

# Faster, cleaner,

more consistent nucleic acid extraction



The Thermo Scientific Automated Nucleic Acid Extraction WorkStation is a turn-key solution that provides your lab with everything you need to automate high speed purifications. Based on revolutionary magnetic separation technology, Thermo Scientific KingFisher Flex based systems, enable you to process any sample from virtually any source with guaranteed sample integrity.

The Automated Nucleic Acid Extraction WorkStation<sup>™</sup> is an easy-to-use, single-vendor solution so you'll be up and running in no time. And you'll be sure your system is properly maintained well into the future. The flexibility of the system is unmatched in the industry allowing for: instruments to be used in stand-alone use and swap-out of instruments even when the system is running. With non-contact dispensing of all reagents and buffers, you'll save time and money over disposable tip changing.

# **Momentum Workflow Software**

The entire system is controlled and monitored with the Thermo Scientific Momentum Scheduling Software. Momentum™ software is the top layer software that communicates and controls all instruments in the system. Momentum software lets users define, execute and monitor complex processes in a powerful yet easy-to-use visual environment. The software offers a simulation mode and accelerated simulation to test your processes in advance. Powerful instrument pooling capabilities increases capacity as the system can utilize any instruments that is available in a pool. Momentum software isolates problems and provides recovery options for attended or unattended modes to keep your science moving. This revolutionary software can even run multiple processes at the same time, the possibilities are endless!

#### System Includes All These Components

- Thermo Scientific KingFisher Flex purification system
- Thermo Scientific Multidrop Combi bulk reagent dispenser
- Multi-reagent Valve for Multidrop Combi™
- Thermo Scientific Alps 3000 automated plate sealer
- Thermo Scientific Orbitor RS microplate mover
- Momentum scheduling software
- Instrument drivers for all instruments
- Automation computer
- Six storage hotels

- Two tables
- Waste station
- On-site factory trained installation
- On-site, one day of training

# **Applications**

- QPCR sample preparation
- PCR
- Plasmid library

- Forensic sample
- Sequencing
- Cloning

Routine sample preparation

# **Expansion Options**

- Second KingFisher for increased throughput
- Second Multidrop Combi and Valve
- Optional Thermo Scientific Automated Lysate Plate Preparation Station including PlateMate 2x3 liquid handler
- Grinding station
- Carousel for increased plate storage
- Automated plate washer
- Aspirators, to remove fluids from plate before waste step
- Second Orbitor<sup>™</sup> mover
- Momentum, advanced user training
- Service and Maintenance contracts

#### **Features**

- Deadlock detection and avoidance
- Wide variety of safety features
- Lidding and de-lidding
- Plate re-orientation
- Modular, expandable
- Supports most SBS format plates

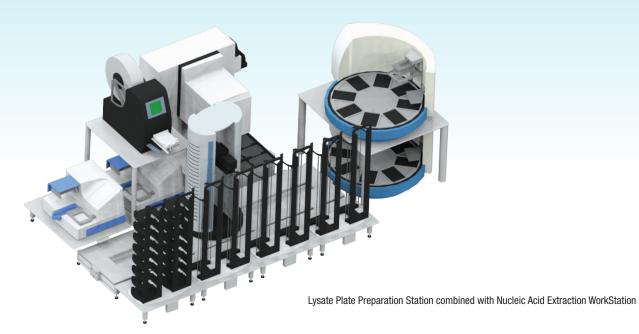
- Small footprint
- Graphical process editor
- Attended and unattended modes
- Simulation mode
- Decision point, behavior change based on variable
- Audit trail of all operations
- Reproducibility with magnetic rods
- Fast purification process
- High speed, high precision reagent dispensing



Automated Nucleic Acid Extraction WorkStation



Automated Nucleic Acid Extraction WorkStation with Orbitor BenchTrak



**Plate Preparation**Prepare Lysate plates

Load Plates

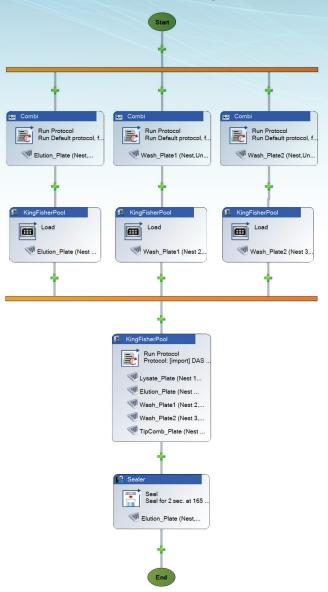
Lysate, elution, empty wash plates, & tip combs in predefined locations

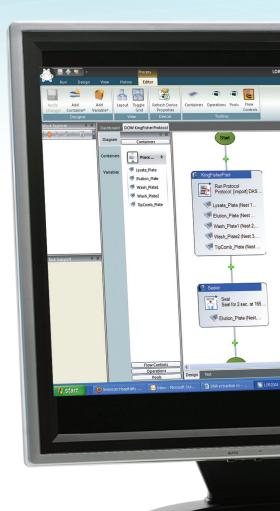
Check Buffer Quantities Wash & elution Dispense Buffers
To wash plate and elution plate

Load KingFisher Flex With all required plates Sample

**Optional Automated Lysate Plate Preparation** 

# Momentum Software Sample Process





Momentum Process Builder screen

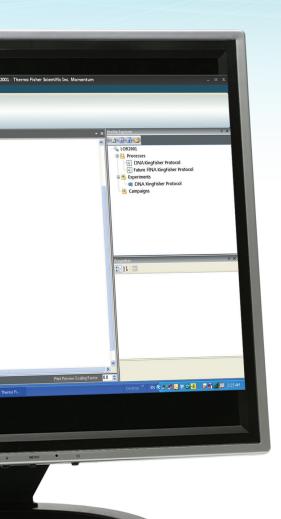
ind Wash with beads Remove impurit

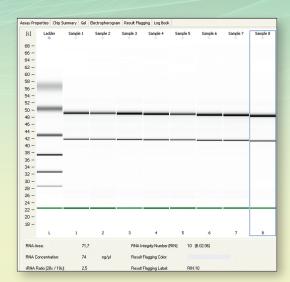
**Elute** Purified produc Aspirate
Remove liquid from wash &
Lysate plates (not included in the base workstation)

Waste
All plates, except
Elution plate

Seal Plates And store

**Automated Nucleic Acid Extraction WorkStation** 





**Figure Blood:** High yield of genomic DNA was purified from Blood samples by using Thermo Scientific KingFisher Blood DNA Kit and KingFisher Flex instrument. The band on the agarose gel is clear and there is no smear indicating that gDNA is pure and undegraded.

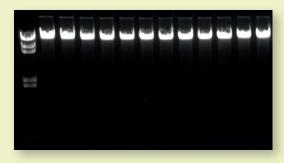


Figure RNA: Total RNA purified from HeLa-S3 cells with Thermo Scientific KingFisher Total RNA Kit and KingFisher Flex instrument show consistency and good quality of purified RNA. The RNA integrity number (RIN) of the samples was 10, indicating that RNA was intact in all of the samples.



## www.thermoscientific.com/nucleicacidextraction

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