|  |  |  |
| --- | --- | --- |
| PI: |  |  |
| Agent(s): | 6-OHDA (Oxidopamine) |
| Date SOP Created: |  |

*Instructions: Insert specific details pertaining to your research and delete irrelevant procedures; contact EH&S at 642-3073 or OLAC at 642-9232 as needed for assistance.*

|  |  |
| --- | --- |
| Hazard Information | *Work with hazardous chemicals and other agents may only be performed in reserved, pre-approved locations on campus. Contact EH&S at 642-3073 for authorization and training prior to beginning work.* Oxidopamine, also known as 6-hydroxydopamine (6-OHDA) or 2,4,5-trihydroxyphenethylamine, is a neurotoxic synthetic organic compound used to selectively destroy dopaminergic and noradrenergic neurons in the brain. 6-OHDA is thought to enter the neurons via the dopamine and noradrenaline (norepinephrine) reuptake transporters. Oxidopamine is often used in conjunction with a selective noradrenaline reuptake inhibitor (such as desipramine) to selectively destroy dopaminergic neurons. The main use for oxidopamine in scientific research is to induce Parkinsonism in laboratory animals such as mice, rats and monkeys, in order to develop and test new medicines and treatments for Parkinson's disease. Avoid direct contact with skin and mucous membranes of the eyes, nose and mouth. No food or drink is allowed in the lab. Remove gloves and wash hands carefully before leaving. Careful handling and disposal of sharps is required. Deposit used sharps directly into a rigid sharps container labeled for chemical waste disposal. **NEVER** recap needles. Hazards specific to your Agent and route of administration:This agent causes skin irritation, serious eye irritation and may cause respiratory irritation. |
| Personal Protective Equipment (PPE) | when working in a biosafety cabinet:Lab coatNitrile Gloveswhen working with animals:Disposable gownNitrile Gloveswhen working outside a biosafety cabinet include:Eye protectionSurgical mask or face shield (disposable)*Additional PPE specific to your research:*When working with oxidopamine in laboratories outside of animal facilities, PPE should include, at a minimum, a lab coat, double Nitrile gloves, and ANSI Z-87 compliant protective eyewear that provides chemical splash protection and appropriate lab attire (full-length pants, closed toe shoes, etc.). When working with the powder form, ensure gloves worn are also non-static.Whenever the potential for aerosolization of oxidopamine exists,procedures should be done in an appropriate containment device, such as a chemical fume hood. Outside of containment, an N95 respirator should be worn whenever the potential for inhalation exists. Note that the use of an N95 respirator requires medical clearance and fit testing to comply with 29 CFR 1910.134. Contact the Office of Environmental Health and Safety prior to purchasing or wearing respiratory protection. |
| Preparation | *List procedures used. Be specific about the physical form (solid, liquid, etc.) and locations for work (bench top, fume hood, biosafety cabinet), and personal protective equipment (PPE) to be worn when handling the material.* Oxidopamine will be purchased/obtained from *(List provider)*. Package will be kept intact with shipping documentation and/or maintained in double containment with proper labeling, including PI name and contact information.*Other specific preparation steps (with location):*  |
| Transportation | Agent will be carried in an easily decontaminated, leak-proof, secondary container labeled with PI name and contact information to NAF 120F, LSA 640, or Minor 599E *(choose location or list approved location)*. |
| Use | While working in NAF 120F, LSA 640, or Minor 599E *(choose location or list approved location)* with agent and if handling animals post-treatment, the following PPE must be worn: **Disposable Gown, Gloves, Face Shield (Disposable) when outside of the biosafety cabinet or fume hood.** *Description of treatment procedures:*  |
| Disposal and DisinfectionIf unsure, contact EH&S at 642-3073 to determine disposal procedures. | * Decontaminate all work surfaces and equipment with 10% bleach.
* All used sharps must be immediately placed into a rigid sharps container labeled for chemical waste. DO NOT recap needles. When 2/3 full, these containers should be picked up by EH&S as hazardous chemical waste.
* All potentially contaminated lab debris should be collected for disposal as hazardous chemical waste, see [*http://ehs.berkeley.edu/hazardous-materials*](http://ehs.berkeley.edu/hazardous-materials) for guidance.
* Liquid waste, including excess stock, will be labeled with a hazardous chemical waste label and disposed through the EH&S hazardous waste program.
* Animal cages, bedding, and water bottles should be disposed of as medical waste for incineration (chemotherapy waste). Animals should be transferred to clean cages by the researcher within a functioning biosafety cabinet or chemical fume hood.
* Animal carcasses should be disposed of as pathology waste.
 |
| Spill Response and Emergency Procedures | Recommended disinfectants: 10% household bleach *Disinfectant to be used:* For emergency clean up response, notify EH&S at 642-3073. Seek medical attention and/or report needle sticks or injuries to Urgent Care at the Tang Center at 642-3188.Don the appropriate personnel protective equipment, contain the spill and clean up bulk material using paper towel or absorbent pads from nearest chemical spill kit. For spills of powder, it may be helpful to lightly wet the absorbent material. Wipe the area with 10% bleach 1-2 times and then wash the area with soap and water. Dispose all wipes as hazardous chemical waste. |
| Hazard Communication (signs, cage cards, etc.)  | All researchers handling this material must read and sign this document. Cage cards indicating the agent name will be completed and posed on all cages containing oxidopamine treated animals. Cages will be labeled as “Do Not Change” for OLAC staff. All cage changes will be handled by approved laboratory researchers. Signs will be posted when agent is in use and will not be taken down until work surfaces have been decontaminated.EH&S and an OLAC veterinarian or approved staff must review and date this SOP prior to starting this work within an animal facility. Obtain hazardous agent cage cards from OLAC. During injections this SOP must be posted in a plastic sleeve on the door of NAF 120F, LSA 640, Minor 599E *(choose location or list approved location)* to notify OLAC staff and other personnel.  |
| Unique Instructions | Coordinate use of NAF 120F, LSA 640, Minor 599E *(choose location or list approved location)* with the OLAC Facility Manager. *Other unique procedures:* |
| Additional Information or References | Refer to applicable protocols and authorizations, e.g. the lab’s Biohazard Use Authorization, MAUP/eProtocol, SDS available at <http://ehs.berkeley.edu/hazardous-materials/safety-data-sheets-formerly-msds>, your lab’s chemical hygiene plan, or contact your supervisor or EH&S at 642-3073 for further guidance. Useful additional information:<http://www.sigmaaldrich.com/MSDS/MSDS/DisplayMSDSPage.do?country=US&language=en&productNumber=H4381&brand=SIGMA&PageToGoToURL=http%3A%2F%2Fwww.sigmaaldrich.com%2Fcatalog%2Fproduct%2Fsigma%2Fh4381%3Flang%3Den>*Other required protocols or references:* |

|  |  |  |
| --- | --- | --- |
| **Print Name (last, first)** | **Signature** | **Date Plan Reviewed** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

PERSONNEL SIGNATURES

EH&S Review (Name/Date):­ 642-3073

OLAC Representative Review (Name/Date): 642-9232