

# SAFETY DATA SHEET

Cat# K559-100 D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

SDS DATE: Apr 8, 2020

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

**PRODUCT CODES:** Cat# K559-100

**RESTRICTIONS ON USE:** For laboratory research purposes. Not for drug or household use.

**MANUFACTURER:** BioVision, Inc.

**DIVISION:**

**ADDRESS:** 155 S. Milpitas Boulevard, Milpitas, CA 95035

**EMERGENCY PHONE:** 858-373-8066

**CHEMTREC PHONE:**

**OTHER CALLS:** 408-493-1800

**FAX PHONE:** 408-493-1801

## SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
DAAO Assay Buffer	Contains PROPRIETARY SUBSTRATE	25 ml	No hazards
DAAO Substrate	Liquid	220 µl	No hazards
DAAO Cofactor	--	1 vial	No hazards
DAAO Probe (in DMSO)	in DMSO	200 µl	See below
DAAO Enzyme Mix	--	1 vial	No hazards
H <sub>2</sub> O <sub>2</sub> Standard (0.88 M)	H <sub>2</sub> O <sub>2</sub>	100 µl	See below
DAAO Positive Control	--	1 vial	No hazards

### DMSO:

#### Emergency Overview

**OSHA Hazards:** Combustible Liquid, Target Organ Effect

**Target Organs:** Eyes, Skin

**GHS Classification:** Flammable liquids (Category 4)

**GHS Label elements, including precautionary statements**

**Pictogram:** none

**Signal word:** Warning

**Hazard statement(s):** H227 Combustible liquid

**Precautionary statement(s):** none

#### HMIS Classification

**Health hazard:** 0

**Chronic Health Hazard:** \*

**Flammability:** 2

**Physical hazards:** 0

#### NFPA Rating

**Health hazard:** 0

**Fire:** 2

**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.

**Aggravated Medical Condition:** Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

### HYDROGEN PEROXIDE:

#### Emergency Overview

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) :**

Oxidizing liquids (Category 1), H271

Acute toxicity, Oral (Category 4), H302

Skin corrosion (Category 1A), H314

Serious eye damage (Category 1), H318

Acute aquatic toxicity (Category 3), H402

Chronic aquatic toxicity (Category 3), H412

# SAFETY DATA SHEET

Cat# K559-100 D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

SDS DATE: Apr 8, 2020

GHS Label elements, including precautionary statements

Pictogram:



Danger

**Signal word:**

**Hazard statement(s):**

H315 Causes skin irritation.

H318: Causes serious eye damage

**Precautionary statement(s):**

P210 Keep away from heat.

P220 Keep/Store away from clothing/ combustible materials.

P221 Take any precaution to avoid mixing with combustibles.

P264 Wash skin thoroughly after handling.

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

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P283 Wear fire/ flame resistant/ retardant clothing.

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

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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.

P306 + P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

P310 Immediately call a POISON CENTER or doctor/ physician.

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

P363 Wash contaminated clothing before reuse.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P405 Store locked up.

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

**HMIS Classification**

**Health hazard:** 2

**Flammability:** 0

**Physical hazards:** 0

**NFPA Rating**

**Health hazard:** 2

**Fire:** 0

**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
DMSO	67-68-5	200-664-3	78.13	C <sub>2</sub> H <sub>6</sub> OS
HYDROGEN PEROXIDE	--	--	--	--

## 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:** Take off contaminated clothing and shoes immediately. 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. Continue rinsing during transport to hospital.

**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

**DMSO:**

**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 combustion products formed under fire conditions – no data available.

# SAFETY DATA SHEET

Cat# K559-100 D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

SDS DATE: Apr 8, 2020

Further information: Use water spray to cool unopened containers.

## 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. Discharge into the environment must be avoided.

**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 inhalation of vapor or mist. Avoid contact with skin and eyes.

### 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

### DMSO:

Components	CAS-No.	Value	Control parameters	Basis
Dimethyl sulfoxide	67-68-5	TWA	250 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

### HYDROGEN PEROXIDE:

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

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

Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	DMSO	HYDROGEN PEROXIDE
Appearance:	Clear liquid	liquid
pH:	No data available	No data available
Water Solubility:	Completely miscible	No data available
Other Solubility:	No data available	No data available
Boiling Point (°C):	189 °C (372 °F)	No data available
Melting Point (°C):	16-19 °C (61-66 °F)	No data available
Flash Point (°C):	87 °C (189 °F)	No data available
Ignition Temperature (°C):	301 °C (574 °F)	No data available
Density:	1.1 g/ml	No data available

## SECTION 10: STABILITY AND REACTIVITY

Property	DMSO	HYDROGEN PEROXIDE
Chemical stability:		
Conditions to avoid:	Heat, flames, sparks	Not data available
Materials to avoid:	Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents	Zinc, Powdered metals, Iron, Copper, Nickel, Brass, Iron and iron salts

# SAFETY DATA SHEET

Cat# K559-100 D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

SDS DATE: Apr 8, 2020

<b>Hazardous decomposition products:</b>	Carbon oxides, sulfur oxides	No data available
--	------------------------------	-------------------

## SECTION 11: TOXICOLOGICAL INFORMATION

### **DMSO:**

**Acute toxicity:** LD50 Oral – rat – 14,500 mg/kg

LC50 Inhalation – rat – 4 h – 40250 ppm

LD50 Dermal – rabbit – >5,000 mg/kg

**Skin corrosion/irritation:** Skin – rabbit – no skin irritation – 4h

**Serious eye damage/eye irritation:** Eyes – rabbit – mild eye irritation

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

**Germ cell mutagenicity:** Genotoxicity in vitro – mouse – lymphocyte: Cytogenetic analysis

Genotoxicity in vitro – mouse – lymphocyte: Mutation in mammalian somatic cells

Genotoxicity in vivo – rat – Intraperitoneal: Cytogenetic analysis

Genotoxicity in vivo – mouse – Intraperitoneal: DNA damage

**Carcinogenicity:** Carcinogenicity – rat – Oral → Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Skin and appendages: other: tumors.

Carcinogenicity – mouse – Oral → Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Leukemia skin and appendages: other: tumors.

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 – rat – Intraperitoneal → Effects on fertility: abortion

Reproductive toxicity – rat – Intraperitoneal → Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants)

Reproductive toxicity – rat – Subcutaneous → Effects on fertility: post-implantation mortality (e.g. dead and/or resorbed implants per total number of implants). Effects on fertility: litter size (e.g. # fetuses per litter; measured before birth)

Reproductive toxicity – mouse – Oral → Effects on fertility: post-implantation mortality (e.g. reduction in number of implants per female; total number of implants per corpora lutea). Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus). Specific developmental abnormalities: musculoskeletal system.

**Teratogenicity:** Developmental toxicity – mouse – Intraperitoneal: Effects on embryo/fetus: Fetotoxicity (except death, e.g. stunted fetus).

Specific developmental abnormalities: musculoskeletal system

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

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

**Aspiration hazard:** no data available

### **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.

**Aggravated Medical Condition:** Avoid contact w/DMSO solutions containing toxic materials or materials with unknown toxicological properties. DMSO is readily absorbed through skin and may carry such materials into the body.

**Signs and Symptoms of Exposure:** Effects due to ingestion may include: nausea, fatigue, and/or headache.

**Additional information:** RTECS: PV6210000

### **HYDROGEN PEROXIDE:**

**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: 3 - Group 3: Not classifiable as to its carcinogenicity to humans

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential 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

**Aspiration hazard:** no data available

**Additional information:** RTECS: not available

# SAFETY DATA SHEET

Cat# K559-100 D-Amino Acid Oxidase Activity Assay Kit (Fluorometric)

SDS DATE: Apr 8, 2020

## SECTION 12: ECOLOGICAL INFORMATION

### DMSO:

**Elimination information (persistence and degradability):** no data available

**Ecotoxicity effects:** 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 pulex (Water flea) - 27,500 mg/l  
Toxicity to algae EC50 - Lepomis macrochirus (Bluegill) - > 400,000 mg/l - 96 h

**Further information on ecology:** no data available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

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

## SECTION 14: TRANSPORT INFORMATION

### DMSO:

**DOT (US):** UN-Number: 1993, Class: CBL, Packing group: III; Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfoxide); Marine pollutant: No; Poison Inhalation Hazard: No

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

### HYDROGEN PEROXIDE:

**DOT (US):** UN number: 2014 Class: 5.1 (8) Packing group: II

Proper shipping name: Hydrogen peroxide, aqueous solutions

Reportable Quantity (RQ):

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG:** UN number: 2014 Class: 5.1 (8) Packing group: II EMS-No: F-H, S-Q

Proper shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

Marine pollutant: No

**IATA:** UN number: 2014 Class: 5.1 (8) Packing group: II

Proper shipping name: Hydrogen peroxide, aqueous solution

## SECTION 15: REGULATORY INFORMATION

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

**HYDROGEN PEROXIDE:** CAS-No. -- Revision Date 1993-04-24

**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 II, Section 313.

**SARA 311/312 Hazards:** **DMSO:** Fire Hazard, Chronic Health Hazard; **HYDROGEN PEROXIDE:** Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components:** **HYDROGEN PEROXIDE:** CAS-No. -- Revision Date 1993-04-24

**Pennsylvania Right To Know Components:** **Dimethyl sulfoxide** CAS-No. 67-68-5; **HYDROGEN PEROXIDE**, CAS-No. --

**New Jersey Right To Know Components:** **Dimethyl sulfoxide** CAS-No. 67-68-5; **HYDROGEN PEROXIDE**, CAS-No. --

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

### EU regulations:

Component	Risk Phrases	Safety Phrases
DMSO	R10, R36/37/38	S24/25, S36/37/39, S45
HYDROGEN PEROXIDE	--	--

## 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. BioVision, Inc., 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.