



Automated purification

## Automate your workflow for FFPE samples with a high-throughput integrated solution

Purify and isolate high-quality RNA/DNA and save time by reducing multiple manual steps

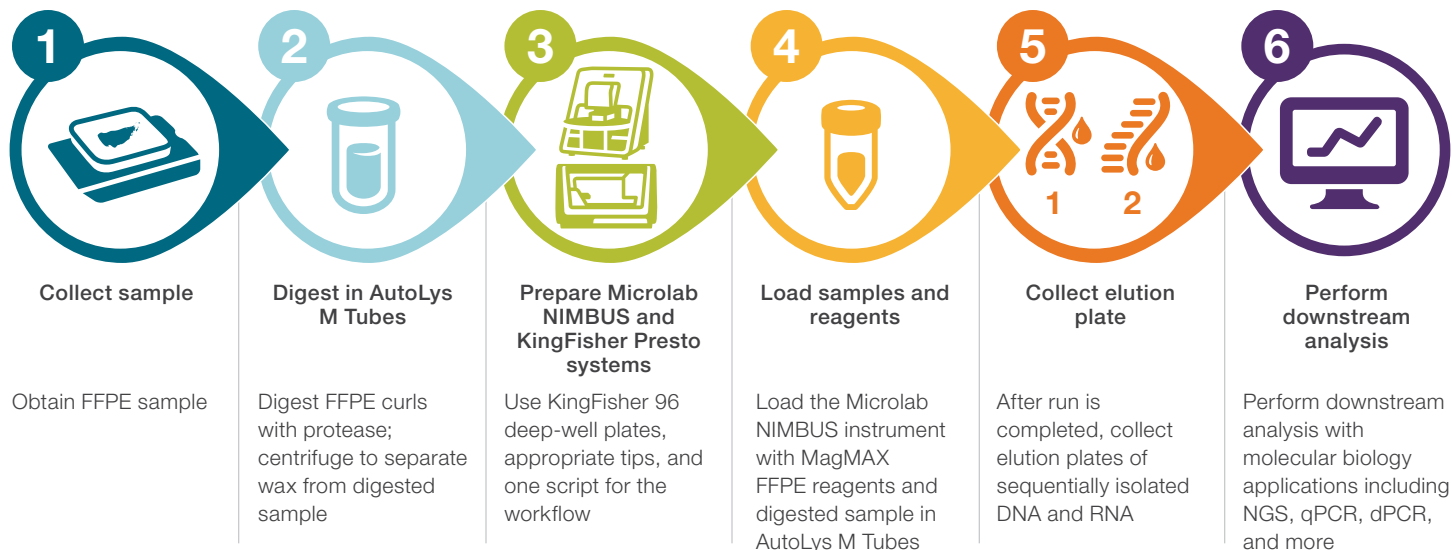
Integrate the Thermo Scientific™ KingFisher™ Presto system into a Hamilton™ Microlab™ NIMBUS® HD liquid handler system to achieve automated workflows without the need to prepare plates and reagents for sample preparation. Reduce operator hands-on time with workflows optimized to be consistent and reproducible without sacrificing sample quality. Now, the Applied Biosystems™ MagMAX™ FFPE DNA/RNA Ultra Kit can be leveraged on a high-throughput integrated solution, i.e., the Microlab NIMBUS instrument with the KingFisher Presto instrument, for sequential isolation of RNA and DNA; use one simple script for the KingFisher Presto purification system and the Microlab NIMBUS liquid handler system post-deparaffinization. Simplify deparaffinization and avoid harmful chemicals when processing formalin-fixed, paraffin-embedded (FFPE) samples with Applied Biosystems™ AutoLys M Tubes and Caps. Purify your clarified lysate by using proven chemistries and validated protocols of the MagMAX FFPE DNA/RNA Ultra Kit.



AutoLys M Tubes and Caps



MagMAX FFPE DNA/RNA Ultra Kit



**Figure 1. Basic workflow of automated sequential isolation of RNA/DNA from FFPE samples.** The KingFisher Presto system integrated into the Microlab NIMBUS system was used with MagMAX FFPE DNA/RNA Ultra nucleic acid isolation chemistry and AutoLys M Tubes and Caps.

The Microlab NIMBUS HD liquid handler system and the KingFisher Presto instrument create a fully integrated solution that combines their respective product technologies into a high-throughput workflow solution. The workstation optimizes automated nucleic acid and protein extractions from biological samples like FFPE, blood, plasma, tissue, and saliva. Utilizing magnetic bead-based processing in both 24- and 96-well formats, the workstation can easily adapt to evolving lab requirements. With a pipetting range of 1–1000 µL, the system enhances walkaway time while delivering high-quality results, all within a compact footprint—ideal for preserving valuable laboratory space.



**Table 1. Instrument specifications.**

Description	
Number of channels	4
Sample input format	AutoLys M Tubes
Sample output format	Thermo Scientific™ KingFisher™ 96 deep-well plate
Validated sample prep kits for human identification	MagMAX FFPE DNA/RNA Ultra Kit
Dimensions (L x W x H)	53.5 x 27.9 x 32.7 in. (135.9 x 70.9 x 83.1 cm) with door closed
	53.5 x 27.9 x 48.3 in. (135.9 x 70.9 x 122.7 cm) with door opened
Weight	300 lb (136 kg)
Warranty	1 year included, extended warranties available
Training	Human Identification Professional Services (HPS) for validation and verification available

Table 2. Operation and storage specifications.

Description	
Power input	100–240 VAC, 50–60 Hz, 5 A
Output power (auxiliary)	42 VDC, ±5%; 600 W maximum
Communication	Ethernet
Operating temperature	15–35°C (59–95°F)
Relative humidity	30–80% noncondensing
Storage temperature	–20°C to +50°C

Table 3. Computer\* and software specifications.

Description	
Memory	4 GB RAM
Processor	2.33 GHz processor
Hard drive	80 GB hard drive
Operating system	Microsoft™ Windows™ 10 OS
Graphics card	Graphics card with Microsoft™ DirectX™ 10.0 installer support
Miscellaneous	<ul style="list-style-type: none"> <li>At least 1 (recommended 2) Ethernet port (RJ45, CAT5E) for connection to the instrument</li> <li>At least 1 serial port for connection to the VFV kit balance</li> <li>Additional USB and/or RS232 ports as necessary for integrated devices (RS232 to USB adaptor may be used)</li> <li>Microsoft™ .NET Framework 3.5</li> </ul>
Software	Applied Biosystems™ HID NIMBUS™ System Software

\* Minimum specification.

Table 4. Performance requirements.

Across the required operating temperature and humidity, the device will meet or exceed the following pipetting performance requirements				
	Disposable tip size	Pipetting volume	Accuracy, R (%)	Precision CV (%)
Pipetting capabilities	10 µL	0.5 µL	10.0	6.0
	10 µL	1 µL	5.0	4.0
	10 µL	5 µL	2.5	1.5
	10 µL	10 µL	1.5	1.0
	50 µL	0.5 µL	10.0	6.0
	50 µL	1 µL	5.0	4.0
	50 µL	5 µL	2.5	1.5
	50 µL	50 µL	2.0	0.75
	300 µL	10 µL	5.0	2.0
	300 µL	50 µL	2.0	0.75
	300 µL	200 µL	1.0	0.75
	1,000 µL	10 µL	7.5	3.5
	1,000 µL	100 µL	2.0	0.75
	1,000 µL	1,000 µL	1.0	0.75
Positional accuracy	Device shall have a positional accuracy of ±0.5 mm Positional data as measured from the pipette channel stop disk			

## Ordering information

Product	Quantity	Cat. No.
KingFisher Presto Purification System, 96 DW head	1 each	5400830
KingFisher Presto Purification System, 24 DW head	1 each	5400840
AutoLys M Tubes and Caps	25 each	A38738
AutoLys M TubeLifter	1 each	A37956
AutoLys M Tube Racks	5 racks	A37955
AutoLys M Tube Locking Lid	1 each	A37954
AutoLys M Tube Pliers	1 each	A38261
MagMAX FFPE DNA/RNA Ultra Kit	1 kit	A31881
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 tip comb for deep-well magnets	Case of 50	97002610

## Access scripts

[MagMAX FFPE DNA/RNA Ultra Kit](#)

[Hamilton NIMBUS Presto workstation](#)

## Additional references

1. [Application note \(2023\) A convenient, solvent-free deparaffinization method for FFPE sample preparation.](#)
2. [Application note \(2016\) MagMAX FFPE DNA/RNA Ultra Kit.](#)
3. [Application note \(2023\) Detecting mutations in matched tissue and plasma liquid biopsies using optimized high-throughput sample preparation workflows.](#)

**HAMILTON** 

 Learn more at [thermofisher.com/magmaxffpe](https://thermofisher.com/magmaxffpe)