



POLICY

TITLE:	Use of Tribromoethanol (Avertin®)
Policy Number:	2014-030
Responsible Department:	Institutional Animal Care and Use Committee
Policy Contact: Designation: E-Mail:	Donald E. Walters, Ph.D. Chair, Institutional Animal Care and Use Committee dewalters@westernu.edu
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Revised:	8/14/17 (wordsmithing); 408/2020 (Added: place initials of preparer or name of lab on bottles of TBE)

Purpose of Policy: To inform investigators of the potential complications associated with the use of tribromoethanol (Avertin®) and, if approved by the Institutional Animal Care and Use Committee (IACUC), the conditions under which it may be used, prepared and stored.

Policy Information: Tribromoethanol (TBE), previously available under the brand name Avertin®, has been used as a parenteral anesthetic in mice. However, when exposed to light or heat, TBE degrades into the nephrotoxic and hepatotoxic metabolites dibromoacetaldehyde and hydrobromic acid which can result in an animal's death within 24 hours of administration. Intraperitoneal injection of TBE has led to peritonitis and, with repeated use, abdominal adhesions. Intestinal ileus has also been observed and can cause death several weeks after injection.

TBE is no longer available in pharmaceutical grade and, therefore, regulatory agencies no longer consider its use to reflect current standards of veterinary care (See IACUC Policy No. 2014-001 regarding the use of non-pharmaceutical grade compounds).

The use of TBE as an anesthetic, including those uses listed above, must be scientifically justified and approved by the Institutional Animal Care and Use Committee (IACUC). Cost or prior use of TBE alone is not an acceptable justification for its use.

If the use of TBE is approved on scientific grounds, the following conditions will apply:

- TBE may only be used in mice and rats.
- Solutions must be sterilized by passing them through a 0.2 micron filter.
- Solutions must be capped and stored in a dark or foil-covered bottle to prevent breakdown by light.
- TBE solutions must be refrigerated at 4° C and brought to room temperature before use.

- Do not use solutions that are discolored or that contain precipitates. A yellow color indicates the presence of toxic breakdown products.
- Use only solutions with pH > 5.
- Discard all solutions after 4 months.
- Label all bottles of TBE with the drug name and concentration, date of preparation, expiration date and initials of the preparer or name of the lab.
- The dose must not exceed those given below.
- Only a single dose may be given for survival procedures.
- Any adverse or unanticipated events must be immediately reported to the Attending Veterinarian and the Office of the IACUC.

It is recommended that solutions be prepared in a chemical fume hood and that the preparer wear nitrile gloves, a lab coat and safety glasses. Variations in batches might cause slight variations in the effective dose but, for mice, the dosage range is generally between 250-400 mg/kg.