

Automate your cfDNA isolation workflows with a high-throughput integrated solution

Isolate high-quality cfDNA to help save time by streamlining your workflow and reducing multiple manual steps

Integrate the Thermo Scientific[™] KingFisher[™] Presto Purification System into a Tecan[®] Fluent[®] 780 Automation Workstation to achieve automated workflows without the need to prepare plates and reagents for sample preparation (Figure 1). Reduce operator hands-on time with workflows optimized to be consistent and reproducible without sacrificing sample quality.

The Applied Biosystems[™] MagMAX[™] Cell-Free DNA Isolation Kit can be leveraged on a high-throughput integrated solution, i.e., the Fluent 780 Automation Workstation with the KingFisher Presto instrument, for isolation of cell-free DNA (cfDNA). Optimized and qualified scripts are available to assist you in setting up your high-throughput workflow.



Fluent 780 Automation Workstation and MagMAX Cell-Free DNA Isolation Kit

Collect sample	Prepare Fluent and KingFisher Presto systems	Load samples and reagents	Collect elution plate	Perform downstream analysis
Obtain plasma sample	Use KingFisher 24 deep-well plates, appropriate tips, and one script for the workflow	Load the Fluent 780 Automation Workstation with MagMAX cfDNA reagents, consumables, and plasma samples	After the run is completed, collect elution plate(s) containing isolated cfDNA	Perform downstream analysis with molecular biology applications including NGS, qPCR, dPCR, and more

Figure 1. Basic workflow of high-throughput cfDNA isolation. The KingFisher Presto system is integrated into the Fluent 780 Automation Workstation and used with the MagMAX Cell-Free DNA Isolation Kit (Cat. No. A29319).

Chemistry specifications

Description	
Qualified sample prep kit	MagMAX Cell-Free DNA Isolation Kit
Throughput	24–96
Sample type	Plasma (4 mL)
Sample input format	KingFisher 24 deep-well plate (8)
Sample output format	KingFisher 24 deep-well plate (4)

Instrument specifications

Description		
Automation workstation	Fluent 780 system	
System integration	KingFisher Presto system (2)	
Required arm(s)	Flexible Channel Arm [™] (FCA), 8-channel Robotic Gripper Arm [™] (RGA)	
Dimensions (D x W x H)	78.5 x 165 x 123.6 cm (30.9 x 65.0 x 48.6 in.)	
Dimensions (D x W x H) with Kingfisher Presto system integration	107.2 x 165 x 123.6 cm (42.2 x 65.0 x 48.6 in.)	
Weight (not including the KingFisher Presto system)	~308.6 lb (140 kg)	
Warranty	1 year included, extended warranties available	

Operation

Description	
Power input	100–240 V AC, 50–60 Hz, 5 A
Operating temperature	15–32°C (59–90°F)
Relative humidity	30–80% noncondensing

Computer* and software specifications

Description	
Operating system	Microsoft [™] Windows [™] 10 Enterprise LTSC 2019 (version 1809)
Processor	Intel [™] Core [™] i7 processor or equivalent
Memory	32 GB RAM
Hard drive	Solid-state hard drive with 512 GB free space
Graphics card	NVIDIA [™] GPU with minimum 5 GB RAM and CUDA [™] node support
Network card	1–2 GigE network cards with Intel [™] chipsets
Communication	1 USB port
Monitor	Vertical resolution of 1,024 pixels

* Minimum specification.

Performance

Flexible Channel Arm-air displacement pipetting

Gravimetric measurement using deionized water in single pipetting mode under optimized conditions

Tecan [®] Disposable Tip (DiTi) size	DiTi 10		DiTi 50		DiTi 200		DiTi 350		DiTi 1,000	
Volume (µL)	CV	ACC	CV	ACC	CV	ACC	CV	ACC	CV	ACC
0.5	≤6%	±9.5%	-	-	-	-	-	-	-	-
1	-	-	≤4%	±8%	-	-	-	-	-	-
10	≤1%	±2%	≤0.5%	±1%	≤2%	±2%	≤2%	±2%	≤1.2%	±2%
100	-	-	-	-	-	-	-	-	≤0.3%	±0.5%
200	-	-	-	-	≤0.2%	0.5%	0.2%	0.5%	-	-

The combination of the Fluent 780 Automation Workstation and KingFisher Presto system, developed through a collaboration between Tecan and Thermo Fisher Scientific, is a comprehensive and unified solution. The combination workstation optimizes automated nucleic acid extractions from biological samples like blood, plasma, saliva, and plasmids in bacteria. Utilizing magnetic bead-based processing in both 24- and 96-well formats, the combined workstation of the Fluent 780 and KingFisher Presto systems can easily be adapted to evolving lab requirements while simultaneously delivering high-quality results, all within a compact footprint-excellent for preserving valuable laboratory space.

Ordering information

Description	Quantity	Cat. No.
KingFisher Presto Purification System, 96 deep-well head	1 each	5400830
KingFisher Presto Purification System, 24 deep-well head	1 each	5400840
MagMAX Cell-Free DNA Isolation Kit	1 kit	A29319
KingFisher 96 deep-well plate	Case of 50	95040450
KingFisher 96 tip comb for deep-well magnets	Case of 100	97002534
KingFisher 24 deep-well plate	Case of 50	95040470
KingFisher 24 deep-well tip comb and plate	Case of 50	97002610



For more information about Tecan's Fluent Automation Workstation, visit **PTECAN**• lifesciences.tecan.com/fluent-laboratory-automation-workstation

Learn more at thermofisher.com/magmaxcfdna

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