alcoholic beverage consumption and is not applicable for product.

64-17-5	ethanol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency):**

None of the ingredients are listed.

· **IARC (International Agency for Research on Cancer):**

64-17-5	ethanol	1

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**

None of the ingredients are listed.

· **Canadian Domestic Substances List (DSL):**

Not all ingredients listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** September 22, 2017 / -

· **Abbreviations and acronyms:**
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistant, Bio-accumulable, Toxique
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

· **Sources**

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Website, European Chemicals Agency (echa.europa.eu)
Website, US EPA Substance Registry Services (ofmpub.epa.gov/sor internet/registry/substreg/home/overview/home.do)
Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)
Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6
Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.
Safety Data Sheets, Individual Manufacturers

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