

SDS DATE: May 29, 2023

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: MTT Cell Proliferation Assay
PRODUCT CODES: Cat# CPT-0103
RESTRICTIONS ON USE: For laboratory research purposes. Not for drug or household use.
MANUFACTURER: AkrivisBio, Inc.
ADDRESS: 48511 Warm Springs Blvd., Suite 213, Fremont, CA 94539
EMERGENCY PHONE: 408-739-9315
OTHER CALLS:
FAX PHONE:
EMAIL: sds@akrivisbio.com

SECTION 2: HAZARDS IDENTIFICATION

Component	Description	Volume	Safety Information
MTT Reagent	Liquid	50 ml	See below
MTT Solvent	In Isopropanol	150 ml	See below

Isopropanol:

Emergency Overview

OSHA Hazards: Flammable liquid, Target organ effect, Irritant

Target Organs: Nerves, Kidney, Cardiovascular system, Gastrointestinal tract, Liver

GHS Classification: Flammable liquids (Category 2)

Skin irritation (Category 3)

Eye irritation (Category 2A)

Specific target organ toxicity – single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

Danger

Hazard statement(s):

H225 Highly flammable liquid and vapour.
H316 Causes mild skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Precautionary statement(s):

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
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 hazard: *

Flammability: 3

Physical hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 3

Reactivity Hazard: 0

Potential Health Effects

Inhalation: May be harmful if inhaled. Causes respiratory tract irritation. Vapors may cause drowsiness or dizziness.

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

Eyes: Causes severe eye burns.

Ingestion: May be harmful if swallowed.

MTT REAGENT:

Emergency Overview:

GHS Classification: Skin irritation (Category 2), H315

Eye irritation (Category 2A), H319

Germ cell mutagenicity (Category 2), H341

GHS Label elements, including precautionary statements

Pictogram:



Signal word:

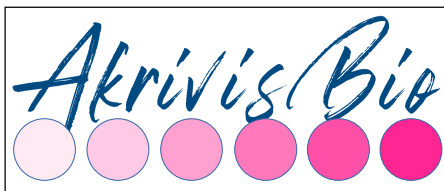
Danger

Hazard statement(s):

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects

Precautionary statement(s):

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.



P271 Use only outdoors or in a well-ventilated area
P280 Wear protective gloves/ eye protection/ face protection.
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.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P321 Specific treatment (see supplemental first aid instructions on this label).
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

Physical hazards: 0

NFPA Rating

Health Hazard: 2

Fire: 0

Reactivity Hazard: 0

Hazards not otherwise classified (HNOC) or not covered by GHS : none

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	Concentration
Isopropanol	67-63-0	200-661-7	60.10	C ₃ H ₈ O	<20%
MTT reagent	298-93-1	--	414.32	C ₁₈ H ₁₆ BrN ₅ S	<1%

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

Isopropanol:

Conditions 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 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.

MTT Reagent:

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.

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. Evacuate personnel to safe areas. 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. 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 contact with skin and eyes. Avoid inhalation of vapour or mist. Flash back possible over considerable distance. Container explosion may occur under fire conditions. Use explosion-proof equipment. Keep away from sources of ignition – no smoking. Take measures to prevent the build up of electrostatic charge.

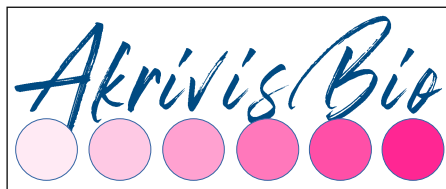
Conditions for safe storage

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



Isopropanol:

Components	CAS-No.	Value	Control parameters	Basis
2-propanol	67-63-0	TWA	200 ppm	USA. ACGIH Threshold Limit Values (TLV)
Remarks:	Eye & upper respiratory tract irritation. Central nervous system impairment. Not classifiable as a human carcinogen.			
		STEL	400 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Eye & upper respiratory tract irritation. Central nervous system impairment. Not classifiable as a human carcinogen.			
		TWA	400 ppm 980 mg/m ³	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants - 1910.1000
		STEL	500 ppm 1,225 mg/m ³	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants - 1910.1000
		TWA	400 ppm 980 mg/m ³	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants
The value in mg/ m ³ is approximate.				
		TWA	400 ppm 980 mg/m ³	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m ³	USA. NIOSH Recommended Exposure Limits

MTT Reagent:

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

Hygiene measures

General industrial hygiene practice

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Isopropanol	MTT Reagent
Appearance:	Liquid	Yellow to dark yellow solid
pH:	No data available	No data available
Water Solubility:	Completely soluble	H ₂ O (>10 mg/ml)
Other Solubility:	No data available	No data available
Boiling Point (°C):	82 °C (180 °F)	No data available
Melting Point (°C):	-89.5 °C (-129.1 °F)	No data available
Flash Point (°C):	12 °C (53.6 °F)	No data available
Ignition Temperature (°C):	425 °C (797 °F)	No data available
Density:	0.785 g/cm ³	No data available

SECTION 10: STABILITY AND REACTIVITY

Property	Isopropanol	MTT Reagent
Chemical stability:	Stable under recommended storage conditions	
Conditions to avoid:	Heat, flames, sparks, extremes of temperature and direct sunlight	No data available
Materials to avoid:	Oxidizing agents, acid anhydrides, aluminum, halogenated compounds, acids	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides	Carbon oxides, nitrogen oxides, hydrogen bromide, sulfur oxides

SECTION 11: TOXICOLOGICAL INFORMATION

Isopropanol:

Acute toxicity: LD50 Oral – rat – 5,045 mg/kg → Remarks: Behavioral: altered sleep time (including change in righting reflex). Behavioral: somnolence (general depressed activity).

LC50 Inhalation – rat – 8 h – 16,000 ppm

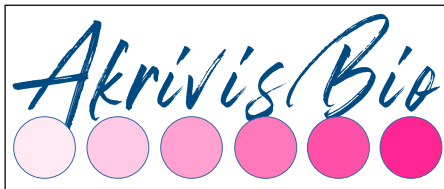
LD50 Dermal – rabbit – 12,800 mg/kg

Skin corrosion/irritation: Skin – rabbit- mild skin irritation.

Serious eye damage/eye irritation: Eyes – rabbit – eye irritation – 24 h.

Respiratory or skin sensitization: May cause sensitization by skin contact.

Germ cell mutagenicity: no data available



Carcinogenicity: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification.

- IARC: 3 –Group 3: Not classifiable as to its carcinogenicity to humans (2-propanol).
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): May cause drowsiness or dizziness.

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. Vapors may cause drowsiness or dizziness.

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

Eyes: Causes severe eye burns.

Ingestion: May be harmful if swallowed.

Signs and Symptoms of Exposure: Central nervous system depression. Prolonged or repeated exposure can cause: nausea, headache, vomiting, narcosis, drowsiness. Overexposure may cause mild, reversible liver effects.

Additional information: RTECS: NT8050000

MTT REAGENT:

Acute toxicity: no data available

Inhalation: no data available

Dermal: no data available

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: In vitro tests showed mutagenic effects

S. typhimurium

Result: positive

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

Aspiration hazard: 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.

Synergistic effects: no data available

Additional information: RTECS: XF8060000

SECTION 12: ECOLOGICAL INFORMATION

Isopropanol:

Persistence and degradability: no data available

Toxicity: Toxicity to fish: LC50 – Pimephales promelas (fathead minnow) – 9,640 mg/l – 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 – Daphnia magna (water flea) – 5,102 mg/l – 24 h

Immobilization EC50 – Daphnia magna (water flea) – 6,851 mg/l – 24 h

Toxicity to algae: EC50 – Desmodesmus subspicatus (green algae) – >2,000 mg/l – 72 h

EC50 – algae – >1,000 mg/l – 24 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

MTT REAGENT:

Persistence and degradability: no data available

Toxicity: no data available

Bioaccumulative potential: no data available

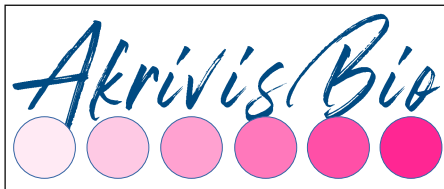
Mobility in soil: no data available

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

Isopropanol:

DOT (US): UN-Number: 1219, Class: 3, Packing group: II; Proper shipping name: Isopropanol; Marine pollutant: No; Poison Inhalation Hazard: No

IMDG: UN-Number: 1219, Class: 3, Packing group: II; EMS-No: F-E, S-D; Proper shipping name: ISOPROPANOL; Marine pollutant: No

IATA: UN-Number: 1219, Class: 3, Packing group: II; Proper shipping name: Isopropanol

MTT REAGENT:

DOT (US): Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

SECTION 15: REGULATORY INFORMATION

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

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

2-propanol, CAS-No. 67-63-0; Revision Date: 1987-01-01

SARA 311/312 Hazards:

Isopropanol: Fire Hazard, Acute Health Hazard, Chronic Health Hazard; MTT Reagent: Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components: Isopropanol, CAS-No. 67-63-0

Pennsylvania Right To Know Components: Isopropanol, CAS-No. 67-63-0; Revision Date: 1987-01-01; MTT REAGENT, CAS-No. 298-931

New Jersey Right To Know Components: Isopropanol, CAS-No. 67-63-0; Revision Date: 1987-01-01; MTT REAGENT, CAS-No. 298-93-1

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
Isopropanol	R11, R36, R67	S7, S16, S24/25, S26
MTT reagent	R36/38	S36/37/39

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. 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.