

**SECTION 234000 – AIR FILTRATION**

- 1.0 Water and oil wash systems are prohibited.
- 2.0 Carbon type filters are permitted for special applications requiring the removal of gases only after review and approval by the University Engineering Department.
- 3.0 The minimum filter arrangement for supply air handling units for any application (laboratory, office, etc.) shall be specified as 30% efficient (Merv 8) pre-filter and 95% efficient (Merv 14) final filter as tested in accordance with ASHRAE Standard 52.2. For recirculating systems, 85% (Merv 13) final filtration is acceptable. The maximum filter face velocity shall not exceed 500 feet per minute (FPM).
- 4.0 For each project application, review the following items with the Office of Environmental Health and Radiation Safety (OEHRs):
  - A. Filter arrangement (draw through vs. blow through, etc).
  - B. Higher efficiency applications requirements (HEPA, etc.).
  - C. Applications that require terminal filtration, vivarium holding room exhaust grilles, BL-3 labs, etc.
- 5.0 Any deviation from the above standard filters must be submitted to the University's Representative for review and approval.
- 6.0 For fan sizing purposes, the manufacturer's recommended maximum "dirty" static pressure drop shall be used.
- 7.0 Filter gauges shall be installed across each filter bank. One gauge may serve pre-filter/final filter banks.
- 8.0 Specification shall require (1) new complete spare set of filters for each filter bank when construction work is completed.
- 9.0 Each filter bank within an air handling unit shall utilize all same size filters.
- 10.0 Use of bag-type filters is discouraged. Box or cartridge type filters shall be utilized due to lower pressure drop.
- 11.0 Where possible, design shall incorporate side loading filters on tracks to avoid the use of filter clips.
- 12.0 Refer to HVAC Section 230000 for other specific system filtration requirements.