Mayer’s Reagent for Narcotic Alkaloids
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Revision date:02/18/2013 Supersedes:01/31/2011
Version:

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

1.1. Product identifier
Product form: Mixture
Product name: Mayer’s Reagent for Narcotic Alkaloids
Product code: NARK20019

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/preparation: Crime Scene Investigation

1.3. Details of the supplier of the safety data sheet
SIRCHIE Finger Print Laboratories
100 Hunter Place
27596 Youngsville, NC - USA
T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
http://www.sirchie.com

1.4. Emergency telephone number
Emergency number: 1.800.424.9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification (GHS-US)
Acute Tox. 3 (Oral) H301
Skin Irrit. 2 H315
Eye Irrit. 2A H319
Muta. 2 H341
Repr. 2 H361
STOT RE 1 H372

2.2. Label elements
GHS-US labeling
Hazard pictograms (GHS-US)

Signal word (GHS-US): Danger
Hazard statements (GHS-US):
H301 - Toxic if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H341 - Suspected of causing genetic defects
H361 - Suspected of damaging fertility or the unborn child
H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS-US):
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash ... thoroughly after handling.
P270 - Do no eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor
P302+P352 - IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention
P314 - Get medical advice and attention if you feel unwell.
P321 - Specific treatment (see ... on this label)
P330 - If swallowed, rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P362 - Take off contaminated clothing
P405 - Store locked up
P501 - Dispose of contents/container to ....
Mayer's Reagent for Narcotic Alkaloids
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

2.3. Other hazards
Other hazards not contributing to the classification: None under normal conditions.

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQUA (CAS No.)7732-18-5</td>
<td></td>
<td>93.64</td>
<td>Not classified</td>
</tr>
<tr>
<td>potassium iodide (CAS No.)7681-11-0</td>
<td></td>
<td>5</td>
<td>Not classified</td>
</tr>
<tr>
<td>mercury dichloride (CAS No.)7487-94-7</td>
<td></td>
<td>1.36</td>
<td>Acute Tox. 2 (Oral), H300</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1B, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Muta. 2, H341</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 2, H361</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT RE 1, H372</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of 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: Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries: Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 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
Reactivity: No reactivity hazard other than the effects described in sub-sections below.

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
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.

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.
SECTION 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 eat, drink or smoke and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well ventilated place away from: Keep container closed when not in use.
Incompatible products: Strong bases. strong acids.
Incompatible materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>mercury dichloride (7487-94-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA ACGIH</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or safety glasses.
Respiratory protection: Wear approved mask.
Other information: When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Liquid
Appearance: Clear, colorless liquid.
Color: Colorless.
Odor: odorless.
Odor threshold: No data available
pH: No data available
Relative evaporation rate (butyl acetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Self ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: No data available
Solubility: Soluble in water.
Log Pow: No data available
Log Kow: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Explosive properties: No data available
Oxidizing properties: No data available
Explosive limits: No data available
9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No reactivity hazard other than the effects described in sub-sections below.

10.2. Chemical stability
Stable under recommended handling and storage conditions (see section 7).

10.3. Possibility of hazardous reactions
No reactivity hazard other than the effects described in sub-sections below.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials
Strong acids. Strong bases.

10.6. Hazardous decomposition products
Fume, Carbon monoxide, Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity
: Toxic if swallowed.

<table>
<thead>
<tr>
<th>Mercury dichloride (7487-94-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation
: Causes skin irritation.

Serious eye damage/irritation
: Causes serious eye irritation.

Respiratory or skin sensitization
: Not classified

Germ cell mutagenicity
: Suspected of causing genetic defects. Based on available data, the classification criteria are not met

Carcinogenicity
: Not classified

<table>
<thead>
<tr>
<th>Mercury dichloride (7487-94-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IARC group</td>
</tr>
</tbody>
</table>

Reproductive toxicity
: Suspected of damaging fertility or the unborn child. Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure)
: Not classified

Specific target organ toxicity (repeated exposure)
: Causes damage to organs through prolonged or repeated exposure. Based on available data, the classification criteria are not met

Aspiration hazard
: Not classified. Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms
: Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

<table>
<thead>
<tr>
<th>Mercury dichloride (7487-94-7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>LC50 fish 2</td>
</tr>
<tr>
<td>EC50 Daphnia 2</td>
</tr>
<tr>
<td>TLM fish 1</td>
</tr>
<tr>
<td>Threshold limit other aquatic organisms 1</td>
</tr>
<tr>
<td>Threshold limit algae 1</td>
</tr>
<tr>
<td>Threshold limit algae 2</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Mayer's Reagent for Narcotic Alkaloids
Persistence and degradability
: Not established.
Mayer's Reagent for Narcotic Alkaloids

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>mercury dichloride (7487-94-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
<tr>
<td>BOD (% of ThOD)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

**Mayer’s Reagent for Narcotic Alkaloids**

Bioaccumulative potential | Not established.

<table>
<thead>
<tr>
<th>mercury dichloride (7487-94-7)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>10000 (Pisces)</td>
</tr>
<tr>
<td>BCF fish 2</td>
<td>500 - 4620 (Cyprinus carpio; TEST DURATION: 10 WEEKS)</td>
</tr>
<tr>
<td>BCF other aquatic organisms 1</td>
<td>10000 (Ostreidae)</td>
</tr>
<tr>
<td>Log Pow</td>
<td>0.1 - 0.22 (Calculated)</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information: Avoid release to the environment.

**SECTION 13: Disposal considerations**

13.1. Waste treatment methods

Waste disposal recommendations: Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

**SECTION 14: Transport information**

In accordance with ADR / RID / ADNR / IMDG / ICAO / IATA

14.1. UN number

UN-No.(DOT): 3316

14.2. UN proper shipping name

DOT Proper Shipping Name: Chemical kit

Department of Transportation (DOT) Hazard Classes: 9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140

Hazard labels (DOT): 9 - Miscellaneous dangerous compounds

Packing group (DOT): II - Medium Danger

14.3. Additional information

Other information: No supplementary information available.

Overland transport

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

**SECTION 15: Regulatory information**

15.1. US Federal regulations

**Mayer’s Reagent for Narcotic Alkaloids**

Listed on SARA Section 313 (Specific toxic chemical listings)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
15.2. International regulations

**CANADA**
No additional information available

**EU-Regulations**
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Classification according to Directive 67/548/EEC or 1999/45/EC
Not classified

15.2. National regulations
No additional information available

15.3. US State regulations

| Mayer's Reagent for Narcotic Alkaloids() | U.S. - California - Proposition 65 - Developmental Toxicity | Yes |

### SECTION 16: Other information

**Indication of changes**
Revision - See : *.

**Data sources**

**Training advice**
Normal use of this product shall imply use in accordance with the instructions on the packaging. Keep in tightly closed container. Keep cool and dry. Avoid all ignition sources - heat, open flame, sparks. Avoid incompatible materials. Avoid dust creation and accumulation. Avoid inhalation and ingestion. Avoid contact with eyes. Wash thoroughly after handling.

**Other information**
This Safety Data Sheet has been established in accordance with the applicable European Union legislation.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>Acute Tox. 2 (Oral)</th>
<th>Acute toxicity (oral) Category 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox. 3 (Oral)</td>
<td>Acute toxicity (oral) Category 3</td>
</tr>
<tr>
<td>Eye Irrit. 2A</td>
<td>Serious eye damage/eye irritation Category 2A</td>
</tr>
<tr>
<td>Muta. 2</td>
<td>Germ cell mutagenicity Category 2</td>
</tr>
<tr>
<td>Repr. 2</td>
<td>Reproductive toxicity Category 2</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>skin corrosion/irritation Category 1B</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>skin corrosion/irritation Category 2</td>
</tr>
<tr>
<td>STOT RE 1</td>
<td>Specific target organ toxicity (repeated exposure) Category 1</td>
</tr>
<tr>
<td>H300</td>
<td>Fatal if swallowed</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H341</td>
<td>Suspected of causing genetic defects</td>
</tr>
<tr>
<td>H361</td>
<td>Suspected of damaging fertility or the unborn child</td>
</tr>
<tr>
<td>H372</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
</tr>
</tbody>
</table>

**NFPA health hazard**
2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

**NFPA fire hazard**
1 - Must be preheated before ignition can occur.

**NFPA reactivity**
1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

**HMIS III Rating**

<table>
<thead>
<tr>
<th>Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Moderate Hazard - Temporary or minor injury may occur</td>
</tr>
</tbody>
</table>
### Mayer's Reagent for Narcotic Alkaloids

**Safety Data Sheet**

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Category</th>
<th>Hazard</th>
<th>GHS Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability</td>
<td>1 Slight Hazard</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td>1 Slight Hazard</td>
<td></td>
</tr>
<tr>
<td>Personal Protection</td>
<td>G</td>
<td></td>
</tr>
</tbody>
</table>

**SDS US (GHS HazCom 2012)**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, expressed or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes.