



RoboColumns®

RoboColumns are miniaturized chromatographic columns pre-packed with TOYOPEARL ion exchange, mixed-mode, hydrophobic interaction or affinity media. These columns are available in different volumes and can be operated with a robotic liquid handling system, such as the Freedom EVO° from TECAN. This approach allows automated highthroughput, small-scale biochromatographic separations of protein samples by running up to eight individual columns simultaneously. Liquid flow in the columns is driven by positive pressure liquid displacement, rather than by air pressure, thus mimicking the situation in columns individually connected to a conventional standalone chromatography system. RoboColumns are packed with TOYOPEARL media by Repligen GmbH, they are identical to the RoboColumns supplied by Repligen GmbH. A 96-well array plate is available to arrange the up to 96 RoboColumn units.

HIGHLIGHTS

Miniaturized column format

High throughput parallel chromatography

Automated screening of resins and parameters

Better understanding of the design space applications

RoboColumns can be used in a wide range of applications, including parallel resin screening, screening and optimization of separation conditions, scale-down experiments as well as high throughput sample preparation.

SCREENING

Parallel screening of chromatographic media as well as screening of conditions for binding, washing, and elution e.g. buffer pH, ionic strength, type of salt. When screening chromatographic conditions in order to optimize the separation and explore the design space the experimental set-up should simultaneously test many different conditions. Design of Experiments (DoE), a statistical approach used to define those factors having the greatest impact on the process, is a suitable tool to minimize the number of experiments needed.



Elution profile of a protein A capture eluate on RoboColumns packed with Toyopearl SuperQ-650M at various conditions. Data kindly provided by T. Schröder, Repligen GmbH.

Figure 1 shows a screening experiment to optimize the chromatographic parameters for the intermediate flow-through anion exchange step in a purification platform for monoclonals. Protein binding of a Protein A capture eluate on RoboColumns packed with TOYOPEARL SuperQ-650M was analyzed by varying salt concentration and pH of loading and washing buffer. Best results were achieved using 20 mmol/L sodium phosphate, 80 mmol/L sodium chloride, pH 6.5.

SEPARATION

RoboColumns can be applied to perform small scale purifications/separations either isocratic or by applying a step gradient. Examples are small scale mAb purification using Protein A affinity for in-process monitoring of fermentation or sample preparation prior to subsequent analysis by MS, ELISA or CGE/SDS-Page.

FORMATS

RoboColumns are available in two formats with 200 μ L (bed height of 10 mm) and 600 μ L (bed height of 30 mm) resin volume, respectively. They are supplied in a row of eight units pre-packed with the same TOYOPEARL resin and sealed with two removable silicon cover seals for proper storage.

Ordering information

RoboColumn®

They can be individually arranged on a 96 position array plate. All chromatographic media used in the RoboColumns are also available in larger pre-packed SkillPak[™] columns of 1 mL or 5 mL volume and as bulk resins for use at all scales.

RoboColumn° is a registered trademark of Repligen GmbH. SkillPak is a trademark of Tosoh Bioscience LLC

Freedom EVO[®] and Freedom EVOware[®] are registered trademarks of Tecan

Group Ltd.; Te-Chrom[™] and Te-Stack[™] are trademarks of Tecan Group Ltd.

0045027 RoboColumn Sulfate-650F 200 x 8 75 0045028 RoboColumn GigaCap S-650S 200 x 8 75 0045021 RoboColumn GigaCap S-650S 200 x 8 75 0045023 RoboColumn GigaCap S-650M 200 x 8 75 0045002 RoboColumn GigaCap S-650M 200 x 8 75 0045002 RoboColumn GigaCap S-650M 200 x 8 75 004502 RoboColumn GigaCap 0-650S 200 x 8 75 0045002 RoboColumn GigaCap 0-650M 200 x 8 75 0045005 RoboColumn GigaCap 0-650M 200 x 8 75 0045004 RoboColumn GigaCap 0-650M 200 x 8 75 0045005 RoboColumn GigaCap 0-650M 200 x 8 75 0045007 RoboColumn GigaCap DEAE-650M 200 x 8 75 0045007 RoboColumn NH-750F 200 x 8 75 0045021 RoboColumn NX-Trp-650M 200 x 8 75 0045032 RoboColumn Ca*PureHA 200 x 8 75 0045033 RoboColumn Remyl-600M	Part-no	Description	Volume (µL)	Particle size (µm)	Pore size (nm
0045023 RoboColumn GigaCap S-650S 200 x 8 75 0045024 RoboColumn GigaCap S-650S 600 x 8 75 0045001 RoboColumn GigaCap S-650M 200 x 8 75 0045025 RoboColumn GigaCap S-650M 600 x 8 75 0045025 RoboColumn GigaCap O-650S 200 x 8 75 0045026 RoboColumn GigaCap O-650M 200 x 8 75 0045005 RoboColumn GigaCap O-650M 200 x 8 75 0045005 RoboColumn GigaCap CM-650M 200 x 8 75 0045005 RoboColumn GigaCap DE4-650M 200 x 8 75 0045006 RoboColumn GigaCap DE4-650M 200 x 8 75 0045007 RoboColumn MigaCap DE4-650M 600 x 8 75 0045021 RoboColumn MX-750F 200 x 8 75 0045052 RoboColumn MX-710-650M 200 x 8 75 0045053 RoboColumn MX-710-650M 200 x 8 65 0045054 RoboColumn MX-710-650M 200 x 8 65 0045053 RoboColumn MX-170-650M	0045027	RoboColumn Sulfate-650F	200 x 8	75	100
0045024 RoboColumn GigaCap S-650M 200 × 8 75 0045001 RoboColumn GigaCap S-650M 200 × 8 75 0045025 RoboColumn GigaCap O-650S 200 × 8 75 0045026 RoboColumn GigaCap O-650S 600 × 8 75 0045026 RoboColumn GigaCap O-650M 200 × 8 75 0045003 RoboColumn GigaCap O-650M 200 × 8 75 0045005 RoboColumn GigaCap O-650M 200 × 8 75 0045004 RoboColumn GigaCap O-650M 200 × 8 75 0045005 RoboColumn GigaCap DEAE-650M 200 × 8 75 0045007 RoboColumn GigaCap DEAE-650M 200 × 8 75 0045021 RoboColumn NHz-750F 200 × 8 75 0045022 RoboColumn MX-Trp-650M 200 × 8 75 0045051 RoboColumn MX-Trp-650M 200 × 8 39 0045052 RoboColumn Phenyl-600M 200 × 8 39 0045053 RoboColumn Phenyl-600M 200 × 8 65 0045053 RoboColumn Phenyl-600M 200 × 8 65 0045053 RoboColumn Phenyl-650M<	0045028	RoboColumn Sulfate-650F	600 x 8	75	100
D045001 RobaColumn GigaCap S-650M 200 x 8 75 D045002 RobaColumn GigaCap O-650S 200 x 8 75 D045026 RobaColumn GigaCap O-650S 200 x 8 75 D045026 RobaColumn GigaCap O-650S 600 x 8 75 D045003 RobaColumn GigaCap O-650M 200 x 8 75 D045005 RobaColumn GigaCap CM-650M 600 x 8 75 D045006 RobaColumn GigaCap D-AE-650M 600 x 8 75 D045007 RobaColumn GigaCap DEAE-650M 600 x 8 75 D045021 RobaColumn Miz-750F 200 x 8 75 D045022 RobaColumn MX-Trp-650M 600 x 8 75 D045051 RobaColumn MX-Trp-650M 600 x 8 75 D045052 RobaColumn MX-Trp-650M 600 x 8 75 D045051 RobaColumn MX-Trp-650M 600 x 8 75 D045052 RobaColumn MX-Trp-650M 600 x 8 65 D045053 RobaColumn Phenyl-600M 600 x 8 65 D045053 RobaColumn Butyl-600M 200 x 8 65 D045053 RobaColumn PFG-600M	045023	RoboColumn GigaCap S-650S	200 x 8	75	100
01045002 RobcColumn GigaCap Q-650S 200 x 8 75 0045025 RobcColumn GigaCap Q-650S 200 x 8 75 00450303 RobcColumn GigaCap Q-650M 200 x 8 75 00450404 RobcColumn GigaCap Q-650M 200 x 8 75 0045005 RobcColumn GigaCap Q-650M 600 x 8 75 0045006 RobcColumn GigaCap CM-650M 200 x 8 75 0045007 RobcColumn GigaCap DEAE-650M 200 x 8 75 0045008 RobcColumn GigaCap DEAE-650M 200 x 8 75 0045021 RobcColumn Mix-Top-650M 200 x 8 75 0045022 RobcColumn MX-Trp-650M 200 x 8 75 0045051 RobcColumn MX-Trp-650M 200 x 8 39 0045052 RobcColumn Ca**Pure-HA 200 x 8 39 0045053 RobcColumn Phenyl-600M 200 x 8 65 0045053 RobcColumn Phenyl-600M 200 x 8 65 0045054 RobcColumn Phenyl-600M 200 x 8 65 0045053 RobcColumn Phenyl-600M 200 x 8 65 0045054 RobcColumn Phenyl-600M 200 x 8 65 0045055 RobcColumn Phenyl-650M 200 x 8 65 0045054 RobcColumn	045024	RoboColumn GigaCap S-650S	600 x 8	75	100
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0045053 RoboColumn Ca**Pure-HA 200 x 8 39 0045054 RoboColumn Ca**Pure-HA 600 x 8 39 0045054 RoboColumn Phenyl-600M 200 x 8 65 0045031 RoboColumn Phenyl-600M 600 x 8 65 0045033 RoboColumn Butyl-600M 200 x 8 65 0045034 RoboColumn Butyl-600M 600 x 8 65 0045035 RoboColumn PPG-600M 200 x 8 65 0045036 RoboColumn PPG-600M 200 x 8 65 0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Phenyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Butyl-650M 600 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 65 0045066 RoboColumn AF-rProtein L650F 200 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8<	045051	RoboColumn MX-Trp-650M	200 x 8	75	100
Nu45054 RoboColumn Ca**Pure-HA 600 x 8 39 045031 RoboColumn Phenyl-600M 200 x 8 65 045032 RoboColumn Phenyl-600M 600 x 8 65 045033 RoboColumn Butyl-600M 200 x 8 65 045034 RoboColumn Butyl-600M 600 x 8 65 045035 RoboColumn Butyl-600M 600 x 8 65 045036 RoboColumn PPG-600M 600 x 8 65 045037 RoboColumn Phenyl-650M 200 x 8 65 045038 RoboColumn Butyl-650M 200 x 8 65 045039 RoboColumn Butyl-650M 200 x 8 65 045090 RoboColumn Butyl-650M 600 x 8 65 045090 RoboColumn Hexyl-650C 200 x 8 65 045091 RoboColumn Hexyl-650C 200 x 8 45 045092 RoboColumn AF-rProtein L650F 200 x 8 45 045066 RoboColumn AF-rProtein A HC-650F 200 x 8 45 045061 RoboColumn AF-rProtein A HC-650F 600 x 8 <t< td=""><td>045052</td><td>RoboColumn MX-Trp-650M</td><td>600 x 8</td><td>75</td><td>100</td></t<>	045052	RoboColumn MX-Trp-650M	600 x 8	75	100
0045031 RoboColumn Phenyl-600M 200 x 8 65 0045032 RoboColumn Phenyl-600M 600 x 8 65 0045033 RoboColumn Butyl-600M 200 x 8 65 0045034 RoboColumn Butyl-600M 600 x 8 65 0045035 RoboColumn PPG-600M 600 x 8 65 0045036 RoboColumn PPG-600M 600 x 8 65 0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Phenyl-650M 200 x 8 65 0045039 RoboColumn Butyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 600 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn AF-rProtein L650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045061 RoboColumn AF-rProtein A-650F </td <td>045053</td> <td>RoboColumn Ca⁺⁺Pure-HA</td> <td>200 x 8</td> <td>39</td> <td></td>	045053	RoboColumn Ca⁺⁺Pure-HA	200 x 8	39	
0045032 RoboColumn Phenyl-600M 600 x 8 65 0045033 RoboColumn Butyl-600M 200 x 8 65 0045034 RoboColumn PPG-600M 200 x 8 65 0045035 RoboColumn PPG-600M 200 x 8 65 0045036 RoboColumn PPG-600M 200 x 8 65 0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Phenyl-650M 200 x 8 65 0045039 RoboColumn Butyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Butyl-650M 200 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 65 0045093 RoboColumn AF-rProtein L-650F 200 x 8 45 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F	045054	RoboColumn Ca++Pure-HA	600 x 8	39	
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0045034 RoboColumn Butyl-600M 600 x 8 65 0045035 RoboColumn PPG-600M 200 x 8 65 0045036 RoboColumn PPG-600M 600 x 8 65 0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Phenyl-650M 200 x 8 65 0045039 RoboColumn Butyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Butyl-650C 200 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 200 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045061 RoboColumn AF-rProtein A -650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045063 RoboColumn AF-rProtein A-650F 200 x 8 45 0045064 RoboColumn	045032	RoboColumn Phenyl-600M	600 x 8	65	75
0045035 RoboColumn PPG-600M 200 x 8 65 0045036 RoboColumn PPG-600M 600 x 8 65 0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Phenyl-650M 600 x 8 65 0045039 RoboColumn Butyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn Hexyl-650C 200 x 8 45 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 200 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062	045033	RoboColumn Butyl-600M	200 x 8	65	75
0045036 RoboColumn PPG-600M 600 × 8 65 0045037 RoboColumn Phenyl-650M 200 × 8 65 0045038 RoboColumn Butyl-650M 600 × 8 65 0045090 RoboColumn Butyl-650M 200 × 8 65 0045091 RoboColumn Butyl-650C 200 × 8 65 0045092 RoboColumn Hexyl-650C 200 × 8 100 0045092 RoboColumn AF-rProtein L-650F 200 × 8 45 0045065 RoboColumn AF-rProtein L-650F 200 × 8 45 0045064 RoboColumn AF-rProtein L-650F 200 × 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 × 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 × 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 × 8 45 0045062 RoboColumn AF-rProtein A HC-650F 200 × 8 45 0045061 RoboColumn AF-rProtein A -650F 200 × 8 45 0045062 RoboColumn AF-rProtein A-650F 600 × 8 45 0045062 RoboColumn AF-rProtein A-650F 600 × 8 45 00	045034	RoboColumn Butyl-600M	600 x 8	65	75
0045037 RoboColumn Phenyl-650M 200 x 8 65 0045038 RoboColumn Butyl-650M 600 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 65 0045092 RoboColumn AF-rProtein L-650F 200 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045063 RoboColumn AF-rProtein L-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45	045035	RoboColumn PPG-600M	200 x 8	65 9	75
0045038 RoboColumn Phenyl-650M 600 x 8 65 0045090 RoboColumn Butyl-650M 200 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 65 0045092 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn AF-rProtein L-650F 200 x 8 45 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A-650F 600 x 8 45 0045064 RoboColumn AF-rProtein A-650F 600 x 8 45	045036	RoboColumn PPG-600M	600 x 8	65	75
0045089 RoboColumn Butyl-650M 200 x 8 65 0045090 RoboColumn Butyl-650M 600 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn AF-rProtein L-650F 200 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045037	RoboColumn Phenyl-650M	200 x 8		100
0045090 RoboColumn Butyl-650M 600 x 8 65 0045091 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn Hexyl-650C 600 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045061 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045062 RoboColumn AF-rProtein A -650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045038	RoboColumn Phenyl-650M	600 x 8	65 45 48 8	100
0045091 RoboColumn Hexyl-650C 200 x 8 100 0045092 RoboColumn Hexyl-650C 600 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045061 RoboColumn AF-rProtein A -650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A -650F 600 x 8 45 0045061 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A-650F 600 x 8 45 0045064 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045089	RoboColumn Butyl-650M	200 x 8	8 8 8 8 65 4 4	75
0045092 RoboColumn Hexyl-650C 600 x 8 100 0045065 RoboColumn AF-rProtein L-650F 200 x 8 45 0045066 RoboColumn AF-rProtein L-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A-650F 600 x 8 45 0045064 RoboColumn AF-rProtein A-650F 600 x 8 45 0045064 RoboColumn AF-rProtein A-650F 600 x 8 45	045090	RoboColumn Butyl-650M	600 x 8	65	75
0045065 RoboColumn AF-rProtein L-650F 200 × 8 45 0045066 RoboColumn AF-rProtein L-650F 600 × 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 × 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 × 8 45 0045061 RoboColumn AF-rProtein A HC-650F 600 × 8 45 0045062 RoboColumn AF-rProtein A-650F 200 × 8 45 0045062 RoboColumn AF-rProtein A-650F 600 × 8 45 0045062 RoboColumn AF-rProtein A-650F 600 × 8 45 0045062 RoboColumn AF-rProtein A-650F 600 × 8 45 0045071 RoboColumn HW-40F 200 × 8 45	045091	RoboColumn Hexyl-650C	200 x 8	100	100
0045066 RoboColumn AF-rProtein L-650F 600 x 8 45 0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045092	RoboColumn Hexyl-650C	600 x 8	100	100
0045063 RoboColumn AF-rProtein A HC-650F 200 x 8 45 0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045065	RoboColumn AF-rProtein L-650F	200 x 8	45	100
0045064 RoboColumn AF-rProtein A HC-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045061 RoboColumn AF-rProtein A-650F 600 x 8 45 0045062 RoboColumn AF-rProtein A-650F 200 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045066	RoboColumn AF-rProtein L-650F	600 x 8	45	100
0045061 RoboColumn AF-rProtein A-650F 200 x 8 45 0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045063	RoboColumn AF-rProtein A HC-650F	200 x 8	45	100
0045062 RoboColumn AF-rProtein A-650F 600 x 8 45 0045071 RoboColumn HW-40F 200 x 8 45	045064	RoboColumn AF-rProtein A HC-650F	600 x 8	45	100
0045071 RoboColumn HW-40F 200 x 8 45	045061	RoboColumn AF-rProtein A-650F	200 x 8	45	100
	045062	RoboColumn AF-rProtein A-650F	600 x 8	45	10
1045072 RoboColumn HW-40F 600 x 8 45	045071	RoboColumn HW-40F	200 x 8	45	Ę
	045072	RoboColumn HW-40F	600 x 8	45	!

Array Plate

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