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.