



SDS DATE: August 20, 2023

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Neutrophil Elastase Activity Assay
PRODUCT CODES: Cat# MA-0156
RESTRICTIONS ON USE: For laboratory research purposes only. Not for drug or household use.
MANUFACTURER: AkrivisBio, Inc.
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SECTION 2: HAZARDS IDENTIFICATION

Product Name/Chemical Name	Description	Amount	Safety Information
Assay Buffer	Proprietary Buffer	15 ml	No hazards
Neutrophil Elastase Dilution Buffer	Proprietary Buffer	1.5 ml	No hazards
MeOSucc-AAPV-AFC	solution (contains DMSO)	0.2 ml	See below
AFC Standard	Solution (contains DMSO)	0.5 ml	See below
Neutrophil Elastase Positive Control	lyophilized	1 ug	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.**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	EC-No.	MW	Concentration	Chemical Formula
DMSO	67-68-5	200-664-3	78.13	neat	C ₂ H ₆ OS

SECTION 4: FIRST AID MEASURES**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration.**In case of skin contact:** Wash off with soap and plenty of water.**In case of eye contact:** Flush eyes with water as precaution.**If swallowed:** Never give anything by mouth to an unconscious person. Rinse mouth with water.**5: FIRE-FIGHTING MEASURES****Condition of flammability:** combustible.**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 combustion products formed under fire conditions— no data available.**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal precautions:** Avoid dust formation. Avoid breathing vapors, mist, gas, or dust. Ensure adequate ventilation.**Environmental precautions:** Do not let product enter drains.**Methods for cleaning up:** Sweep up and shovel. Keep in suitable, closed containers for disposal.



SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

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
Dimethyl sulfoxide	67-68-5	TWA	250 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

Personal protective equipment

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific workplace. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Hygiene measures

General industrial hygiene practice.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	DMSO
Appearance:	clear liquid
pH:	no data available
Water Solubility:	miscible
Other Solubility:	no data available
Specific Gravity (g/ml):	1.1 g/ml
Boiling Point (°C):	189°C
Melting Point (°C):	16-19°C
Flash Point (°C):	87°C
Ignition Temperature (°C):	301°C

SECTION 10: STABILITY AND REACTIVITY

Property	DMSO
Chemical stability	Stable under recommended storage conditions
Conditions to avoid:	Not data available
Materials to avoid:	Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents
Hazardous decomposition products:	Carbon oxides, sulfur oxides

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: no data available

Serious eye damage/eye irritation: no data available

Respiratory/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 & Appendages: Other: Tumors.

Carcinogenicity – mouse – Oral → Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Leukaemia Skin & 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: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Teratogenicity: Developmental Toxicity – mouse – Intraperitoneal→ Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus). Specific Developmental Abnormalities: Musculoskeletal system.
Signs and Symptoms of Exposure: Exposure via ingestion may cause nausea, fatigue, headache.
Additional Information: RTECS: PV6210000

SECTION 12: ECOLOGICAL INFORMATION

DMSO:

Persistence and degradability: no data available
Toxicity: 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
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

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.

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: DMSO: Combustible liquid, Target organ effect
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 II, Section 313.
SARA 311/312 Hazards: DMSO: Fire Hazard, Chronic Health Hazard
Massachusetts Right To Know Components: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components: Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01
New Jersey Right To Know Components: Dimethyl sulfoxide CAS-No. 67-68-5; Revision Date: 2007-03-01
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

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:
PREPARATION 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. AkrivisBio 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.