

UNDERWRITERS LABORATORIES INC. CERTIFICATION REQUIREMENT DECISION

This Certification Requirement Decision is prepared and published by Underwriters Laboratories Inc. (UL). It is normative for the applicable UL Product Certification Program(s); however, it is currently not part of the UL Standard(s) referenced below.

Product Category (CCN): AGGZ, OETX
Standard Number: UL 867
Edition Date: October 9, 2000
Edition Number: 4
Section / Paragraph Reference: 37.2.3
Subject: Chamber Setup

DECISION:

37.2.3 Performance of the test chamber shall be verified prior to each test and after any modification or cleaning through:

- a) Determination of the chamber ozone half-life at 0 forced air changes,
- b) Calculation of the chamber deposition velocity under these conditions using the equation defined in 37.2.4,
- c) Calculation of the air exchange rate necessary to maintain an overall chamber ozone removal rate (N_{apparent}) value of 1.33 using the equation defined in 37.2.5,
- d) Verification of the chamber ozone half-life of 31 ± 2 minutes under the air exchange rate calculated in c), and if necessary, adjustment of the air exchange rate to achieve an ozone half-life of 31 ± 2 minutes, repeating the verification as needed after adjustment of the air exchange rate.

The chamber ozone half-life is determined using an initial steady state concentration of 0.100 to 0.200 ppm ozone. For the purpose of this measurement, steady state is defined as a fluctuation not greater than ± 10 percent or 0.0020 ppm, whichever is greater, during a fifteen minute period.

Exception: If the chamber has initially demonstrated compliance with the requirements of steps a) through d), and with step d) in three or more consecutive tests over a two-day minimum timeframe, only step d) need be repeated immediately prior to the testing of each model. However, steps a) through d) and three or more consecutive step d) tests shall be repeated, at a minimum, bi-annually or after any chamber modification or maintenance activities.

RATIONALE FOR DECISION:

Steps a) through c) of paragraph 37.2.3 allow the test laboratory to easily dial in the necessary chamber air exchange rate based upon theoretical calculations. These steps are intended to assist laboratories during initial chamber setup and following routine maintenance, and are not considered necessary prior to individual test runs.

Additionally, if the laboratory can demonstrate a stable ozone half-life, via compliance with the standard specification over three or more consecutive tests, it can be assumed that the chamber will typically remain stable over the course of testing an air cleaner model at various settings and samples. Also, any

significant change in chamber performance would become evident during the next ozone half-life test and would be corrected to meet the standard specifications. This CRD clarifies, under stable chamber conditions, only step d) as necessary between the testing of air cleaner models.

Copyright © 2009 Underwriters Laboratories Inc.

UL, in performing its functions in accordance with its objectives, does not guarantee or warrant the correctness of Certification Requirement Decisions it may issue or that they will be recognized or adopted by anyone. Certification Requirement Decisions are the opinion of Underwriters Laboratories Inc. in practically applying the requirements of the standard. They do not represent formal interpretations of the standard under American National Standards Institute (ANSI) processes. UL shall not be responsible to anyone for the use of or reliance upon Certification Requirement Decisions by anyone. UL shall not incur any obligation or liability for damages, including consequential damages, arising out of or in connection with the use or reliance upon Certification Requirement Decisions. The electronic version of the Certification Requirement Decision is the current version and previously printed copies may be outdated.

This document is published as a service to UL's certification customers