

Environmental Health & Safety Department
Chemical Safety Division

Standard Operating Procedure (SOP) for Trypan Blue Use in Laboratories

Purpose:

The purpose of this SOP is to outline standard procedures to be followed by laboratory personnel who work with trypan blue. Principal Investigators are responsible for informing their staff of the hazards associated with working with trypan blue, and ensuring that research activities involving the use of trypan blue are in accordance with the procedures outline in this document.

Uses of Trypan Blue:

Trypan blue is used primarily as a vital stain in proliferation and toxicity assays.

Chemical Information:

Trypan blue: CAS # 72-57-1

Physical Form: Liquid or powder.

Hazards:



Carcinogen. Teratogen. Target organ effect (liver).

Risk Control Measures (Personal Protective Equipment):

The following personal protective equipment is required when working with all forms of trypan blue:

Gloves – disposable nitrile, neoprene, natural rubber, PVC, or butyl gloves

Face shield or goggles & mask

Laboratory coat

NIOSH approved respirator – may be required. Contact Environmental Health & Safety for assistance.

Engineering / Ventilation Controls:

Ensure quick access to a safety shower and eye wash station in areas where trypan blue is used. Minimize formation of dust when working with powder form. Provide appropriate exhaust ventilation when dust is formed.

Storage Requirements:

Keep container tightly closed in a dry and well-ventilated place.

Hazardous Waste Disposal:

Do not pour trypan blue down the drains. Collect waste in an appropriate waste container with secondary containment with proper labeling. Contact Environmental Health & Safety to request a chemical waste pick up (<http://research.uthscsa.edu/safety>).

Spill Response:

Unless otherwise specified, contact Environmental Health & Safety (210-567-2955) for accidental spills of a hazardous material. **The South Texas Poison Center may be reached at 1-800-222-1222 for medical assessment and treatment recommendations at any time for acute exposures to any potential toxin or toxicant. For any immediate life-threatening exposure 9-1-1 should be called.**

Small spills of trypan blue may be cleaned by laboratory personnel. Utilize appropriate personal protective equipment while performing chemical spill clean-up, or contact Environmental Health & Safety for assistance.

Small spills (< 1 liter):

1. Notify other workers in the area of the spill and control traffic through area. If spill occurs in the public corridor, contact UT Police for assistance in traffic control (7-2800).
2. Remove any contaminated clothing.
3. Utilize nearest emergency safety shower or eyewash station.
4. Put on gloves, shoe covers and cover spill with appropriate material.
5. Carefully pour appropriate absorbent material/neutralizing agent over spill.
6. Recover spill materials with broom, squeegee and dustpan and place in a waste bag.
7. Pick up any broken glass with forceps and dispose of in a sharps container.
8. Wipe area clean.
9. Remove gloves and shoe covers before leaving area and place in waste bag.
10. Secure waste bag and label appropriately. This should be disposed of as hazardous waste. Contact Environmental Health & Safety (<http://research.uthscsa.edu/safety>) to request a pick-up.

Large spills (> 1 liter):

1. Evacuate room, close door, to prevent others from entering.
2. Contact Environmental Health & Safety, 567-2955, for assistance. Be prepared to provide the following information: location of spill, time of spill, name of chemical, physical form (powder, liquid, etc.), quantity, injured persons, security of area where spill occurred.

Training: Employees working with trypan blue should be properly trained in the hazards associated with working with trypan blue, as well as proper work practices, including proper handling, storage, disposal, and emergency response.

First Aid for Accidental Exposures:

Skin Contact: Immediately flush skin with water for 15 minutes while removing all contaminated clothing and shoes. Get medical attention immediately. Wash clothing and shoes thoroughly before use.

Eye Contact: Immediately flush eyes with water for 15 minutes, lifting lower and upper lids occasionally. Get medical attention immediately.

Ingestion: If swallowed, get medical attention immediately. Do not induce vomiting. Never give anything by mouth to an unconscious person. If not breathing, give artificial respiration.

Inhalation: Remove to fresh air. If breathing is labored or with coughing, give 100% oxygen. If not breathing, give artificial respiration. **DO NOT GIVE MOUTH TO MOUTH RESUSCITATION.**

Post Exposure/Injury. If a spill results in an exposure (i.e. inhalation, skin contact, eye contact, or ingestion):

- SEEK MEDICAL ATTENTION IMMEDIATELY

- Report incident to your supervisor as soon as possible, and with your supervisor, complete the Employer's First Report of Injury form available at <http://research.uthscsa.edu/safety/workerscomp.shtml>.
- Report all chemical incidents to Environmental Health & Safety at 210-567-2955.

It is important to fill out all of the appropriate paperwork in order to be eligible to collect workers compensation should any illnesses arise from the hazardous exposure in the future. Seek medical attention. Provide a copy of MSDS. Contact UTHSCSA Employee Health & Wellness Clinic (210-567-2788) during normal business hours, or University Hospital Emergency Triage (210-358-2488) after normal business hours or on weekends.

For questions or concerns, please contact:

**Environmental Health & Safety, 1.343T DTL
(210)567-2955**

<http://research.uthscsa.edu/safety>