

Policy on Vaporizer Certification

Purpose

To provide guidance on the frequency of certification of isoflurane vaporizers. Isoflurane is a halogenated hydrocarbon that is commonly used as an anesthetic gas. Isoflurane vaporizers are supplied by a number of manufacturers, but are essentially of the same design. Some manufacturers have recommended service intervals, while some do not. Annual recertification of an isoflurane vaporizer most often does not require recalibration or repair. Annual recertification places an undue financial burden on researchers and does not significantly contribute to efficacy or safe operation. This guidance allows for a triennial recertification, providing the isoflurane vaporizer meets the performance standard for efficacy and the unit is operating in a safe manner. Equipment that does not meet performance standards must be labeled as being out of service, and cannot be used until it is repaired.

The IACUC has determined that isoflurane vaporizer recertification must occur triennially, i.e., a vaporizer must be recertified at an interval of no more than three years after its first use, and no more than every three years after that. If the isoflurane vaporizer does not meet the recertification standard above, at any time within the three year time period, use of the vaporizer must cease until it is recalibrated, repaired, and/or recertified.

Documentation of Vaporizer Certification

Vaporizers must have documentation of vaporizer certification to include the following:

1. Date of last service/certification affixed to the vaporizer
2. Test results

The safest method to perform all gas anesthetic activities is to use an active gas scavenging system, a chemical fume hood, or a vacuum snorkel.

References

1. Augusta University, IACUC Policy on Vaporizer Calibration, 2016.
2. Duke University & Duke University Medical Center, IACUC Policy General Inhalational Anesthesia Machine/Vaporizer/Waste Gas Maintenance and Calibration, 2013.
3. UM Program for Monitoring Anesthetic Machines and Vaporizers, 2010.