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Thermo Scientific Richard-Allan Scientific Vytac 10% Formalin Neutralizer Instructions for Use

For in vitro diagnostic use.
For use as a neutralizing agent for formalin.

Intended Use

Thermo Scientific™ Richard-Allan Scientific™ Vytac™ 10% Formalin Neutralizer is intended for use with spent 10% formalin waste only. If your 10% formalin waste contains other contaminants or heavy metals, such as mercury, contact your local publicly owned wastewater treatment facility or Laboratory Applications by dialing 1-800-522-7270, before using Vytac 10% Neutralizer to neutralize and dispose of such waste. The amount of alcohol used as a stabilizer in 10% formalin is not considered a restricted chemical waste.

Summary

Formaldehyde solutions are essential for the proper preservation and fixation of tissue specimens. The daily disposal of 10% formalin waste has become a problem because of the toxic effects and potential cancer risk associated with formaldehyde usage.

When used as directed one part of Vytac 10% Neutralizer reacts with four parts of spent 10% formalin waste to produce a solution containing a small amount of very fine polymer precipitate. The solution and residue may then be safely disposed of down the drain.

Important Notice

Federal, state and local requirements must be observed with regard to hazardous waste disposal. It is the responsibility of the waste generator to comply with local disposal regulations. Contact your local publicly owned wastewater treatment facility prior to disposing of 10% formalin waste neutralized with Vytac 10% Neutralizer. For more information on complying with regulations, please read the Procedure Notes section before performing the neutralization procedure. Contact Laboratory Applications by dialing 1-800-522-7270.

Precautions

Safety Precautions: Suitable protective clothing and adequate ventilation are important when working with formaldehyde solutions. The use of gloves impervious to phosphoric acid and formaldehyde and safety eyewear is recommended.

Storage: Store neutralizer in a cool, dry place because prolonged exposure to elevated temperatures will result in the release of carbon dioxide gas which will pressurize the container. Store neutralizer in the original container with the original vented cap. Do not freeze.

Product Frozen in Transit: Should shipping conditions during winter months result in the product becoming partially or completely frozen, allow Vytac 10% Neutralizer to gradually warm to room temperature. Do not heat product. Heating, as a method to resuspend the crystals, can result in raising the pH and ultimately adversely affect the neutralization performance. Heated product may not perform as specified. Any crystals remaining in the product after attaining ambient temperature should be resuspended by shaking the container. With this mixing, 95% of the crystals should resuspend. If all crystals do not go back into solution, Vytac 10% Neutralizer will still perform as specified. The neutralization performance is not affected if the product is properly thawed as described above.

Instructions for Use

These directions pertain to neutralization of spent 10% formalin waste only. If 37% formaldehyde waste is to be neutralized, it must be diluted to 10% formalin (4% formaldehyde, w/v) before adding Vytac 10% Neutralizer.

1. Obtain a suitable container for collecting and measuring spent 10% formalin waste to be neutralized (such as Vytac Neutralizing Reservoir).
2. Pour spent 10% formalin waste into the reservoir to determine volume.
3. Add 25 mL of neutralizer for every 100 mL of spent 10% formalin waste to be neutralized.
4. Mix this solution with a stirring rod.
5. Cover reservoir and allow to stand for a minimum of 2 hours – See Procedure Notes section #1 and #2.
6. At the end of the neutralization period, mix thoroughly to resuspend any polymer precipitate that has formed and pour solution in small amounts down the drain with copious amounts of water.
7. Rinse the container and pour the residue down the drain, flushing with an equal volume of water.

Note: Some POTWs (Public Owned [wastewater] Treatment Works) may require a pH adjustment prior to disposal down the drain. See Procedure Notes section #3.

Procedure Notes

1. Local government agencies are responsible for enforcing the federal regulations concerning the disposal of formaldehyde. Many of these agencies have established their own guidelines for the amount of formaldehyde in ppm (part per million) that can be poured into their systems. The residual formalin allowed in neutralized solutions for drain disposal by these agencies ranges from just under 1000 ppm to less than 100 ppm. As a general rule, most agencies accept 500 ppm or less for drain disposal. The following table can be used as a general guideline to determine the appropriate neutralization time to meet local requirements.

Neutralization Time	Unbuffered Formalin (ppm)	10% Buffered 10% Formalin (ppm)
0 hr	37,000	37,000
1 hr	520	675
2 hr	300	450
4 hr	225	325
8 hr	150	200
24 hr	75	100

2. The concentration of formaldehyde and buffering salts will vary among the different brands of 10% formalin. Since the speed of the neutralization reaction is driven by the concentration of formaldehyde and affected by the concentration of buffering salts, it may be necessary to allow the formalin Vytac mixture to stand for more than or less than 2 hours before pouring it down the drain. If you require additional assistance, please contact Laboratory Applications by dialing 1-800-522-7270.
3. The pH of the neutralized solution will vary depending upon the pH of the water and the type of formalin, i.e., buffered or unbuffered. Some POTWs may require a pH adjustment prior to disposal down the drain. If required, the pH may be adjusted by adding an acid neutralizer like Vytac ACX or one of the following: 10-20% sodium hydroxide solution or sodium carbonate crystals.

⚠ Caution: Contains – Phosphoric Acid Solution, 1-5% CAS 7664-38-2, pH 2.3 to 2.8.

The remaining chemical ingredients are proprietary in nature. The following are New Jersey Trade Secret Registry Numbers for these proprietary ingredients:

TSRN 80100368-5000p, TSRN80100368-5001p, TSRN80100368-5002p, TSRN80100368-5003P, TSRN80100368-5004P

May be irritating to the eyes, skin and mucus membranes. Inhalation may cause irritation. Skin contact may cause local irritation. Prolonged or repeated exposure may cause dermatitis. Eye contact may cause irritation. Ingestion may cause irritation. Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing mist or vapor. Keep container tightly closed. Use only with adequate ventilation. Wash thoroughly after handling. Target organs affected include eyes, skin, mucus membranes and gastrointestinal tract.

First Aid

If inhaled, remove person from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Keep affected person warm and at rest. Get medical attention immediately. For skin contact, wash affected area with soap and water immediately. For eyes, flush eyes immediately with water for 15 minutes. Get medical attention. **DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious person.** Get medical attention immediately.

Order Information

Product	Size	Qty.	REF
Vytac 10% Formalin Neutralizer	1 gal. (3.5 L)	4/cs	5401
Vytac 10% Formalin Neutralizer	4 gal. (16 L)	1	5405
Vytac 10% Formalin Neutralizer	55 gal. (208 L)	1	5455
Vytac Daily Disposal System Starter Kit containing: 3.5 L container of neutralizer, 8 L neutralizing reservoir with cover 500 mL measuring cup, stirring rod		1	5402
Vytac Neutralizing Reservoir with Cover	8 L-capacity	1	5403
Measuring Cup 500 mL-capacity		1	5404
Stirring Rod		1	5406

Anatomical Pathology

15 C (59 F) – 30 C (86 F)

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