

# SAFETY DATA SHEET

Cat# BN01008 Collagenase Activity Colorimetric Assay Kit

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Collagenase Activity Colorimetric Assay Kit  
**PRODUCT CODES:** Cat# BN01008  
**MANUFACTURER:** Assay Genie (brand of Reagent Genie Ltd.)  
**ADDRESS:** G1 The Steelworks, Foley Street, Dublin 1  
**EMERGENCY PHONE:** +353 1 8879802

## SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
Collagenase Assay Buffer	Liquid	20 ml	No hazard
Collagenase	Liquid	1 ml	No hazard
Collagenase Substrate	Liquid	4 ml	No hazard
Inhibitor (1,10-Phenanthroline)	In Ethanol (Contains 1,10-Phenanthroline)	50 µl	See below

### 1,10-Phenanthroline:

#### Emergency Overview

**GHS Classification:** Acute toxicity, Oral (Category 3), H301  
Acute aquatic toxicity (Category 1), H400  
Chronic aquatic toxicity (Category 1), H410

#### GHS Label elements, including precautionary statements



#### Pictogram:

**Signal word:** Danger

**Hazard statement(s):** H301 Toxic if swallowed  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement(s):** P264 Wash hands thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P330 Rinse mouth.

P391 Collect spillage.  
P405 Store locked up.

P501 Dispose of contents/container to an approved waste disposal plant.

#### HMIS Classification

**Health hazard:** 2  
**Flammability:** 0  
**Physical hazards:** 1

#### NFPA Rating

**Health Hazard:** 2  
**Fire:** 0  
**Reactivity Hazard:** 1

#### Potential Health Effects

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.  
**Skin:** Harmful if absorbed through skin. Causes skin irritation.  
**Eyes:** Causes eye irritation.  
**Ingestion:** Harmful if swallowed.

#### Ethanol:

#### Emergency Overview

**OSHA Hazards:** Combustible liquid, Target organ effect, Irritant, Carcinogen

**Target Organs:** Nerves, Liver, Heart

**GHS Classification:** Flammable liquids (Category 3)

# SAFETY DATA SHEET

## Cat# BN01008 Collagenase Activity Colorimetric Assay Kit

Skin irritation (Category 2)

Eye irritation (Category 2B)

Specific target organ toxicity – single exposure (Category 3)

GHS Label elements, including precautionary statements



Pictogram:

Signal word:

Warning

Hazard statement(s):

H225: Highly flammable liquid and vapour

Precautionary statement(s): P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### HMIS Classification

Health hazard: 2

Chronic health hazard: \*

Flammability: 2

Physical hazards: 0

### NFPA Rating

Health Hazard: 2

Fire: 2

Reactivity Hazard: 0

### Potential Health Effects

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
1,10-Phenanthroline	--	--	--	--
Ethanol	64-17-5	200-578-6	46.07	C <sub>2</sub> H <sub>6</sub> O

## SECTION 4: FIRST AID MEASURES

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

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact:** Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed:** DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## SECTION 5: FIRE-FIGHTING MEASURES

### Ethanol:

**Condition of flammability:** Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for fire-fighters:** Wear self-contained breathing apparatus for firefighting if necessary.

**Hazardous combustion products:** Hazardous decomposition products formed under fire conditions— see section 10.

**Further information:** Use water spray to cool unopened containers.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Use personal protective equipment. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

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

**Methods for cleaning up:** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

# SAFETY DATA SHEET

Cat# BN01008 Collagenase Activity Colorimetric Assay Kit

## SECTION 7: HANDLING AND STORAGE

### Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Keep away from sources of ignition – no smoking. Take measures to prevent the build up of electrostatic charge.

### Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20°C.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ethanol:

Components	CAS-No.	Value	Control parameters	Basis
Ethanol	64-17-5	TWA	1,000 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks: Upper respiratory tract irritation. Confirmed animal carcinogen with unknown relevance to humans.				
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	USA. OSHA: TABLE Z-1 Limits for Air Contaminants – 1910.1000
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants
The value in mg/m <sup>3</sup> is approximate.				
		TWA	1,000 ppm 1,900 mg/m <sup>3</sup>	USA. NIOSH recommended exposure limits

### 1,10-Phenanthroline:

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

#### Eye protection

Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### Skin and body protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	1,10-Phenanthroline	Ethanol
Appearance:	Powder	Clear liquid
pH:	No data available	No data available
Water Solubility:	No data available	Completely soluble
Other Solubility:	No data available	No data available
Boiling Point (°C):	No data available	78-80 °C (172.4-176 °F)
Melting Point (°C):	No data available	-144 °C (-227.2 °F)
Flash Point (°C):	No data available	14 °C (57.2 °F)
Ignition Temperature (°C):	No data available	363 °C (685°F)
Density:	No data available	0.79 g/cm <sup>3</sup>

## SECTION 10: STABILITY AND REACTIVITY

Property	1,10-Phenanthroline	Ethanol
Chemical stability:	Stable under recommended storage conditions	

# SAFETY DATA SHEET

## Cat# BN01008 Collagenase Activity Colorimetric Assay Kit

<b>Conditions to avoid:</b>	No data available	Heat, flames, sparks, extreme temperatures, direct sunlight
<b>Materials to avoid:</b>	Strong oxidizing agents, strong acids	Oxidizing agents, alkali metals, ammonia, peroxides
<b>Hazardous decomposition products:</b>	No data available	Carbon oxides

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 1,10-Phenanthroline:

**Acute toxicity:** LD50 Oral - rat - 132 mg/kg

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

#### **Carcinogenicity:**

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: 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.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** no data available

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** no data available

**Specific target organ toxicity – repeated exposure (GHS):** no data available

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:** RTECS: not available

#### Ethanol:

**Acute toxicity:** LD50 Oral – rat – 7,060 mg/kg □ Remarks: Lungs, thorax, or respiration : other changes

LC50 Inhalation – rat – 10 h – 20000 ppm

**Skin corrosion/irritation:** Skin – rabbit – irritating to skin – 24 h

**Serious eye damage/eye irritation:** Eyes – rabbit – mild eye irritation – 24 h (Draize test)

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:** Carcinogenicity – mouse – oral □ Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Liver: tumors. Blood: Lymphomas including Hodgkin's disease.

- IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- ACGIH: 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.
- NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Reproductive toxicity – human – female – oral □ Effects on newborn: apgar score (human only), other neonatal measures or effects, and drug dependence.

**Teratogenicity:** no data available

**Specific target organ toxicity – single exposure (GHS):** Inhalation – may cause respiratory irritation.

**Specific target organ toxicity – repeated exposure (GHS):** no data available

**Aspiration hazard:** no data available

#### **Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.

**Skin:** May be harmful if absorbed through skin. Causes skin irritation.

**Eyes:** Causes eye irritation.

**Ingestion:** May be harmful if swallowed.

**Signs and Symptoms of Exposure:** Exposure may cause central nervous system depression, narcosis, and/or damage to the heart. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:** RTECS: KQ6300000

# SAFETY DATA SHEET

Cat# BN01008 Collagenase Activity Colorimetric Assay Kit

## SECTION 12: ECOLOGICAL INFORMATION

### 1,10-Phenanthroline:

**Persistence and degradability:** no data available

**Toxicity:** no data available

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** no data available

**Other adverse effects:** no data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

**Product:** Observe all federal, state, and local environmental regulations.

**Contaminated packaging:** Dispose of as unused product.

## SECTION 14: TRANSPORT INFORMATION

### 1,10-Phenanthroline:

**DOT (US):** UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solids, organic, n.o.s. (1,10-Phenanthroline)

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG:** UN number: 2811 Class: 6.1 Packing group: III EMS-No: F-A, S-A

Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,10-Phenanthroline)

Marine pollutant: No

**IATA:** UN number: 2811 Class: 6.1 Packing group: III

Proper shipping name: Toxic solid, organic, n.o.s. (1,10-Phenanthroline)

### Ethanol:

**DOT (US):** UN-number: 1170, Class: 3, Packing group: II; Proper shipping name: Ethanol; Marine pollutant: No; Poison inhalation hazard: No

**IMDG:** UN-number: 1170, Class: 3, Packing group: II; EMS-No: F-E, S-D; Proper shipping name: ETHANOL; Marine pollutant: No

**IATA:** UN-number: 1170, Class: 3, Packing group: II; Proper shipping name: Ethanol

## SECTION 15: REGULATORY INFORMATION

**SARA 302 Components:** SARA 302: No chemical in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** 1,10-Phenanthroline: Acute Health Hazard

Ethanol: Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components:** Ethanol, CAS-No. 64-17-5, Revision Date: 2007-03-01

**Pennsylvania Right To Know Components:**

1,10-Phenanthroline, CAS-No. 66-71-7

Ethanol, CAS-No. 64-17-5, Revision Date: 2007-03-01

**New Jersey Right To Know Components:**

1,10-Phenanthroline, CAS-No. 66-71-7

Ethanol, CAS-No. 64-17-5, Revision Date: 2007-03-01

**California Prop. 65 Components:** This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

### EU regulations

Component	Risk Phrases	Safety Phrases
1,10-Phenanthroline	--	--
Ethanol	R11, R20/21/22	S16, S36/37/39, S45

## SECTION 16: OTHER INFORMATION

### DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Assay Genie shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.