



June 22 SOP # 013 for 6-Hydroxy Dopamine (6-OHDA)

Standard Operating Procedure for 6-OHDA in Animals		
Health Hazards	6-Hydroxy dopamine (6-OHDA) is neurotoxin that destroys catecholamine terminals and can cause Parkinsonism, ataxia, and other motor disturbances in humans if it enters the blood stream in significant amounts. At low concentrations 6-OHDA can cause irritations to the respiratory tract, digestive tract, the eyes, and skin. Statement of Hazard: Harmful if swallowed Harmful in contact with skin Causes skin irritation Causes serious eye irritation Harmful if inhaled May cause respiratory irritation. There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Chronic exposure to phenethylamines excites the central nervous system and induce tolerance; in extreme cases they produce amphetamine-like responses including personality changes, compulsive and stereotyped behavior and may induce psychosis with auditory and visual hallucinations and paranoid delusions * Pregnant and lactating women should not be exposed to 6- OHDA or handle animals that have been administered 6-OHDA or be extra careful and use additional PPE (use respirators). *Immunocompromised individuals should also use extreme caution when handling 6 -OHDA.	
Designated Area	ABSL2 Facility (Animal Biosafety Level 2)	
Training Requirements	Hazardous chemical training and training on this SOP is required before working with 6-OHDA. This should include but is not limited to reviewing the SDS, training on the physical hazards of the chemicals, symptoms of exposure, appropriate work practices, and proper use of PPE	
Personal Protective Equipment (PPE)	Double nitrile gloves or compatible chemical-resistant gloves, Chemical safety goggles, Lab coat and mask. Appropriate PPE should also be used for lower arms such as sleeve covers or securing gloves over the sleeves of laboratory coat. <i>Personnel should not work with 6-OHDA if skin is cut or scratched</i>	
General Precautions for Animal Use	where possible). Have a sharps container in close vicinity. Animals should be restrained or anesthetized during injection. Exposure may occur during preparation and administration of the drugs and handling of cytotoxic wastes from animals receiving cytotoxic drugs.	





Environmenta	A. The preparation of 6-OHDA including reconstitution, weighing, and
I/ Ventilation	diluting should be performed in a chemical <u>fume hood</u> or biological
Controls	safety cabinet (<i>class II Type B</i>). Work should be done over absorbent pads.
	B. Whenever possible, 6-OHDA should be purchased in sealed rubber capped
	vials so that it can be solubilized by injecting water into the vial cap without
	having to open the vial
	C. Work with animals should be conducted in <u>ABSL-2</u> facility, over
	absorbent pads in a Class II type A2 BSC.
Special	A. <u>Handling:</u> 6-OHDA should be handled in containment and done over
Handling	absorbent pads. Following preparation of 6-OHDA, the work area should
Procedures&	be thoroughly cleaned with soap and water or with Distel (disinfectant).
Storage	Utilize safe sharps procedures (i.e. sharps container in the immediate
Requirements	vicinity, Leurlock syringes are recommended). The fume hood or other
	approved containment must be cleaned upon completion of tasks.
	Following preparation of 6-OHDA, the work area should be thoroughly
	cleaned with soap and water or with Distel. Any visible contamination or
	spills should be cleaned with Distel and then washed with water. Any wipes
	contaminated with 6-OHDA must be disposed as Cytotoxic hazardous
	waste.
	B. All equipment must be decontaminated prior to removal from the room
	nousing the infected animals.
	C. Wash hands thoroughly after handling 6-OHDA.
	D. When transporting 6-OHDA, the viais should be placed in secondary,
	sealed, plastic, labeled, non-breakable containers.
	Storage: Store in a weil-ventilated place. Keep container in a dry place, tightly
Duccoutions	Closed. Do not store next to strong oxidizing agents of strong bases
Frecautions	A NO recompting needles
for Animal	B. Have a sharps container in close vicinity
Use	C Once 6-OHDA is injected animals, animal waste and cages are considered
	hazardous
	D Hands must be washed upon exiting animal room
Animal	A Animals must be housed in filter ton cages marked as biobazards (including
	the name of the chemical hazard 6-OHDA) in negative pressurized IVC
Handling	B. Handling the cages (including bedding) will be done only by the
Practices	researchers at least for 7 days after the last administration and first cage
	change.
	C. Use a class II A2 BSC at all times (especially during injection or any surgical
	procedure), when performing work on these animals and/or when moving
	animals from dirty to clean cages.
	D. Injection animals with 6-OHDA:
	1. Injection of 6-OHDA will be conducted within Class II A2 BSC.
	2. All needles will be disposed of in sharps container - do not recap or
	bend needles.





	3. Injected animals considered hazardous after each administration of of
	6-OHDA.
	4. Take precautions to avoid the creation of aerosols when changing or
	Washing cages, or cleaning the room
	5. Care should be taken to avoid exposure to bedding dust when
	nandling exposed animals and their waste materials during this time.
	6. A respirator is recommended for personnel that are
	immunocompromised or pregnant and for nearthy personnel if work is
	7 Dead animals must be placed in primary plactic base, and then will be
	7. Dead animals must be placed in primary plastic bags, and then will be transforred to incineration
	All surfaces and racks that may be contaminated will be
	6. All surfaces and facks that may be containinated will be docontaminated with detorgont solution followed by water ASAP
	9 The bedding is considered contaminated and requires special handling
	9. The bedding is considered containinated and requires special handling
	F When changing cages use the following technique:
	1 Transfer the animals to clean cages
	2. Insert the used cages in a plastic bag.
	3. Twist the ends of full bags, and seal with tape. Label with wide tape or
	other type of label marked
	"Hazardous Chemical – 6-0HDA ".
	4. Transport the bags of cages to a HEPA filtered dumping station that
	draws air away from the user (it is recommended to use a mask or
	fume hood).
	5. If local ventilation controls are not available for opening cages or
	dumping bedding, a 3M8835 respirator (or other P3 respirator) and
	safety googles must be worn.
	6. All contaminated bedding will be labeled as hazardous materials and
	handled accordingly: incinerated or placed in chemical waste bags for
	disposal.
	7. After this first cage change there is no need for further special
	precautions to be taken regarding the animals or the cages as long as
	the animals have not received any more 6-OHDA.
	8. The cages should then be put in plastic bags (marked as
	"Toxin - 6-OHDA") and sealed for transport to the washroom.
	9. In the washroom, cages should be unloaded from the bags with the
	appropriate PPE as mentioned above and run through the cage wash
	in the conventional manner. Note- cage wash personnel that meet the
	criteria for extra precautions above (pregnant exc.) should take extra
	precautions (additional PPE) when handling cages that may have 6-
Cuill and	UTIDA contamination.
Spill and	A. Spins must be cleaned immediately by properly protected trained
Accident	B Minor Liquid Spills: should be cleaned by personnel wearing a gown
Procedures	goggles and two nairs of gloves (nitrile). Use absorbent nads to wine
	liquid The snill area should then be cleaned thoroughly with a detergent
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	solution followed by clean water. Place waste in plastic bag and then in
	C. <u>Powder/Major Spills:</u> should be cleaned by personnel wearing a gown,
	goggles, and chemically resistant gloves. For powder or major liquid spills
	outside of a fume hood or approved containment, personnel should be
	instructed to leave the laboratory and entrance should be restricted for
	at least 30 min. In addition to the above specified PPE, a respirator and
	safety googles, should also be worn. Contain or absorb spill with
	vermiculite. Collect and place waste in plastic bag and then in the
	chemical waste container. The spill area should then be cleaned
	thoroughly with a detergent solution followed by clean water- prevent
	runoff into drains. Place waste in a plastic bag and then in the chemical
	waste container.
	Prevent, by all means available, spillage from entering drains.
	D. <u>Exposure</u> :
	• In case of skin contact or injection with 6-OHDA, wash the
	affected area with soap and water for at least 15 minutes.
	Consult with a Medical doctor in an Emergency Room (ER)
	• For eye exposure, flush with water for at least
	15 minutes.
	In any case
	Consult with Medical doctor in ER
	Report incident to supervisor
	> Report the accident/injury to the Safety Unit Tel:
	2146/7.
Waste	Dispose all waste material in the appropriate chemical waste container.
Disposal	Unused solutions of 6-OHDA and contaminated solid waste will be disposed
•	of as hazardous chemical material.
I hereby confi	rm that I have read the SOP (Standard Operating Procedure) for
Working with 6	-Hydroxy dopamine (6-OHDA) in animals and agree to follow these
procedures.	
Name:	Title:
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