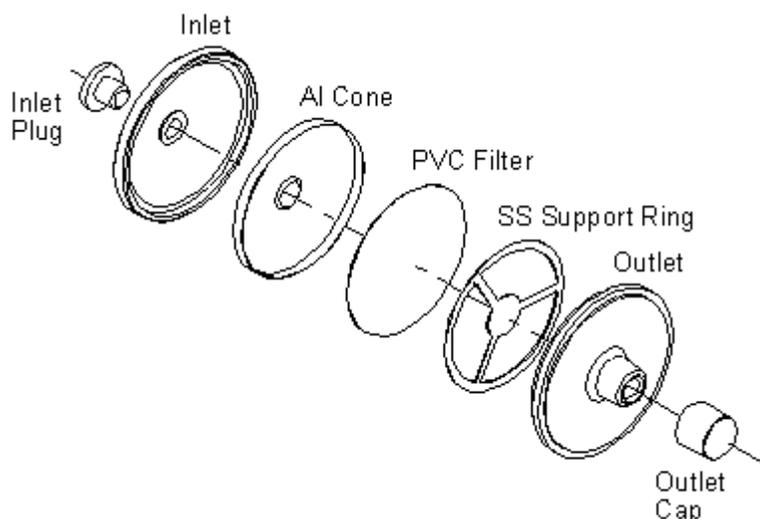


APPENDIX A

PRE-WEIGHED FILTERS

The SLTC provides pre-weighed filters for gravimetric analysis. Filter/cassette units, when assembled in a cassette by the manufacturer, are tested for leaks. These filter/cassette units reduce sample preparation time by CSHOs because the filters are weighed at the SLTC and the units are shipped to the field fully assembled and ready for use. The filter/cassette units are returned to the SLTC for gravimetric determinations and additional analyses as needed. The filter medium is 5- μm , 37-mm diameter, low-ash PVC or PTFE (TEFLON). The PVC filters should be used for silica (quartz) analysis, aluminum, and other appropriate substances having high PELs or requiring gravimetric analysis. The PTFE filters are used for asphalt fumes. The filters may be used with or without a cyclone. Other than for silica, if the gravimetric analysis yields a result less than the PEL for the requested substance(s), no further analysis will be provided unless specifically requested. The filter/cassette unit is shown below in Figure A-1. [Appendix B](#) includes a partial listing of substances that should be sampled and analyzed gravimetrically using pre-weighed cassettes.

FIGURE A-1. FILTER/CASSETTE UNIT



Due to the slightly smaller size of the filter, check it frequently to avoid overloading. This can be accomplished by looking into the inlet sampling port of the cassette. Use a flashlight, if necessary. Visual observation of the airborne dust in the workplace may assist in determining how frequently to check the filter for overloading. If used with a cassette, do not lift the cyclone in such a way that particles from the grit pot could be deposited on the filter.

As shown in Figure A-1, the inlet side of the cassette is marked on the polystyrene cassette. This is the side of the filter cassette with the aluminum cone antistatic shield. The stainless steel support (Figure A-2) is visible from the outlet side of the assembly. Each of the filter assemblies is bar coded for weighing purposes (Figure A-4). To aid in tracking the filters, please use the barcode number as the sample submission number when completing the OIS air sampling worksheet. A blank should be included with every set of samples.

FIGURE A-2. STAINLESS STEEL FILTER SUPPORT



FIGURE A-3 OUTLET VIEW OF A FILTER CASSETTE (connect to sampling pump)



FIGURE A-4. INLET VIEW OF A FILTER CASSETTE (open to atmosphere, pointed downward during sampling)



The filter/cassette assembly can be used with both nylon cyclone and holder assemblies currently in field use; however, the standard MSA coupler (used with a standard 2- or 3-piece cassette) will not fit these cassettes. Another coupler available from MSA (part #457391), which is plastic instead of stainless steel, can be obtained from the CTC.