

# SAFETY DATA SHEET

Cat# BN00922 Isopropanol Dehydrogenase Activity Assay Kit (Colorimetric)

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Isopropanol Dehydrogenase Activity Assay Kit (Colorimetric)

**PRODUCT CODES:** Cat# BN00922

**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
ADH1-NADP Assay Buffer	Liquid	25 ml	No hazards
ADH1-NADP Substrate	Liquid (contains isopropanol)	1 ml	See below
ADH1-NADP Developer	--	1 vial	No hazards
ADH1-NADP Positive Control	Liquid	100 µl	No hazards
NADPH Standard	--	1 vial	No hazards

### Isopropanol:

#### Emergency Overview

**OSHA Hazards:** Flammable liquid, Target organ effect, Irritant

**Target Organs:** Nerves, Kidney, Cardiovascularsystem, 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

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Isopropanol	67-63-0	200-661-7	60.10	C3H8O

## 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.

## 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 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

### 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 <sup>3</sup>	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants -1910.1000
		STEL	500 ppm 1,225 mg/m <sup>3</sup>	USA. Occupational Exposure Limits (OSHA): Table Z-1 Limits for Air Contaminants -1910.1000
		TWA	400 ppm 980 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	400 ppm 980 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		ST	500 ppm 1,225 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits

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### 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.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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Property	Isopropanol
Appearance:	Liquid
pH:	No data available
Water Solubility:	Completely soluble
Other Solubility:	No data available
Boiling Point (°C):	82 °C (180 °F)
Melting Point (°C):	-89.5 °C (-129.1 °F)
Flash Point (°C):	12 °C (53.6 °F)
Ignition Temperature (°C):	425 °C (797 °F)
Density:	0.785 g/cm <sup>3</sup>

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## SECTION 10: STABILITY AND REACTIVITY

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Property	Isopropanol
Chemical stability:	Stable under recommended storage conditions
Conditions to avoid:	Heat, flames, sparks, extremes of temperature and direct sunlight
Materials to avoid:	Oxidizing agents, acid anhydrides, aluminum, halogenated compounds, acids
Hazardous decomposition products:	Carbon oxides

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### 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.

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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

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## SECTION 12: ECOLOGICAL INFORMATION

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### 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

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## SECTION 13: DISPOSAL CONSIDERATIONS

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**Product:** Offer surplus and non-recyclable solutions to a licensed disposal company. Contact 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.

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## SECTION 14: TRANSPORT INFORMATION

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### 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

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## SECTION 15: REGULATORY INFORMATION

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**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:** 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

**Massachusetts Right To Know Components:** 2-propanol, CAS-No. 67-63-0

**Pennsylvania Right To Know Components:**

2-propanol, CAS-No. 67-63-0

**New Jersey Right To Know Components:**

2-propanol, CAS-No. 67-63-0

**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
Isopropanol	R11, R36, R67	S7, S16, S24/25, S26

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## **SECTION 16: OTHER INFORMATION**

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### **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.