

SAFETY DATA SHEET

Cat# BN00764 Soluble Collagen Assay Kit

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Soluble Collagen Assay Kit
PRODUCT CODES: Cat# BN00764
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
Collagen Assay Buffer	Liquid	25 ml	No hazards
Collagenase Enzyme Mix	--	1 vial	No hazards
Detection Reaction Buffer	Contains Boric acid	10 ml	See below
Peptide Labelling Reagent	Contains DOPAC	1 vial	See below
Developer Solution	Liquid	500 µl	No hazards
Collagen I Standard (2 mg/ml)	Liquid	100 µl	No hazards

DOPAC:

Emergency Overview:

GHS Classification

Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Warning

Hazard statement(s):

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statement(s):

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

P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/ eye protection/ face protection.

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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

P312 Call a POISON CENTER or doctor/ physician if you feel unwell.

P321 Specific treatment (see supplemental first aid instructions on this label).

P330 Rinse mouth.

P332 + P313 If skin irritation occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

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

HMIS Classification

Health hazard: 2

Flammability: 0

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Physical hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: Cause eye irritation.

Ingestion: Harmful if swallowed.

Boric acid:

Emergency Overview

OSHA Hazards: Target organ effect, Teratogen, Reproductive hazard

Target Organs: Testes

GHS Classification: Acute toxicity, Oral (Category 5)
Reproductive toxicity (Category 1B)

GHS Label elements, including precautionary statements

Pictogram:



Signal word: warning

Hazard statement(s): H303 May be harmful if swallowed.
H361 Suspected of damaging fertility or the unborn child.

Precautionary statement(s): P281 Use personal protective equipment as required.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.

HMIS Classification

Health hazard: 2

Chronic health hazard: *

Flammability: 0

Physical hazards: 0

NFPA Rating

Health hazard: 2

Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Boric acid	10043-35-3	233-139-2	61.83	H ₃ BO ₃
DOPAC	102-32-9	203-024-1	168.15	C ₈ H ₈ O ₄

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: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for firefighters: 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.

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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20 °C.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Components	CAS-No.	Value	Control parameters	Basis
Boric acid	10043-35-3	STEL	6 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
Remarks:	Upper respiratory tract irritation. Not classifiable as a human carcinogen varies.			
		TWA	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen.			
		STEL	6 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Not classifiable as a human carcinogen.			
		TWA	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Upper respiratory tract irritation. Not classifiable as a human carcinogen varies.			
		TWA	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Upper respiratory tract irritation. Not classifiable as a human carcinogen varies.			
		STEL	6 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Upper respiratory tract irritation. Not classifiable as a human carcinogen varies.			

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

Face shield and safety glasses. 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	Boric acid	DOPAC
Appearance:	Solid	Solid
pH:	5.1 at 1.8 g/l	no data available
Water Solubility:	Soluble	no data available
Other Solubility:	No data available	no data available
Vapor Pressure	300 °C (572 °F)	no data available
Vapor Density	160 °C (320 °F)	no data available
Flash Point (°C):	No data available	no data available
Ignition Temperature (°C):	No data available	no data available
Density:	1.44 g/cm ³	no data available

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SECTION 10: STABILITY AND REACTIVITY

Property	DOPAC	Boric acid
Chemical Stability:	Stable under recommended storage conditions	
Conditions to Avoid:	No data available	No data available
Materials to Avoid:	Bases, halides, organic materials, carbides, fulminates, nitrates, picrates, cyanides, chlorates, alkali halides, zinc salts, permanganates, hydrogen peroxide, azides, perchlorates, nitromethane, phosphorus. Reacts violently with: cyclopentadiene, cyclopentanone oxime, nitroaryl amines, hexalithium disilicide, phosphorus (III) oxides, powdered metals	Strong oxidizing agents, Strong bases
Hazardous decomposition: products:	Sodium oxides	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

DOPAC:

Acute toxicity: no data available

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

Aspiration hazard: no data available

Potential Health Effects

Inhalation: May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin: May be harmful if absorbed through skin. Causes skin burns.

Eyes: Causes eye burns. Causes severe eye burns.

Ingestion: May be harmful if swallowed.

Synergistic effects: no data available

Additional information: RTECS: AH0590000

Boric acid:

Acute toxicity: LD50 Oral – rat – 2,660 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: Presumed human reproductive toxicant.

Teratogenicity: Fetotoxicity. Presumed human reproductive toxicant.

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

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

Potential Health Effects

Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.

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Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: May cause eye irritation.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

Additional information: RTECS: ED4550000

SECTION 12: ECOLOGICAL INFORMATION

DOPAC:

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: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

Boric acid:

Persistence and degradability: no data available

Toxicity: Toxicity to fish: LC50 – *Ptychocheilus lucius* – 279 mg/l – 96 h

LC50 – *Lepomis macrochirus* (Bluegill) – >1,021 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates: LC50 – *Daphnia magna* (Water flea) – 53.2 mg/l – 21 d

EC50 – *Daphnia magna* (Water flea) – 133 mg/l – 48 h

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

DOPAC:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods

Boric acid:

DOT (US): Not dangerous goods.

IMDG: Not dangerous goods.

IATA: Not dangerous goods

SECTION 15: REGULATORY INFORMATION

SARA 302 Components: SARA 302: The following components are subject to reporting levels established by SARA Title III, Section 302:

DOPAC CAS-No. 7664-93-9 Revision Date 2007-07-01

SARA 313 Components: The following components are subject to reporting levels established by SARA Title III, Section 313:

DOPAC CAS-No. 7664-93-9 Revision Date 2007-07-01

SARA 311/312 Hazards Boric acid: Chronic Health Hazard

DOPAC: Acute Health Hazard

Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components: DOPAC CAS-No. 102-32-9 Revision Date 2007-07-01

Boric acid, CAS-No. 10043-35-3; Revision Date: 2009-07-17

New Jersey Right To Know Components: DOPAC CAS-No. 102-32-9 Revision Date 2007-07-01

Boric acid, CAS-No. 10043-35-3; Revision Date: 2009-07-17

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
DOPAC	R35	S26, S30, S45

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Boric acid	R60, R61	S45, S53
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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.