

# Operating Instructions

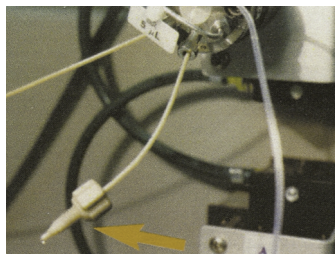
## Advantage™ Filter Kit

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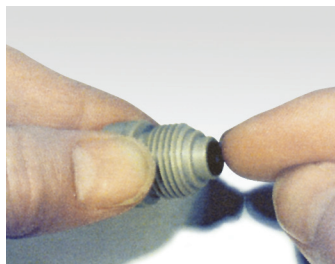
In addition to these instructions, this kit contains an Advantage™ Filter Holder like the one pictured to the right, a 10cm piece of PEEK™ tubing, a finger-tight bushing and ferrule, and a vial of filters.



Before using the new Advantage Filter, we strongly recommend that you replace the stainless steel outlet tubing from your instrument's injector with the piece of PEEK tubing and finger-tight bushing and ferrule as illustrated in the figure to the right. This modification is not only convenient, but it will also prevent possible damage to the Holder being caused by a metal bushing, ferrule and tube.



Installation of the small filter element is accomplished by unscrewing the two parts of the holder and placing the filter into the recess of the male piece as shown in the figure on the right. Hold the male end of the assembly with the inserted filter facing up and reassemble the Holder by screwing the two ends together until they are snug. You will feel a slight increase in resistance as the high pressure seal is being made.



To replace a filter, disassemble the holder and remove the old unit with a fingernail or tip of a spatula. Inspect both sections of the Holder for buffer salt crystals or other debris. Rinse and dry if necessary before inserting a new filter element.

The Advantage Filter can be screwed directly into the inlet end of an HPLC column. An optional female/female version has standard 10-32 bushings on each end. **Do not over-tighten the holder or bushings.** The knurls on the holder are to aid in opening and closing the holder. Never use tools to tighten the holder together or to tighten a holder onto a column.



## Parts and Accessories:



Part No.	Description
ADV-FFKIT	<i>Note: Filter Starter Kits include a package of 10 Filters</i> Advantage Filter Starter Kit (Standard)
ADV-FWKIT	Advantage Filter Starter Kit (for Waters HPLC columns)
ADV-FRKIT	Advantage Filter Starter Kit (for Rheodyne injection valves)
ADV-SFILT	Stainless Steel replacement Filters, 0.5 $\mu$ m pore size (pkg of 10)
ADV-TFILT	Titanium replacement Filters, 0.5 $\mu$ m pore size (pkg of 10)
ADV-PFILT	PEEK replacement Filters, 0.5 $\mu$ m pore size (pkg of 10)
ADV-FIT	Replacement PEEK Bushing and Ferrule (1ea)
ADV-TUBE	10cm, 1/16" x 0.010" PEEK tubing

## Specifications:

**Materials:** The Advantage™ Filter Holder is made of black or natural tan PEEK (polyetherether ketone). The 1/16" tubing and ferrule are PEEK, and the finger-tight fitting is made of PEEK or acetal plastic. The 0.5 $\mu$ m pore stainless steel, titanium, or PEEK filters are held in a PEEK ring.

**Temperature:** Maximum recommended operating temperature is 80°C.

**Pressure:** The maximum operating pressure is limited by the plastic bushing and PEEK ferrule (approximately 5,000PSI). The holder has survived destructive testing to over 9,000PSI.

**Solvents:** The holder has very good chemical resistance to most commonly used HPLC solvents and buffer systems. DMSO, Me<sub>2</sub>Cl<sub>2</sub>, and THF can cause PEEK to swell over a period of time so they are not recommended for routine use.

**Volume Variance:** The Holder and Filter's contribution to an HPLC instrument's total system volume variance is less than 20 $\mu$ L<sup>2</sup> at a 200 $\mu$ L/min flow rate.

## Warranty:

Analytical Sales & Services products are manufactured and quality-controlled to the highest standards and are warranted to be free of manufacturing defects. A customer feeling that a product does not measure up to performance expectations must request a returned goods authorization from the place of purchase within 30 days of the invoice date. Analytical Sales & Services products are not intended for use in clinical or diagnostic applications. Specifications are subject to change without notice.



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