Safety Data Sheet
Lugol’s Iodine Working Solution
Revision Date: 1/09/19

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier
Trade name: Lugol’s Iodine, Working Solution
Product code(s): 6583-02, 6583-16

1.2 Relevant identified uses
Laboratory Reagent

Supplier:
Astral Diagnostics Inc. / KACEY
800-441-0366 Technical Service
Monday-Friday: 8:00 - 5:00 PM

Synonym:
None.

Material uses:
Laboratory Reagent.

Validation date:
12/11/2013

In case of emergency:
800-424-9300 CHEMTREC (USA)
24 Hours/Day: 7 Days/Week

2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Label Elements: Pictogram

Signal Word: Warning

Hazard statement(s):
H302: Harmful is swallowed
H319: Causes serious eye irritation

Precautionary statement(s):
P264: Wash exposed skin thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves/ eye protection/ face protection.
P305+351+338: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
NFPA Rating | HMIS Classification
--- | ---
Health hazard: 1 | Health hazard: 1
Fire: 0 | Flammability: 0
Reactivity Hazard: 0 | Physical hazards: 0

**Potential Health Effects**:
- Inhalation – May cause respiratory tract irritation.
- Skin - May cause skin irritation.
- Eyes - May cause eye irritation.
- Ingestion – Potentially toxic if swallowed in large quantities.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS number</th>
<th>% by volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Iodine</td>
<td>7681-11-0</td>
<td>~.7</td>
</tr>
<tr>
<td>Iodine</td>
<td>7553-56-2</td>
<td>~.4</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>Balance</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**First-aid measures general**: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**First-aid measures after inhalation**: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

**First-aid measures after skin contact**: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center or doctor/physician.

**First-aid measures after eye contact**: 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.

**First-aid measures after ingestion**: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor/physician.

### 5. FIREFIGHTING MEASURES

#### 5.1 Extinguishing media
- Unsuitable extinguishing media: Do not use a heavy water stream

#### 5.2 Special hazards arising from the substance or mixture
- No additional information available

#### 5.3 Advice for firefighters
- Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

### 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel
- Protective equipment: Gloves. Safety glasses. Combined gas/dust mask with filter type B/P3.
- Emergency procedures: Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders
- Protective equipment: Equip cleanup crew with proper protection.
- Emergency procedures: Ventilate area.
6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Do not breathe mist, vapors, spray. Obtain special instructions before use. Use personal protective equipment as required. Do not handle until all safety precautions have been read and understood.
Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Comply with applicable regulations.
Storage conditions: Keep container closed when not in use. Protect from sunlight. Store in a well-ventilated place.
Incompatible materials: Sources of ignition. Direct sunlight

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iodine</td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.1 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>TWA</td>
<td>0.01 ppm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL (Ceiling)</td>
<td>1 mg/m³</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OSHA</td>
<td>PEL (Ceiling)</td>
<td>0.1 ppm</td>
<td></td>
</tr>
<tr>
<td>Potassium Iodine</td>
<td>ACGH</td>
<td>TWA</td>
<td>0.01 ppm</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or face shield.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Wear appropriate mask. Gas mask with filter type B.
Other information: Do not eat, drink or smoke during use.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical state:</th>
<th>Liquid.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point:</td>
<td>NA</td>
</tr>
<tr>
<td>pH:</td>
<td>NA</td>
</tr>
<tr>
<td>Melting/freezing point:</td>
<td>NA</td>
</tr>
<tr>
<td>Color:</td>
<td>amber</td>
</tr>
<tr>
<td>Odor:</td>
<td>NA</td>
</tr>
<tr>
<td>Boiling/condensation point:</td>
<td>NA</td>
</tr>
<tr>
<td>Relative density:</td>
<td>NA</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

10.1. Reactivity
No further relevant information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Not established.

10.4. Conditions to avoid
Extremely high or low temperatures.

10.5. Incompatible materials
Metals. Strong reducing agents. Ammonia

10.6. Hazardous decomposition products
Iodine Vapor. Potassium oxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Iodine (7553-56-2)
LD50 Oral Rat 14000 mg/kg
ATE US (oral) 14000 mg/kg body weight
ATE US (dermal) 220 mg/kg body weight

Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
Skin Corrosion/irritation
No data available
Serious eye damage/eye irritation
Causes serious eye irritation
Respiratory or skin sensitization
No data available
Germ cell mutagenicity
No data available

12. ECOLOGICAL INFORMATION

Toxicity:
Iodine
LC50 fish 1: 1.7 mg/l
EC50 Daphnia 1: 0.2 mg/l

Potassium Iodine
LC50 fish 1: 3200 mg/l
EC50 Daphnia 1: 2.7 mg/l 24h

Persistence and degradability: no data available
Bioaccumulative 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

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT (US)
Not Regulated

15. REGULATORY INFORMATION

15.1 US Federal Regulations
Iodine, Potassium Iodide
Listed on the US TSCA (Toxic Substances Control Act) inventory
SARA Sections 311/312 Hazard Classes
Immediate (acute) health hazard

15.2 International regulations
Iodine, Potassium Iodide
Listed on the Canadians DSL (Domestic Substances List)
WHMIS Classification- Class D Division 2 Subdivision B Toxic material causing other toxic effects

15.3 US State Regulations
California Proposition 65- This product does not contains any substances known to the state of California to cause cancer, developmental and/or reproductive harm

16. OTHER INFORMATION

National Fire Protection Association (U.S.A.)

Notice to reader
This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labeling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Astral Diagnostics, Inc / KACEY be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.