

# SAFETY DATA SHEET

Cat# K744-100 MPO Colorimetric Activity Assay Kit

REV SDS DATE: Feb 28, 2020

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** MPO Colorimetric Activity Assay Kit  
**PRODUCT CODES:** Cat# K744-100  
**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
MPO Assay Buffer	Proprietary Buffer (contains Igepal CA-630)	25 ml	See below
DTNB Probe	In DMSO	50 µl	See below
TCEP	Liquid	50 µl	See below
MPO Substrate	Liquid (contains H2O2)	50 ul	See below
Stop Mix	Liquid	n/a	No hazards
MPO Positive Control	Lyophilized	1 vial	No hazards

### IGEPAL CA-630:

#### Emergency Overview

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

Acute toxicity, Oral (Category 4), H302

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

#### GHS Label elements, including precautionary statements



Pictogram:

Signal word: Danger

#### Hazard statement(s):

H302 Harmful if swallowed.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statement(s):

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/ eye protection/ face protection.

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.

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

P305 + P351 + P338 +P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. Immediately call a POISON CENTER/doctor.

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

P362 Take off contaminated clothing and wash before reuse.

P391 Collect spillage.

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

#### HMIS Classification

Health hazard: 2

Chronic health hazard: 0

Flammability: 0

Physical hazards: 0

#### NFPA Rating

Health Hazard: 2

Fire: 0

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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.

### 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.

### DTNB:

#### Emergency Overview

**OSHA Hazards:** Irritant

**GHS Classification:** Skin irritation (Category 2)  
Eye irritation (Category 2A)  
Specific target organ toxicity – single exposure (Category 3)

**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/fumes/gas/mist/vapors/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/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.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.

#### 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.

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## TCEP:

### Emergency Overview

OSHA Hazards: Irritant

GHS Classification: Skin irritation (Category 2)  
Serious eye irritation (Category 1)

### 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/fumes/gas/mist/vapors/spray.  
P264 Wash hands thoroughly after handling.  
P280 Wear protective gloves/protective clothing/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.  
P332+P313 If skin irritation occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.

### 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.

## Hydrogen peroxide:

### Emergency Overview

OSHA Hazards: Oxidizer, Target organ effect, Harmful by ingestion, Corrosive

Target Organs: Eyes, Skin, Respiratory system

GHS Classification: Oxidizing liquids (Category 1)  
Acute toxicity, Oral (Category 4)  
Acute toxicity, Inhalation (Category 5)  
Skin corrosion (Category 1A)  
Serious eye damage (Category 1)  
Acute aquatic toxicity (Category 3)

### GHS Label elements, including precautionary statements

Pictogram:



Signal word: Danger

Hazard statement(s): H315 Causes skin irritation.  
H318 Causes serious eye damage.

Precautionary statement(s): Wash skin thoroughly after handling.  
P280 Wear eye protection/ face protection.  
P280 Wear protective gloves.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

### HMIS Classification

Health hazard: 3

Chronic health hazard: \*

Flammability: 0

Physical hazards: 2

### NFPA Rating

Health Hazard: 3

Fire: 0

Reactivity Hazard: 2

Special Hazard: OX

### Potential Health Effects

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

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

**Eyes:** Causes eye burns.

**Ingestion:** Harmful if swallowed.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC-No.	Molecular Weight	Chemical Formula	Concentration
Igepa CA-630	9002-93-1	--	603	(C <sub>2</sub> H <sub>4</sub> O) <sub>n</sub> C <sub>14</sub> H <sub>22</sub> O	< 0.2%
DMSO	67-68-5	200-664-3	78.13	C <sub>2</sub> H <sub>6</sub> OS	100%
5,5'-Dithiobis(2-nitrobenzoic acid) [DTNB]	69-78-3	200-714-4	396.35	C <sub>14</sub> H <sub>8</sub> N <sub>2</sub> O <sub>8</sub> S <sub>2</sub>	<5 %
TCEP	51805-45-9	--	286.65	C <sub>9</sub> H <sub>15</sub> O <sub>6</sub> P · HCl	< 2%
Hydrogen peroxide	7722-84-1	231-765-0	34.01	H <sub>2</sub> O <sub>2</sub>	< 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:** 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.

**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**

Components	CAS-No.	Value	Control parameters	Basis
Hydrogen peroxide	7722-84-1	TWA	1 ppm	USA. ACGIH Threshold Values (TLV)
Remarks:				Eye, skin, & upper respiratory tract irritation. Confirmed animal carcinogen with unknown relevance to humans.
		TWA	1 ppm 1.4 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		TWA	1 ppm 1.4 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.

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	TWA	1 ppm 1.4 mg/m <sup>3</sup>	USA. OSHA – Table Z-1 Limits for Air Contaminants – 1910.1000
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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.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	DMSO	DTNB	TCEP	Hydrogen peroxide
Appearance:	Clear liquid	Light yellow powder	liquid	Clear liquid
pH:	No data available	No data available	6.0-8.0	No data available
Water Solubility:	Completely miscible	No data available	No data available	No data available
Other Solubility:	No data available	No data available	No data available	No data available
Boiling Point (°C):	189 °C (372 °F)	No data available	No data available	No data available
Melting Point (°C):	16-19 °C (61-66 °F)	240-250 °C (464-473 oF)	No data available	No data available
Flash Point (°C):	87 °C (189 °F)	No data available	No data available	No data available
Ignition Temperature (°C):	301 °C (574 °F)	No data available	No data available	No data available
Density:	1.1 g/ml	No data available	No data available	1.11 g/cm3

Property	IGEPAL CA-630
Appearance:	liquid
pH:	9.7
Water Solubility:	soluble
Other Solubility:	No data available
Boiling Point (°C):	> 200 °C > 392 °F at 1,013 hPa
Melting Point (°C):	6 °C (43 °F)
Flash Point (°C):	251 °C (484 °F) - closed cup
Ignition Temperature (°C):	No data available

### SECTION 10: STABILITY AND REACTIVITY

Property	DMSO	DTNB	TCEP	Hydrogen peroxide	IGEPAL CA-630
Chemical stability:	Stable under recommended storage conditions				
Conditions to avoid:	Heat, flames, sparks	No data available	No data available	Not data available	No data available
Materials to avoid:	Acid chlorides, phosphorus halides, strong acids, strong oxidizing agents, strong reducing agents	Strong oxidizing agents, strong bases	Strong oxidizing agents	Zinc, powdered metals, iron, copper, nickel, brass, iron, and iron salts	Strong oxidizing agents
Hazardous decomposition products:	Carbon oxides, sulfur oxides	Carbon oxides, nitrogen oxides, sulfur oxides	No data available	No data available	Carbon oxides

### SECTION 11: TOXICOLOGICAL INFORMATION

#### IGEPAL CA-630:

**Acute toxicity:** LD50 Oral - Rat - 1,900 - 5,000 mg/kg

Remarks: (External MSDS) The value is given in analogy to the following substances: Inhalation: No data available

LD50 Dermal - Rabbit - > 3,000 mg/kg

Remarks: (External MSDS) The value is given in analogy to the following substances: No data available

**Skin corrosion/irritation:** Skin - Rabbit

Result: irritating - 4 h

(OECD Test Guideline 404)

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Remarks: The value is given in analogy to the following substances: no data available

**Serious eye damage/eye irritation:** Eyes - Rabbit

Result: Risk of serious damage to eyes. (Draize Test) Risk of corneal clouding.

**Respiratory or skin sensitization:** Sensitisation test: - Human

Result: negative

Remarks: (External MSDS) The value is given in analogy to the following substances: 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

**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: no data available

### 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

### DTNB:

**Acute toxicity:** LD50 Intraperitoneal – mouse – 2,080 mg/kg

**Skin corrosion/irritation:** no data available

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**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

**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. 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.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Additional information:** RTECS: DG9650000

### 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 (Hydrogen peroxide)
- 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

### 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.

**Ingestion:** Harmful if swallowed.

**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: not available

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## SECTION 12: ECOLOGICAL INFORMATION

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### IGEPAL CA-630:

**Persistence and degradability:** Biodegradability aerobic - Exposure time 28 d (OECD Test Guideline 301C)

Remarks: The value is given in analogy to the following substances:

Chemical Oxygen: 2.19 mg/g

Demand (COD)

### Toxicity:

Toxicity to fish: semi-static test LC50 - *Leuciscus idus* (Golden orfe) - 0.26 mg/l - 96h (OECD Test Guideline 203)

Remarks: The value is given in analogy to the following substances:

Toxicity to daphnia and other aquatic invertebrates: static test EC50 - *Daphnia magna* (Water flea) - 0.011 mg/l - 48 h

Remarks: (ECOTOX Database)The value is given in analogy to the following substances:

Toxicity to algae static test EC50 - *Pseudokirchneriella subcapitata* (green algae) - 1.9 mg/l - 96 h

Remarks: (ECHA)The value is given in analogy to the following

**Bioaccumulative potential:** no data available

**Mobility in soil:** no data available

**PBT and vPvB assessment:** no data available

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

Very toxic to aquatic life with long lasting effects.

Causes endocrine disruption.

### **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

### **Hydrogen peroxide:**

**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.

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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 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.

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## SECTION 14: TRANSPORT INFORMATION

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**DOT (US):** Not dangerous goods.

**IMDG:** Not dangerous goods.

**IATA:** Not dangerous goods.

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## SECTION 15: REGULATORY INFORMATION

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**OSHA Hazards:** DTNB: Irritant

**DMSO:** Combustible liquid, Target organ effect

**Hydrogen peroxide:** Oxidizer, Target organ effect, Harmful by ingestion, Corrosive

**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:**

IGEPAL CA-630: Acute Health Hazard

DTNB: Acute Health Hazard

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. 7722-84-1; Revision Date: 1993-04-24

**Pennsylvania Right To Know Components:**

IGEPAL CA-630, CAS-No. 9002-93-1

Dimethyl sulfoxide CAS-No. 67-68-5

Hydrogen peroxide, CAS-No. 7722-84-1; Revision Date: 1993-04-24

Tris(2-carboxyethyl)phosphine hydrochloride: CAS-No. 51805-45-9

DTNB, CAS-No. 69-78-3

**New Jersey Right To Know Components:**

IGEPAL CA-630, CAS-No. 9002-93-1

Dimethyl sulfoxide CAS-No. 67-68-5

Hydrogen peroxide, CAS-No. 7722-84-1; Revision Date: 1993-04-24

Tris(2-carboxyethyl)phosphine hydrochloride: CAS-No. 51805-45-9

DTNB, CAS-No. 69-78-3

**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
IGEPAL CA-630	R22, R37/38, R40, R53	S22, S24/25 S36/37/39
DMSO	R10, R36/37/38	S24/25, S36/37/39, S45
DTNB	R36/37/38	S22, S24/25, S36/37/39, S45
TCEP	R34	S26, S36/37/39, S45
Hydrogen peroxide	R22, R41	S26, S39



# **SAFETY DATA SHEET**

**REV SDS DATE: Feb 28, 2020**

**Cat# K744-100 MPO Colorimetric Activity Assay Kit**

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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. 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.