Standard Operating Procedure

Lanatoside C

*This is an SOP template and is not complete until: 1) lab specific information is entered into the box below 2) lab specific protocol/procedure is added to the protocol/procedure section and
3) SOP has been signed and dated by the PI and relevant lab personnel.*

 Print a copy and insert into your
*Laboratory Safety Manual* and *Chemical Hygiene Plan*.
Refer to instructions for assistance.

|  |  |
| --- | --- |
| **Department:** | Click here to enter text. |
| **Date SOP was written:** | Click here to enter a date. |
| **Date SOP was approved by PI/lab supervisor:** | Click here to enter a date. |
| **Principal Investigator:** | Click here to enter text. |
| **Internal Lab Safety Coordinator/Lab Manager:** | Click here to enter text. |
| **Lab Phone:** | Click here to enter text. |
| **Office Phone:** | Click here to enter text. |
| **Emergency Contact:** | Click here to enter text. |
| *(Name and Phone Number)* |
| **Location(s) covered by this SOP:** | Click here to enter text. |
| *(Building/Room Number)* |

**Type of SOP:** ☐ Process ☒Hazardous Chemical ☐ Hazardous Class

**Purpose:**

Lanatoside C (or isolanid) is a cardiac glycoside, a type of drug that can be used in the treatment of congestive heart failure and cardiac arrhythmia (irregular heartbeat). Lanatoside C can be used orally or by the intravenous route. It is marketed as Cedilanid in a number of African countries by Novartis, and is also available in generic form. Its main indications are rapid response atrial fibrilation and paroxysmal supraventricular tachycardia, two common types of arrhythmia.

(*State the procedure the specific chemical is used for in lab/the purpose of the chemical*)

**Physical & Chemical Properties/Definition of Chemical Group**

CAS#: 17575-22-3

Class: **Toxic Chemical**

Molecular formula: C49H76O20

Form (Physical State): Solid

**Potential Hazards/Toxicity**

***Oral LD50 [Guinea Pig]*** *100 mg/kg*

* *Inhalation:* Toxic if inhaled. May cause respiratory tract irritation.
* *Ingestion:* Toxic if swallowed. May cause nausea, headache, vomiting, anorexia, abdominal pain, diarrhoea, drowsiness, depression, disorientation, mental disturbances, fatigue, blurred vision, impairment of vision, nervousness, cholinergic reactions, bradycardia, and/or cardiac irregularities.
* *Skin Contact:* Toxic if absorbed through skin. May cause skin irritation and/or symptoms listed above.
* *Eye Contact:* May cause irritation, redness, and pain and/or symptoms listed above.

**Personal Protective Equipment (PPE)**

**Respiratory protection**

Respiratory protection is not generally required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks.

Respirators should be used only under any of the following circumstances:

* As a last line of defense (i.e., after engineering and administrative controls have been exhausted).
* When Permissible Exposure Limit (PEL) has exceeded or when there is a possibility that PEL will be exceeded.
* Regulations require the use of a respirator.
* An employer requires the use of a respirator.
* There is potential for harmful exposure due to an atmospheric contaminant (in the absence of PEL)
* As PPE in the event of a chemical spill clean-up process

Lab personnel intending to use/wear a respirator mask must be trained and fit-tested by ORS and should contact occhealt@uga.edu. This is a UGA requirement described in more detail in the [UGA Respiratory Protection Plan](https://esd.uga.edu/sites/default/files/respiratoryprotection.pdf) and supported by the [Office of Research Occupational Health and Safety Program](https://research.uga.edu/ohsp/).

**Hand protection**

Wear nitrile, natural rubber, neoprene, butyl, PVC or Viton gloves.

**Eye protection**

Wear safety glasses or splash goggles when there is a potential for the chemical to pose a splash hazard.

**Skin and body protection**

Wear long pants, shirt, closed toe shoes, and a lab coat while handling.

**Hygiene measures**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale.

**Engineering Controls**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

**First Aid Procedures**

**If inhaled**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**In case of skin contact**

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash off with soap and plenty of water. Get medical attention immediately. Wash clothing before reuse. Thoroughly clean shoes before reuse. Contaminated work clothes should be laundered by individuals who have been informed of the hazards of exposure to this substance.

**In case of eye contact**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention immediately.

**Special Handling and Storage Requirements**

**Precautions for safe handling**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use only with adequate ventilation or respiratory protection.

**Conditions for safe storage**

Store in a tightly closed container. Keep away from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances including acids and bases.

**Spill and Accident Procedure**

**Chemical Spill Dial 911**

**24-7 On-Call Response to Research, Environment, Health or Safety Concerns Dial 2-5561 from a campus phone or 706-542-5561 from a non-campus line.**

**Spill** – Follow the procedures set out in the [UGA Chemical and Laboratory Safety Manual.](http://research.uga.edu/docs/units/safety/manuals/Chemical-Laboratory-Safety-Manual.pdf)

[If there are any chemical-specific protocols for responding to a spill, insert them here or mark “none”:]

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# **Medical Emergency Dial 911**

**Life Threatening Emergency, After Hours, Weekends And Holidays** – Dial **911** or the emergency phone numbers listed at the beginning of the UGA Chemical and Laboratory Safety Manual

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Non-Life Threatening Emergency** – Follow the instructions in the UGA Chemical and Laboratory Safety Manual.

*Note: All incidents that result in an injury or property damage must be reported to ORS / ESD using a University Incident/Accident Report.*

**Decontamination/Waste Disposal Procedure**

**For general hazardous waste disposal procedures, see Appendix H of the UGA Chemical and Laboratory Safety Manual.**

**Chemical Specific Procedures: [to be inserted or marked as “none”]**

**Safety Data Sheet (SDS) Location**

UGA personnel can access Online SDS through a link in the upper left corner of the ESD home page (<https://esd.uga.edu>) and logging in by using their UGA email user name and password.

**Protocol/Procedure**

 *(Add specific description of procedure.)*

**NOTE**

Any deviation from this SOP requires written approval from PI.

**Documentation of Training** *(signature of all users is required)*

* Prior to conducting any work with Lanatoside C, designated personnel must provide training to his/her laboratory personnel specific to the hazards involved in working with this substance, work area decontamination, and emergency procedures.
* The Principal Investigator must provide his/her laboratory personnel with a copy of this SOP and access to the SDS provided by the manufacturer.
* The Principal Investigator must ensure that his/her laboratory personnel have attended appropriate laboratory safety training or refresher training within the last 12 months.

**Principal Investigator SOP Approval**

Print name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Approval Date:

I have read and understand the content of this SOP:

|  |  |  |
| --- | --- | --- |
| **Name** | **Signature** | **Date** |
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