SAFETY DATA SHEET

1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name: **TINCTURE OF IODINE 5%**

Product code: I-2003

Product use: For laboratory or industrial use only

Supplier: Cochimbec Inc.
8561 chemic Dalton
Ville Mont-Royal, Québec
H4T 1V5 CANADA

Telephone: 514-990-1935
Emergency Telephone: (CANUTEC): 613-996-6666

2 – HAZARDS IDENTIFICATION

GHS Classification: Flammable liquids (Category 2)
Skin irritation (Category 3)
Eye irritation (Category 2A)
Aquatic Acute toxicity (Category 3)
Specific target organ toxicity – single exposure (Category 3)

Signal word:		**Danger**
Hazard statement:	H225	Highly flammable liquid and vapour.
	H316	Causes mild skin irritation.
	H319	Causes serious eye irritation.
	H336	May cause drowsiness or dizziness.
	H402	Harmful for aquatic life
Precautionary statement:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P261	Avoid breathing fume / gas / mist / vapours / spray.
	P271	Use only outdoors or in a well-ventilated area.
	P273	Avoid release to the environment.
	P301 + P310	IF SWALLOWED: Immediately call a poison centre / doctor.

	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P302 + P352 + P362	IF ON SKIN: Wash with plenty of water and remove contaminated clothing.
	P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P403 + P235	Store in a well-ventilated place. Keep cool.
	P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

3 – COMPOSION / INFORMATION ON INGREDIENTS

Synonyms: **None known**

INGREDIENT	Concentration	CAS No.	EC No.	Index No.
Isopropanol	68-72 %	67-63-01	200-661-7	603-117-00-0
Iodine	3-7 %	7553-56-2	231-442-4	
Potassium Iodide	3-7 %	7681-11-0	231-659-4	

4 – FIRST AID MEASURES

Inhalation:	Move victim to fresh air. If victim is not breathing, give artificial respiration and call for medical assistance.
Skin contact:	Wash with soap and water. Consult a physician if irritation persists.
Eye contact:	Rinse thoroughly with water for 15 minutes. If irritation persists, continue rinsing and consult physician.
Ingestion:	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Most important symptoms / effects	Breathing difficulties. May cause central nervous system depression. Symptoms of overexposure or inhalation of high vapour concentration may cause headache, dizziness, tiredness, nausea and vomiting.

5 – FIRE-FIGHTING MEASURES

Extinguishing media:	Water spray, alcohol resistant foam, dry chemical, carbon dioxide. Use water spray to cool unopened containers.
Combustion Exposure Hazards:	Hazardous decomposition products formed under fire condiiotions: Carbon Oxides.
Fire-Fighting equipment and precaution:	Wear self-contained breathing apparatus for firefighting if necessary.
Sensitivity to mechanical impact:	Not sensitive.
Sensitivity to static discharge:	N / D

NFPA Risk 0=Low 4=High	HEALTH	FLAMMABILITY	REACTIVITY	HAZARDS
	1	3	0	

6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Use personal protective equipment. Avoid contact with skin and eyes. Avoid inhaling vapour or mist. Use explosion proof equipment. Keep away for sources of ignition. Evacuate people to safe areas. Avoid accumulation of vapours that can form explosive concentrations.
Environmental Precautions:	Prevent further leakage or spillage using personal protection. Avoid product entering into drains.
Method & Material for containment and cleaning up:	Contain spillage while wearing personal protection and using spark proof equipment. Remove all source of ignition. Soak up with inert absorbent material. Keep in suitable closed container for disposal. Product may be wet-brushed and placed in a container for disposal according to local, state and federal regulations.

7 – HANDLING AND STORAGE

Precautions for safe handling:	Wear personal protective equipment. Keep away from open flame, hot surfaces and sources of ignition. Use explosion proof equipment. Take precautionary measures against static discharges. Do not get on skin, eyes and clothing. Do not breath vapours or mist. Ground any metal equipment.
Conditions for Safe Storage:	Store in a cool, dry place away from incompatibles, heat and possible source of ignition. Keep container tightly closed in a well-ventilated area.

8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-No	VALUE	CONTROL PARAMETERS	BASIS
Isopropanol	67-63-1	TWA	500 ppm	OSHA
		TLV	200 ppm	ACGIH Threshold Limits Values (TLV)
Iodine	7553-56-2	TWA	0.1 ppm 1 mg/m^3	OSHA
		TLV	0.1 ppm 1 mg/m^3	ACGIH Threshold Limits Values (TLV)
Potassium Iodide	7681-11-0		Not listed	Not listed

Eye Protection:	Safety glasses or chemical safety goggles.
Hand Protection:	Use appropriate gloves.
Body Protection:	Use impervious apron or body suit. The protective clothing must be flame retardant and antistatic.
Respiratory Protection:	Where risk assessment shows air-purifying respirators are appropriate, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face air

	respirator. Use NIOSH (US) or CEN (EU) approved respirators.
Engineering Controls:	Use antispark equipment for exhaust or fume hood. Ensure adequate ventilation.

9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid.	**Auto ignition temperature:**	N / D
Color:	Dark brown	**Upper Explosion Limit:**	12.7 % by Volume
Odour:	Mix of rubbing alcohol and Iodine	**Lower Explosion Limit:**	2 % by Volume
Odour threshold::	N / D	**Vapour pressure:**	N / D
pH:	N / D	**Vapour density: (air = 1)**	N / D
Melting point:	< -40 °C	**Relative density**	N / D
Boiling point:	78.3°C @ 760 mm Hg	**Water solubility:**	Completely soluble
Boiling range:	N / D	**Decomposition temperature:**	N / D
Density	N / D	**Refractive Index:**	N / D
Flash point:	18.3 - 24 °C closed cup	**Viscosity:**	N / D
Evaporation rate: (n-Butyl Acetate = 1)	2.8	**Partition coeficient: n-octanol / water**	N / D

10 – STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions:	Vapours may form explosive mixture with air if there is a source of ignition or if product comes in contact with incompatible materials.
Conditions to avoid:	Heat, flames and sparks.
Incompatible materials:	Bases. Oxidizing agents. Reducing agents. Phosphorous Oxychloride. Acid Anhydrides. Aluminum, Acids, Halogenated compounds. Aldehydes and amines.
Hazardous decomposition products:	Hazardous decomposition products formed under fire conditions: Carbon Oxides.

11 – TOXICOLOGICAL INFORMATION

COMPONENTS	**LD_{50} ORAL**	**LD_{50} DERMAL**	**LC_{50} INHALATION**
ISOPROPANOL	5,045 mg/kg (rat)	12,800 mg/kg (rabbit)	16,000 mg/L 8 h.
IODINE	N / A	N / A	N / A
POTASSIUM IODIDE	N / A	N / A	N / A
Skin Corrosion / irritation	Mild skin irritation		
Serious eye damage / eye irritation	Eye irritation		
Respiratory or skin sensitisation	No data available.		
Germ cell Mutagenicity	No data available.		
Carcinogenicity	This product contains a compound listed by NTP, IARC, ACGIH or EPA classified as a		

	carcinogen.
Reproductive toxicity	No data available
Teratogenicity	May cause birth defects based on animal test data. Showed teratogenic effects in animal experiments.
Aspiration hazard	None
Symptoms of Exposure	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Prolonged or repeated exposure can cause irritation to mucous membranes, skin and respiratory system. Can cause liver and kidney damage.
Synergistic effects	No data available
Addition information	--

12 – ECOLOGICAL INFORMATION

COMPONENTS	**Toxicity to fish**	**Toxicity to daphnia and other aquatic invertebrates**	**Toxicity to Algea**
ISOPROPANOL	LC_{50} – Pimephales promelas (Fathead minnow) – 9,640 mg/l – 96 h.	LC_{50} – Daphnia Magna (Water flea) – 8,800 mg/l – 48 h.	EC_{50} Desmodesmus subspicatus (Green algea) > 2000 mg/L - 72 h EC_{50} Algea > 1000 mg/L - 24h
IODINE	N / D	EC_{50} – Daphnia Magna (Water flea) – 0.2 mg/l – 48 h.	N / D
Persistence and degradability	No data available		
Bio-accumulative potential	No data available		
Mobility in soil	No data available		
PBT and vPvB assessment	No data available		
Other adverse effects	No data available		

13 – DISPOSAL CONSIDERATIONS

Product	Exert extra care in igniting, as this product is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Federal and local laws governing disposal of material can differ. Ensure proper disposal compliance with authorities before disposal.
Contaminated clothing	Let dry, then wash before reusing clothes.
Contaminated packaging	Dispose as unused product above.

14 – TRANSPORT INFORMATION

	TDG	IMDG	IATA
Shipping Name:	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)
UN-number:	UN1993	UN1993	UN1993
Class & Subclass:	3	3	3
Packing Group:	II	II	II
Limited Quantity:	1 L	1 L	1 L
ERAP Index:	N / A	N / A	N / A
ERG #:	129	129	129
Inhalation Toxicity:	No	No	No
Marine Pollutant	Yes	Yes	Yes

15 – REGULATORY INFORMATION

US Regulations	SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200 Flammable liquid, Target Organ Effect, Irritant.
Canada Classification	Canada WHMIS: Class B-2: Flammable liquids. Class D-2B: Toxic material causing other toxic effects.
International	--

16 – OTHER INFORMATION

Information on the preparation of SDS:	Prepared by Cochimbec Inc. Safety Personnel Aug. 16, 2019 Revision 0 I.C. 1,2,3,4,8,42
Abbreviations:	ACGIH = American Conference of Governmental Industrial Hygienists ASTM = American Society for Testing and Materials BCF = Bioconcentration Factor CAS = Chemical Abstract Services CCOHS = Canadian Center for Occupational Health & Safety CEN (EU) = Committée Européen de Normalisation CERCLA = Comprehensive Environmental Response Compensation & Liability Act CFR = Code of Federal Regulations CMR = Carcinogenic-mutagenic-toxic for reproduction

CPR = Controlled Products Regulations
DIN = German Institute for Standardisation
DOT = Department of Transport
EC_{50} = Half maximal effect concentration
EINECS = European Inventory of Existing Commercial Chemical Substances
GHS = Global Harmonization System
GLP = Good Laboratory practice
GMO = Genetic Modified Organism
IARC = International Agency for research on Cancer
IATA = International Air Transport Association
ISO = International Organisation for Standardisation
IDLH = Immediate danger to life and health
IMDG = International Maritime Dangerous Goods
LC_{50} = Lethal concentration causing 50% death
LD_{50} = Lethal dose causing 50% death
LOAEL = Lowest Observed Adverse Effect Level
LOEL = Lowest Observed Effect Level
N/A = Not Applicable
N/D = No Data
N/E = Not Established
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety & Health
NTP = National Toxicology Program
OECD = Organisation for Economic Co-operation & Development
OEL = Occupational exposure limit
OHSC = Occupational health & safety council (committee)
OSHA = Occupational Safety & Health Administration
PBT = Persistent, Bioaccumulation, Toxic
PEL = Permissible Exposure Limit
RCRA = Resource Conservation & Recovery Act
RTECS = Registry of Toxic Effects of Chemical Substances
SARA = Species at Risk Act
STEL = Short term exposure limit
STEV = Short term exposure value
STOT = Specific Target Organ Toxicity
TDG = Transport of Dangerous Goods
TLV = Threshold limit value
TMD = Transport de Matières Dangereuses
TSCA = Toxic Substance Control Act
TWA = Time weighted Average
TWAEV = Time weighted average exposure value
UN = United Nations
VOC = Volatile Organic Compounds
WEEL = Workplace Environment Exposure Limit
WHO = World Health Organisation
WHMIS = Workplace Hazardous Material Information System
W/V = Weight / Volume
W/W = Weight / Weight

Disclaimer:	Cochimbec Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages. The information herein is provided in good faith and believed to be correct as of the date shown above but does not purport to be all inclusive and shall be used only as a guide. We also urge each user of this product, to study this SDS carefully and becomne aware of and understand the hazards associated with this product. Since conditions for use of the product are not under the control of the manufacturer, it is the user's responsibility to determine the conditions necessary for the safe use of this product. This information relates only to the product designated herein, and does not relate to its use in combination with other material or in any other process. Do not use ingredient information and / or ingredient percentages in this SDS as a product specification.

End of Safety Data Sheet