SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-SR-00660-250gm
Product Name	Indium shot, tear drop, 4mm (0.2in), 99.99%
CAS No.	7440-74-6
Category	Biochemicals
Synonyms	Indium element; Indium
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email **sales@clearsynth.com** for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
Serious eye damage/eye irritation (Category 2)
Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning

Hazard Statement(s)

Code	Statement
H302	Harmful if swallowed.
H312	Harmful in contact with skin.

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	Not available
H372	Not available
H303	Not available

Precautionary Statement(s)

Code	Statement
P260	Not available
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P270	Not available
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P317	Not available
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presen
P317	Not available
P319	Get medical help if you feel unwell.
P321	Specific treatment (see … on this label).
P330	Not available
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulatio

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Indium shot, tear drop, 4mm (0.2in), 99.99%
CAS Number : 7440-74-6
Molecular Formula : In
Molecular Weight : 114.82
Parent Chemical : -
Synonyms : Indium element; Indium
Concentration : Not available

SECTION 4: First aid measures

Not available

SECTION 5: Firefighting measures

Not available

SECTION 6: Accidental release measures

Not available

SECTION-7: Handling and storage

Not available

SECTION 8: Exposure controls / personal protection

Not available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	Silvery Solid
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

Not available

SECTION 11: Toxicological information

11.1 Information on toxicological effects
- Acute toxicity: /OTHER TOXICITY INFORMATION/ Routes of entry: Inhalation, ingestion; skin and/or eye contact. /Indium and compounds/ /LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ The subcellular behavior of several mineral elements was studied using modern techniques of observation like transmission electron microscopy and analysis like electron probe microanalysis and secondary ion mass spectrometry. In the present ultrastructural and analytical investigations, we undertake to compare the intracellular behavior of a heavy metal, gold, and a III-A group element, indium, on rat testicular tissues after their parenteral administrations. Our ultrastructural results showed that while gold was found only in the lysosomes of Leydig cells under electron dense needles, indium was observed as electron-dense deposits in the lysosomes of both Leydig and Sertoli cells. No ultrastructural modifications were observed in the testicular tissues of the control rats. The microanalytical study

showed that gold was concentrated in lysosomes with sulfur as a sulfate crystalline structure whereas indium was concentrated in the same organelle as insoluble phosphate salt. These results demonstrated that testicular Leydig and Sertoli cells have the ability to selectively concentrate indium but gold was concentrated only in the first kind of cells. The mechanism implicated in this concentration phenomenon is a biochemical one involving intralysosomal hydrolytic enzymes, the acid phosphatase and the arylsulfatase. This mechanism occurs in order to protect the organism and to avoid the presence of toxic metals under soluble and free form.
- 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: No data available.
- Reproductive toxicity: /LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ The subcellular behavior of several mineral elements was studied using modern techniques of observation like transmission electron microscopy and analysis like electron probe microanalysis and secondary ion mass spectrometry. In the present ultrastructural and analytical investigations, we undertake to compare the intracellular behavior of a heavy metal, gold, and a III-A group element, indium, on rat testicular tissues after their parenteral administrations. Our ultrastructural results showed that while gold was found only in the lysosomes of Leydig cells under electron dense needles, indium was observed as electron-dense deposits in the lysosomes of both Leydig and Sertoli cells. No ultrastructural modifications were observed in the testicular tissues of the control rats. The microanalytical study showed that gold was concentrated in lysosomes with sulfur as a sulfate crystalline structure whereas indium was concentrated in the same organelle as insoluble phosphate salt. These results demonstrated that testicular Leydig and Sertoli cells have the ability to selectively concentrate indium but gold was concentrated only in the first kind of cells. The mechanism implicated in this concentration phenomenon is a biochemical one involving intralysosomal hydrolytic enzymes, the acid phosphatase and the arylsulfatase. This mechanism occurs in order to protect the organism and to avoid the presence of toxic metals under soluble and free form. /LABORATORY ANIMALS: Developmental or Reproductive Toxicity/ Indium, a precious metal classified in group 13 (IIIB) in the periodic table, has been used increasingly in the semiconductor industry. Because indium is a rare metal, technology for indium recycling from transparent conducting films for liquid crystal displays is desired, and its safety evaluation is becoming increasingly necessary. The developmental toxicity of indium in experimental animals was summarized. The intravenous or oral administration of indium to pregnant animals causes growth inhibition and the death of embryos in hamsters, rats, and mice. The intravenous administration of indium to pregnant animals causes embryonic or fetal malformation, mainly involving digit and tail deformities, in hamsters and rats. The oral administration of indium also induces fetal malformation in rats and rabbits, but requires higher doses. No teratogenicity has been observed in mice. Caudal hypoplasia, probably due to excessive cell loss by increased apoptosis in the tailbud, in the early postimplantation stage was considered to account for indium-induced tail malformation as a possible pathogenetic mechanism. Findings from in vitro experiments indicated that the embryotoxicity of indium could have direct effects on the conceptuses. Toxicokinetic studies showed that the embryonic exposure concentration was more critical than the exposure time regarding the embryotoxicity of indium. It is considered from these findings that the risk of the developmental toxicity of indium in humans is low, unless an accidentally high level of exposure or unknown toxic interaction occurs because of possible human exposure routes and levels (i.e. oral, very low-level exposure).
- STOT-single exposure: No data available.
- STOT-repeated exposure: No data available.
- Aspiration hazard: No data available.

Likely routes of exposure

- /OTHER TOXICITY INFORMATION/ Routes of entry: Inhalation, ingestion; skin and/or eye contact. /Indium and compounds/

Symptoms related to the physical, chemical and toxicological characteristics
- irritation eyes, skin, respiratory system; possible liver, kidney, heart, blood effects; pulmonary edema

SECTION 12: Ecological information

Not available

SECTION 13: Disposal considerations

Not available

SECTION 14: Transport information

Not available

SECTION 15: Regulatory information

Not available

SECTION 16: Other information

Not available

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