

# KingFisher™

Fast, automated purification and processing of nucleic acids and proteins.

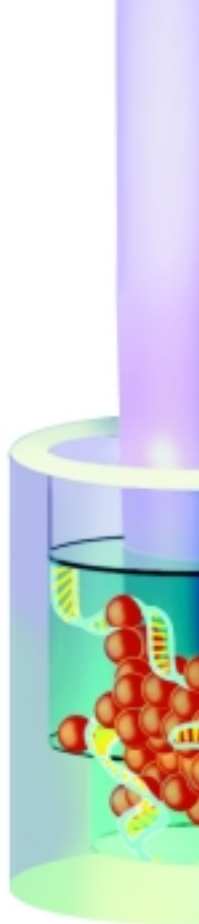
- Revolutionary processing technology
- High-speed high-quality performance
- Excellent reproducibility



**Thermo** Labsystems

# KingFisher™ – Purification made simple

**KingFisher Magnetic Particle Processor is a specially designed system for purifying and processing nucleic acids or proteins and for separating different cell types. KingFisher is ideal for molecular biology research or clinical laboratories that want to process up to 24 samples in 10-30 minutes but do not want to spend time on manual processing or pipetting.**



## KingFisher™ offers competitive advantages

### Cost effective reduction of hands-on time

Thermo LabSystems' KingFisher automates virtually all manual-handling stages involved in nucleic acid or protein purification. KingFisher's efficient washing and short incubation times allow you to increase your productivity. Cost savings are therefore achieved in labor and materials due to reduced processing times and the optimized reagent kits available to purify and process nucleic acids.

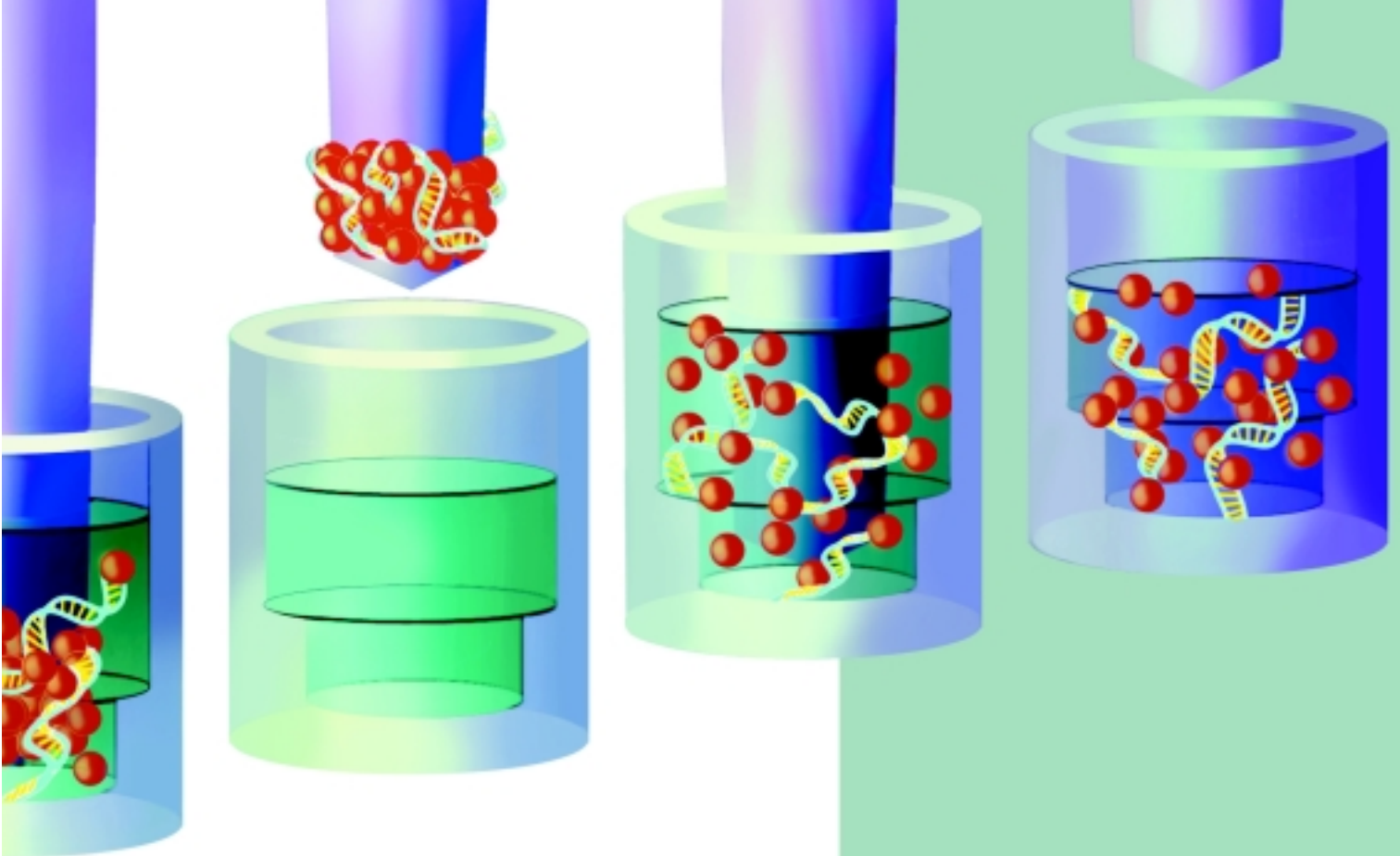
### Rapid performance

When compared to a typical manual extraction of 1 to 2 hours, KingFisher reduces the processing of 24 mRNA samples, for example, to less than 20 minutes. KingFisher is easy to program and use, saving additional time in setting up the system. You simply pipette your reagents and samples into the microstrips, load the microstrips and press start.

### Produces high-quality results

KingFisher's unique concept of processing particles in microplate wells ensures that contaminants are left in the wells, producing excellent recovery and yield. Automation provides outstanding reproducibility by eliminating the potential for inaccuracies introduced by manual methods.





### **Improves user safety**

Since KingFisher eliminates manual intervention, your risk of exposure to toxic reagents or potentially hazardous samples is minimized. The system can be easily put into a fume hood, further reducing the chance of contaminating yourself or your sample.



### **How the KingFisher system works**

KingFisher uses a unique concept patented in which magnetic particles are transferred instead of liquids. All purification and processing steps are carried out in microplates and are started by the simple touch of a button. Target nucleic acids, proteins or cells bind to the surface of magnetic particles during incubation.

These particles are collected on magnetic rods that are dipped into different wells to be washed and incubated to remove contaminants. Finally, the particles are discharged into a well where high quality target molecules are released for use in a variety of standard laboratory applications.

## KingFisher™ is ideal for diverse application areas

KingFisher can help purify DNA, RNA or proteins as well as isolate cells from a range of different starting materials quickly and easily. You can program KingFisher to automate any of your own magnetic-particle protocols. Alternatively, you can use one of KingFisher's purification kits, which are specially formulated for automation.

### RNA purification

The KingFisher system enables you to purify mRNA using oligo (dT) coated magnetic particles or total RNA with magnetic silica particles. Automated purification decreases the risk of RNA degradation.

### DNA purification

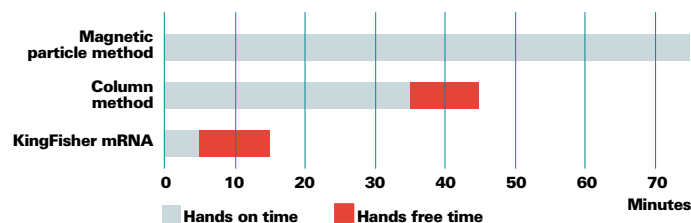
KingFisher is ideal for clinical and research laboratories that are isolating DNA with magnetic particle methods, saving time as well as reducing the risks in handling biohazardous samples. DNA can be isolated from different starting materials including blood, cells and tissue or purified from solutions or agarose gel pieces.

### Protein isolation

You can adapt the KingFisher systems' programs for use with protein purification protocols. For instance, protein purification using Protein A-coated particle methods can be automated with KingFisher.

### Cell separation

Using antibody-coated particles that bind to cell surface antigens, you can program the KingFisher system to separate specific cell populations such as T- and B-cells, monocytes, leukocytes or fibroblasts.



Up to a tenfold increase in productivity for mRNA purification of 24 samples. Comparison of KingFisher mRNA kits with two kits from other manufacturers using the manual magnetic particle methods and column purification method.

KingFisher specifications	Description
Processing volume	20-200 $\mu$ l
Capacity	up to 24 samples/run
Collection efficiency of the particles	>99%
Optimal particle size	0.5 – 10 $\mu$ m
Magnetic rods (fixed)	2 x 12 format
Plate format (disposable)	8 well separate disposable strips + frame
Tip combs (disposable)	Special design, 2 x 12 format
Dimensions (WxDxH mm)	300 x 300 x 300
Weight	11.5 kg
Software	1-8 fixed internal protocols (editing/loading through the external PC)
Keyboard / Display	START/STOP/two cursor keys/LCD

Ordering information	
540 00 00	KingFisher, 110-230 V
970 02 070	KingFisher tip comb RNase free, 50 pcs/box
970 02 080	KingFisher plate 100 $\mu$ l RNase free, 50 pcs/box
970 02 084	KingFisher plate 200 $\mu$ l RNase free, 50 pcs/box
970 02 090	KingFisher plastics 100 $\mu$ l 8-pack, 8 plates + 8 tip combs/box
970 02 094	KingFisher plastics 200 $\mu$ l 8-pack, 8 plates + 8 tip combs/box
540 00 50	KingFisher mL, 110-230 V
970 02 111	KingFisher mL tip comb, 800 pcs
970 02 121	KingFisher mL tube, 900 pcs (15x60 pcs)
970 02 131	KingFisher mL Combi 60 (tubes and tip combs for 60 samples)

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