

UCI EH&S Aircuity® Implementation Criteria
Revision May 31, 2011

A. Installation Criteria

Aircuity® may be installed in all labs, except:

1. High Risk Laboratories (based upon the [Arizona State University Laboratory Risk Categories](#)).

This includes:

- Select agents labs
- Biosafety level 3 labs (BSL3)
- Labs with equipment or areas that have higher-than-usual ventilation requirements (regulated areas, select agent storage areas, clean rooms, etc.)
- Labs with highly toxic gases in any quantity
- Any areas that require specific ventilation for compliance with regulations or certification (i.e. TB isolation rooms)
- Lab rooms identified as high risk by bench top screening criteria or follow-up exposure monitoring studies*

*Bench top risk assessments will be conducted by EH&S in laboratory rooms to identify “high risk laboratories” as defined above and to evaluate work with chemicals of concern that are not detected by OptiNet sensors (and are conducted outside of a fume hood on the bench top).

2. Bench Top Screening Criteria for Exclusion from Proposed 4/2 ACH Ventilation Rates

If the following conditions are found within a laboratory space, EH&S will recommend that the space be excluded from the proposed 4 ACH (occupied) and 2 ACH (unoccupied) ventilation rate setting:

- 1) Asphyxiation hazard (e.g. use of large quantities of nitrogen (N₂) gas or liquid);
- 2) Use of protocols outside of a fume hood in which any of the chemicals listed in the document “[High Acute Toxicity by Inhalation](#)” may be inhaled (potential immediately dangerous to life and health (IDLH) scenario);
- 3) Autoclave rooms with strong odor (odor control)

3. Exposure Monitoring Study Criteria for an Increase of Ventilation Rate

EH&S will recommend an increase in ventilation from 4 ACH (occupied) and 2 ACH (unoccupied), to a higher rate under the following conditions:

- 1) Data indicating any detectable exposure to a select carcinogen. A select carcinogen is any substance which meets one of the following criteria:
 - (1) It is regulated by Cal/OSHA as a carcinogen; or
 - (2) It is listed under the category, "known to be carcinogens," in the Annual Report on Carcinogens published by the National Toxicology Program (NTP); or
 - (3) It is listed under Group 1 ("carcinogenic to humans") by the International Agency for Research on Cancer Monographs (IARC); or
 - (4) It is listed in either Group 2A or 2B by IARC or under the category, "reasonably anticipated to be carcinogens" by NTP.

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- 2) Data indicating any detectable exposure to a [Reproductive Toxin via Inhalation](#).
- 3) Data indicating that a chemical exposure limit has been exceeded.

B. Plan for Future Reduction of Ventilation Rate

Whenever the conditions listed in Sections A.2 or A.3 of this document require increased laboratory ventilation, EH&S will strive to make a reduction in laboratory ventilation possible by elimination, control, or reduction of exposure risk. These efforts may include:

- 1) Encouraging researchers to conduct specific experiments inside a fume hood;
- 2) Substituting less hazardous chemicals in existing bench top protocols;
- 3) Encouraging researchers to buy pre-made solutions rather than creating their own (e.g. gels with ethidium bromide, sodium azide solutions).