

UniFlash Planar Station



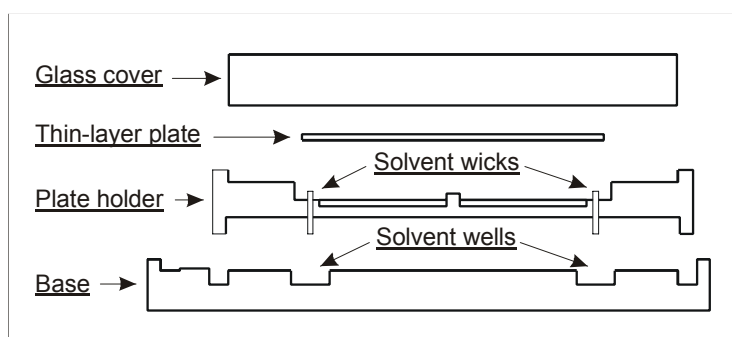
The UniFlash™ product group from Hologent Technologies offers a complete solution for Flash chromatography. The new UniFlash Planar Station™ provides the user with a cost effective, rapid approach to method development for Flash chromatography, using parallel, horizontal thin-layer (“Planar”) separations (Figure 1). The unique design of the Planar Station allows the user to run four different chromatographic runs simultaneously, each employing discrete development solvents. Standard microscope size plates (2.5 x 7.5cm), readily available commercially, are used in the Planar Station. Chromatographic development of the separations typically occurs in less than 2 minutes, allowing quick identification of optimum mobile phase conditions for the Flash chromatographic separation. Hologent offers microscope size thin-layer plates in both Merck 60 and UniFlash silicas. For Flash separations employing these silica chemistries, the results from the Planar Station are directly translatable to the Flash chromatography separation.

DESIGN

The UniFlash Planar Station consists of three main parts - the base, the plate holder, and the glass cover. The base is designed with 4 separate development solvent wells. Each well holds up to 1ml of mobile phase. The Teflon® plate holder holds two microscope slide size thin-layer plates. Each of these plates contacts two separate solvent wicks located at each end of the plate. These porous wicks transfer development solvent from the wells in the base onto the plates. The cover is a ½” thick glass plate. The glass cover is positioned on the plate holder, forming a vapor seal around the chambers containing



Figure 1 - UniFlash Planar Station



the thin layer plates. This provides for very efficient vapor equilibration of the plate surface with the respective development solvents, creating fast, straight spot development paths.

OPERATION

One milliliter of each development solvent are added to the solvent wells in the base. The plate holder is placed in the plate loading position over the base. Thin-layer plates spotted with sample at both ends are placed face down on the plate holder such that the plate ends contact the solvent wicks.

Next the glass cover is placed on the plate holder over the TLC plates, creating four separate sealed vapor chambers. The small size of these chambers creates a very efficient development environment for chromatography.

The plate holder/cover assembly is shifted to the development position over the base, causing the bottom edges of each solvent wick to contact the respective development solvent in the wells of the base. Solvents are wicked up to the plates, and the four separations develop across the plates.

USAGE

The ability to evaluate four separate solvent conditions simultaneously within a single device shortens method development time for Flash chromatography considerably. The most common approaches taken are 1) evaluation of development solvent selectivity using four separate combinations of different solvents (for example, hexane/methylene chloride, hexane/ethyl acetate, hexane/THF, and hexane/isopropanol), or 2) evaluation of solvent strength with different relative compositions of a single solvent pair (for example, hexane/ethyl acetate at four different percentage mixtures). A similar evaluation using conventional thin-layer chromatography requires four separate development jars, consuming more time and substantially more solvent, with poorer quality chromatography.

ORDERING INFORMATION

<u>352-1050</u>	UniFlash Planar Station 4x - (2.5x7.5)	<u>\$295</u>
352-1051	UniFlash Planar Station 2x - (5x10)	\$295
352-1055	Replacement Wicks, 4x - (2.5 x 7.5), 100/pk	\$8
352-1056	Replacement Wicks, 2x - (5 x 10), 100/pk	\$12
623-0037	UniFlash TLC Plates, 2.5 X 7.5cm, 100/pk	\$125
625-0037	Merck TLC Plates, 2.5 X 7.5cm, 100/pk	\$135

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