Safety Data Sheet

Analysis of iodine in freeze dried human urine

Version：V2.0.0.1
Report No.：BWZ7132-2016-MSDS-US
Creation Date：2025/10/12
Revision Date：-
***Prepared according to American OSHA HCS-2024 (29 CFR 1910.1200)**

1 Identification

Product identifier

Product Name	Analysis of iodine in freeze dried human urine
Cat No.	BWZ7132-2016
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

Details of the supplier of the Safety Data Sheet

Name of the company	Weiyel Inc
Address of the company	Hedian Light Industrial Park, Chengguan Town, Shangcheng County, Xinyang City, Henan Province, China
Post code	465350
Telephone number	010-58103678
Fax number	010-84840368
E-mail address	info@weiyel.com

Emergency phone number

Emergency phone number	010-58103678

2 Hazard(s) identification

Hazard classification according to 29 CFR 1910.1200

Serious eye damage/irritation	Category 2

Label elements

Hazard pictograms	
Signal word	**Warning**

Hazard statements

H319	Causes serious eye irritation

Precautionary statements

◆ Prevention

P264	Wash hands and other parts of the body (if related) thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

◆ Response

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

◆ Storage

Storage	Not applicable

◆ Disposal

Disposal	Not applicable

Other hazards

	Not applicable.

Hazard description

◆ Physical and chemical hazards

	No information available

◆ Health hazards

Inhaled	Cough. Shortness of breath. Sore throat.
Ingestion	Convulsions. Headache. Nausea. Vomiting.
Skin Contact	Redness.
Eye	Redness.

◆ Environmental hazards

	Please refer to 12th chapter of SDS.

3 Composition/information on ingredients

Substance/mixture

	Mixture

Component	CAS No.	EC No.	Concentration (wt, %)
Urea	57-13-6	200-315-5	60.56
Sodium chloride	7647-14-5	231-598-3	30.28
2-imino-1-methylimidazolidin-4-one	60-27-5	200-466-7	1.52409
Ascorbic acid	50-81-7	200-066-2	0.061
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	1934-21-0	217-699-5	0.005
Potassium chloride	7447-40-7	231-211-8	7.569
Potassium iodate	7758-05-6	231-831-9	0.00001

4 First-aid measures

Description of first aid measures

General advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye contact	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Skin contact	Rinse and then wash skin with water and soap.
Ingestion	Give plenty of water to drink. Rest.
Inhalation	Fresh air, rest.
Protecting of first-aiders	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

Most important symptoms/effects, acute and delayed

1	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

Indication of any immediate medical attention and special treatment needed

1	Treat symptomatically.
2	Symptoms may be delayed.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Use extinguishing media suitable for surrounding area.
Unsuitable extinguishing media	There is no restriction on the type of extinguisher which may be used.

Specific hazards arising from the substance or mixture

1	Development of hazardous combustion gases or vapor possible in the event of fire.
2	May expansion or decompose explosively when heated or involved in fire.

Special protective equipment and precautions for fire-fighters

1	As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
2	Fight fire from a safe distance, with adequate cover.
3	Prevent fire extinguishing water from contaminating surface water or the ground water system.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

1	Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.
2	Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
3	Use personal protective equipment,do not breathe dust/fume.

Environmental precautions

1	Prevent further leakage or spillage if safe to do so.
2	Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

1	Cut off the source of the leak as much as possible.
2	Keep leaks in a ventilated place.
3	Isolation of contaminated areas and restrictions on access.
4	It is recommended that emergency personnel wear dust masks.
5	Collect the spill with a clean shovel and place it in a clean, dry, loosely closed container and move the container away from the leak.
6	Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7 Handling and storage

Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

8 Exposure controls/personal protection

Control parameters

◆Occupational exposure limit values

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m³	ppm	mg/m³
Urea	Latvia	-	10	-	-

Engineering controls

1	Ensure adequate ventilation, especially in confined areas.
2	Ensure that eyewash stations and safety showers are close to the workstation location.
3	Use explosion-proof electrical/ventilating/lighting/equipment.
4	Set up emergency exit and necessary risk-elimination area.

Personal protection equipment

General requirement	
Eye protection	Must wear appropriate safety goggles.
Hand protection	Must wear appropriate chemical protective gloves.
Respiratory protection	Must wear appropriate personal respiratory protective equipment.

Skin and body protection	Must wear appropriate chemical protective clothing and chemical resistant shoes.

9 Physical and chemical properties and safety characteristics

Physical and chemical properties

Appearance (physical state, color, etc.)	Light yellow or light brown solid
Odor	No information available
Odor threshold	No information available
pH	9 (20°C, 100g/L,Urea)
Melting point/freezing point(°C)	132.7~135 (Urea)
Initial boiling point and boiling range(°C)	Decompose before boiling (Urea)
Flash point(Closed cup,°C)	Not applicable
Evaporation rate	Not applicable
Flammability	No information available
Upper/lower explosive limits[%(v/v)]	Upper limit : No information available ; Lower limit : No information available
Vapor pressure	0.002Pa (25°C,Urea)
Vapor density(Air = 1)	Not applicable
Relative density(Water=1)	1.33 (20 °C,Urea)
Solubility	Miscible with water (Urea)
n-octanol/water partition coefficient	-3~-1.54 (Urea)
Auto-ignition temperature(°C)	No information available
Decomposition temperature(°C)	132.7 (Urea)
Kinematic viscosity	Not applicable

10 Stability and reactivity

Stability and reactivity

Reactivity	Contact with incompatible substances can cause decomposition or other chemical reactions.
Chemical stability	Stable under proper operation and storage conditions.
Possibility of hazardous reactions	No information available.
Conditions to avoid	Incompatible materials, heat, flame and spark.
Incompatible materials	Oxidants, halogen, anhydrides, acids, metals, metal oxides, potassium permanganate, nitro-compounds and metal salts. Metal powder, metal amino compounds, ammonia, ammonium salts, amine, amide, carboxylic acids, phenols, alcohols, carboxylic acid esters, nitriles, sulfuric acid, concentrated nitric acid and phosphoric acid.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 Toxicological information

Acute toxicity

Component	LD_{50}(oral)	LD_{50}(dermal)	LC_{50}(inhalation,4h)
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	12750mg/kg(Mouse)	No information available	No information available
Urea	8471mg/kg(Rat)	No information available	No information available
Potassium chloride	2600mg/kg(Rat)	No information available	No information available
Sodium chloride	3000mg/kg(Rat)	> 10000mg/kg(Rabbit)	No information available
Ascorbic acid	11900mg/kg(Rat)	No information available	No information available

Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
Urea	Not Listed	Not Listed	Not Listed
Sodium chloride	Not Listed	Not Listed	Not Listed
2-imino-1-methylimidazolidin-4-one	Not Listed	Not Listed	Not Listed
Ascorbic acid	Not Listed	Not Listed	Not Listed
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	Not Listed	Not Listed	Not Listed
Potassium chloride	Not Listed	Not Listed	Not Listed
Potassium iodate	Not Listed	Not Listed	Not Listed

Others

Analysis of iodine in freeze dried human urine	
Skin corrosion/irritation	Based on available data, the classification criteria are not met
Serious eye damage/irritation	Causes serious eye irritation(Category 2)
Skin sensitization	Based on available data, the classification criteria are not met
Respiratory sensitization	Based on available data, the classification criteria are not met
Reproductive toxicity	Based on available data, the classification criteria are not met
STOT-repeated exposure	Based on available data, the classification criteria are not met
Aspiration hazard	Based on available data, the classification criteria are not met
Germ cell mutagenicity	Based on available data, the classification criteria are not met

12 Ecological information

Acute aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Potassium iodate	LC_{50} : > 100mg/L (96h)(Fish)	EC_{50} : 100mg/L (48h)(Crustaceans)	No information available
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo	LC_{50} : > 120mg/L (96h)(Fish)	EC_{50} : > 125mg/L (48h)(Crustaceans)	No information available

)pyrazole-3-carboxylate			
Urea	LC_{50} : 6810mg/L (96h)(Fish)	EC_{50} : 5240mg/L (48h)(Crustaceans)	No information available
2-imino-1-methylimidazolidin-4-one	No information available	EC_{50} : > 1000mg/L (48h)(Crustaceans)	ErC_{50} : > 100mg/L (72h)(Algae)
Potassium chloride	LC_{50} :880mg/L (96h)(Fish)	EC_{50} : 141mg/L (48h)(Crustaceans)	No information available
Sodium chloride	LC_{50} : 5840mg/L (96h)(Fish)	EC_{50} : 2120mg/L (48h)(Crustaceans)	No information available

Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae or other aquatic plants
Potassium iodate	NOEC : 6170000mg/L(Fish)	No information available	No information available

Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
Urea	Low	Low
Sodium chloride	Low	Low
2-imino-1-methylimidazolidin-4-one	Low	Low
Ascorbic acid	Low	Low
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	High	High
Potassium chloride	High	High
Potassium iodate	High	High

Bioaccumulative potential

Component	Bioaccumulative potential	Comments
Urea	Low	BCF=10
Sodium chloride	Low	Log Kow=0.5392
2-imino-1-methylimidazolidin-4-one	Low	Log Kow=-1.76
Ascorbic acid	Low	Log Kow=-2.15
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	Low	BCF=3
Potassium chloride	Low	Log Kow=-0.4608
Potassium iodate	Low	Log Kow=-4.6296

Mobility in soil

Component	log Koc	Remark
Urea	0.622	
Sodium chloride	1.155	
2-imino-1-methylimidazolidin-4-one	1.282	
Ascorbic acid	1.000	
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	-4.228	20 ℃, pH=7.0
Potassium chloride	1.155	
Potassium iodate	1.50	20 ℃

13 Disposal considerations

Disposal considerations

Waste chemicals	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
Contaminated packaging	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
Disposal recommendations	Refer to section waste chemicals and contaminated packaging.

14 Transport information

Label and Mark

Transporting Label	Not applicable

IMDG-CODE

IMDG-CODE	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

IATA-DGR

IATA-DGR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

UN-ADR

UN-ADR	NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to IMO instruments

◆Transport in bulk according to Annex II of MARPOL and the IBC code	
	Not Available
◆Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code	
	Not Available
◆Transport in bulk in accordance with the IGC Code	
	Not Available

Others

Precautions for transport	Transport vehicles should be equipped with the appropriate variety and quantity of fire equipment and emergency equipment leakage during transport. Before transport, should be preceded by checking whether container integrity, sealing.

	The transport unit must be placarded and marked in accordance with relevant transporting requirements.

15 Regulatory information

International chemical inventory

Component	A	B	C	D	E	F	G	H	I	J	K	L	M
Urea	√	√	√	√	√	√	√	√	√	√	√	√	√
Sodium chloride	√	√	√	√	√	√	√	√	√	√	√	√	√
2-imino-1-methylimidazolidin-4-one	√	√	√	√	√	√	√	√	√	×	√	√	√
Ascorbic acid	√	√	√	√	√	√	√	√	√	√	√	√	√
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	√	√	√	√	√	√	√	√	√	√	√	√	√
Potassium chloride	√	√	√	√	√	√	√	√	√	√	√	√	√
Potassium iodate	√	√	√	√	√	√	√	√	√	×	×	√	√

【A】 China Inventory of Existing Chemical Substances(IECSC)
【B】 European Inventory of Existing Commercial Chemical Substances(EC inventory)
【C】 United States Toxic Substances Control Act Inventory(TSCA)
【D】 Canadian Domestic Substances List(DSL)
【E】 New Zealand Inventory of Chemicals(NZIoC)
【F】 Philippines Inventory of Chemicals and Chemical Substances(PICCS)
【G】 Korea Existing Chemicals Inventory(KECL)
【H】 Australian. Inventory of Industrial Chemical (AIICS)
【I】 Japan Inventory of Existing & New Chemical Substances(ENCS)
【J】 Thailand Existing Chemicals Inventory(TECI)
【K】 Mexico National Inventory of Chemical Substances (INSQ)
【L】 Russia Inventory of Existing Substances (DRAFT)
【M】 Inventory of Existing Chemical Substances in Taiwan, China (TCSI)

List of Chemical Substances under International Conventions

Component	A	B	C
Urea	×	×	×
Sodium chloride	×	×	×
2-imino-1-methylimidazolidin-4-one	×	×	×
Ascorbic acid	×	×	×
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	×	×	×
Potassium chloride	×	×	×
Potassium iodate	×	×	×

【A】 The Montreal Protocol on Substances that Deplete the Ozone Layer
【B】 Stockholm Convention on Persistent Organic Pollutants (POPs)
【C】 Rotterdam Convention on the prior informed consent procedure for certain hazardous chemicals and pesticides in international trade

US chemical inventory

Component	A	B	C	D	E	F	G	H
Urea	×	×	×	×	×	×	×	×
Sodium chloride	×	×	×	×	×	×	×	×
2-imino-1-methylimidazolidin-4-one	×	×	×	×	×	×	×	×
Ascorbic acid	×	×	×	×	×	×	×	×
Trisodium 5-hydroxy-1-(4-sulphophenyl)-4-(4-sulphophenylazo)pyrazole-3-carboxylate	×	×	×	×	×	×	×	×
Potassium chloride	×	×	×	×	×	×	×	×
Potassium iodate	×	×	×	×	×	×	×	×

[A] US Clean Air Act (CAA)- Section 112, Hazardous Air Pollutants
[B] US SARA 302- Extremely Hazardous Substance List
[C] US CERCLA- Hazardous Substances List
[D] US Massachusetts Right-to-Know Substance List
[E] US New Jersey Right to Know Hazardous Substance List
[F] US Pennsylvania Right to Know Hazardous Substance List
[G] US New York City Right-to-Know Hazardous Substance List
[H] US California Proposition 65 List

Note:
"√" Indicates that the substance included in the regulations.
"×" No data or not included in the regulations.

16 Other information

Information on revision

Creation Date	2025/10/12
Revision Date	-
Reason for revision	-

Reference

[1] IPCS: The International Chemical Safety Cards (ICSC), website: http://www.ilo.org/dyn/icsc/showcard.home.
[2] IARC, website: http://www.iarc.fr/.
[3] OECD: The Global Portal to Information on Chemical Substances, website: https://www.echemportal.org/echemportal/.
[4] CAMEO Chemicals, website: http://cameochemicals.noaa.gov/search/simple.
[5] NLM: ChemIDplus, website: http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp.
[6] EPA: Integrated Risk Information System, website: http://cfpub.epa.gov/iris/.
[7] U.S. Department of Transportation: ERG, website: http://www.phmsa.dot.gov/hazmat/library/erg.
[8] Germany GESTIS-database on hazard substance, website: http://gestis-en.itrust.de/.

Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC_{50}	Lethal Concentration 50%	NFPA	National Fire Protection Association

LD_{50}	Lethal Dose 50%	NTP	National Toxicology Program
EC_{50}	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC_X	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P_{OW}	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

Disclaimer

This Safety Data Sheet (SDS) was prepared according to OSHA HCS-2024. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.