



Owner C.H.O	DOC. NO. SOP	REV. 2	DATE 12/9/2019
DOC. TITLE SOP FOR TRIZOL			

STANDARD OPERATING PROCEDURES (SOP) FOR WORKING WITH TRIZOL AT AMHERST COLLEGE

General Information

Trizol is the brand name of a compound containing guanidine isothiocyanate, phenol, and ammonium thiocyanate. It is a hazardous compound that is often used in DNA-RNA extraction. When used, Trizol usually forms a pink compound with an odor similar to that of phenol. Trizol is often used in a solution with chloroform, which is a carcinogen. Note that the SOP for Chloroform must also be reviewed if your reaction also involves the use of chloroform

Personal Protective Equipment

When working with Trizol, the following personal protective equipment (PPE) **must** be worn:

Splash goggles

Lab coat

Long pants

Close toed shoes

Nitrile Gloves (double-gloving is recommended; change as often as needed)

Safety Devices

Fume hood – always work with Trizol in a fume hood to prevent exposure by inhalation

Identify the location of all the safety devices in the room before starting your procedure. Also, familiarize yourself with all the possible means of egress

Specific Health Hazards

Trizol has an OSHA Permissible Exposure Limit of 5ppm (19mg/m³). This means that personnel shall not be exposed to more than 5ppm, on average, over an eight-hour work day

Trizol is very toxic and may cause severe burns. Exposure may cause damage organs of the respiratory system and other organ systems, along with genetic defects



Environmental Health & Safety

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Pictogram:

Hazards: Mutagen, Toxic, corrosive

Routes of Entry

Inhalation, skin absorption, skin contact, ingestion, eye contact

If *any part of your body* comes in contact with Trizol, call the Amherst College Emergency phone number 413-542-2111. Also call this number if you begin to feel ill after working with or in the vicinity of Trizol

Inhalation

If inhaled, move to fresh air, and get help. if you begin to feel ill during / after working with Trizol, Call the Amherst College Police Department (ACDP) at x2111 to report it

Eye contact

Use eyewash to flush eyes with water for at least 15 minutes

Skin Contact

Wash skin with plenty of water for 15 minutes. Use safety shower, if needed.

Ingestion

Do not induce vomiting

Storage and Special Handling

Store in a tightly closed container in a cool, dry area that is well ventilated, such as an acid cabinet. Do not store on shelf.

Store away from bases, and metals.

Label all solutions of Trizol with the words: "danger" and "Corrosive, Toxic (mutagen), Environmental", along with the correct concentration.

If you have Trizol that you no longer need, please contact Jason Williams, x2736, for disposal



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Special Handling

No special handling

Spill clean up

Do not attempt to clean up a Trizol spill, regardless of volume and concentration.

If a spill occurs, contact the Chemical Hygiene Officer or The Amherst College Police Department to report it.

Alert everyone in the area, leave the room, and close the door behind you

Disposal

Trizol may be disposed of into the "Halogenated Aqueous" waste container if it is in solution with chloroform. Otherwise it may be disposed of as "Non-halogenated" waste, provided that it is compatible with all other contents in that container

Disposable pipets, pipet tips, and any other disposal devices that come in contact with Trizol may be disposed of into the regular trash, provided they are not grossly contaminated or have a foul odor; in which case they should be disposed of in the solid waste container in the Satellite Accumulation Area

Questions

Contact Jason Williams or Environmental Health and Safety if you have any questions about this SOP or this compound.

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