STANDARD OPERATING PROCEDURE - HYDROGEN PEROXIDE

Date: _____
Principal Investigator: _____
Room & Building: _____
Phone Number: _____

#1 PROCESS

Handling of hydrogen peroxide (30%- 50%) solutions.

#2 DESCRIBE PROCESS, HAZARDOUS CHEMICAL OR HAZARD CLASS

Varies by specific lab.

#3 POTENTIAL HAZARDS

Extremely hazardous substance. Oxidizer/corrosive. Not flammable but may start fire in contact with organic materials.

#4 PERSONAL PROTECTIVE EQUIPMENT

Avoid skin contact, serious burns may result. Gloves made of nitrile, neoprene, PVC, supported natural rubber, and Viton can provide effective skin protection. Wear safety glasses or chemical splash goggles with face shield when using large quantities or chemical splash goggles when using small quantities. Wear rubber, neoprene or PVC apron when using large quantities and splash potential exists.

#5 ENGINEERING/VENTILATION CONTROLS

Fume hoods should be used when using large quantities and when potential for reaction releasing hazardous products exists. An eyewash safety shower must be available and accessible to areas where hydrogen peroxide is used.

#6 SPECIAL HANDLING PROCEDURES AND STORAGE REQUIREMENTS

Hydrogen peroxide is a strong oxidizer. Store in a cool, dark, area away from combustibles materials, organic materials, heat, strong bases, reducing agents, powdered metals, metallic salts and alkalies. Minimize quantities stored and rotate stock. Inspect periodically for bulging containers. Contamination from any source (dust, metals) may cause rapid decomposition with generation of large quantities of oxygen and high pressures. Hydrogen peroxide should not be stored directly on wooden shelves. Store in secondary containment such as plastic tub.

#7 SPILL AND ACCIDENT PROCEDURES

Skin exposure: Rinse affected skin with plenty of water while removing contaminated clothing. Rinse for at least 15 minutes. Seek medical attention.

Eye exposure: Vapors are very corrosive and irritating to the eyes. Symptoms include: pain redness and blurred vision. Splashes may cause tissue destruction. Wash eyes for at least 15 minutes, lifting the upper and lower eyelids. Seek medical attention immediately.

Hydrogen peroxide may release oxygen and accelerate combustion. Hydrogen peroxide may react with organic materials and cause fire.

Small spills: Wear protective equipment indicated above. Flood area with excess water to dilute solution. Use a broad spectrum absorbent to clean up the spill. Do not attempt cleanup if you feel unsure of your ability to do so or if you perceive the risk to be greater than normal laboratory operations. Use a large quantity of water to wash down spills and reduce the flammable vapors. Keep hydrogen peroxide out of confined space, such as a sewer, because of the possibility of an explosion.

Large spills: Notify others in area of spill. Turn off ignition sources in area. Evacuate area and post doors to spill area. Call the ORCBS (355-0153) or DPPS after hours (9-1-1) for spill response. Restrict persons from area of spill or leak until cleanup is complete.

#8 DECONTAMINATION PROCEDURES

Dilute with water.

#9 WASTE DISPOSAL PROCEDURES

Dispose of waste through the ORCBS.

#10 MSDS LOCATION

Call the ORCBS (355-0153) or on the web at http://www.orcbs.msu.edu