

Automated genomic DNA isolation system

KF-4000

Genomic DNA isolation from 7ml whole blood



Fully automated DNA isolation

Built-in centrifuge achieves fully automated process from collection of white blood cell to precipitation and hydration of extracted DNA.

KF-4000 can set maximum 48 samples at a time.

Highly reliable DNA isolation

High accuracy robotics, specially designed 6-hole tube and unique chemistry enable consistent isolation of good quality DNA with inexpensive operating cost.

Wide range of sample volume

From 0.5ml up to 7ml, KF-4000 isolates genomic DNA from whole blood sample (2ml blood DNA protocol and large volume blood DNA protocol).

Animal tissue, cultured cell and plasmid DNA isolation protocols are also available.

Operation recording system

Hand-held barcode reader, and sample tracking and reporting software facilitate to record operation history related with the sample information. (option)



Major components of the KF-4000

Workstation



6-hole tube units are set into the machine on portable tube racks. Agitator and heater accelerate the extraction reaction.

Built-in centrifuge



High performance AC brush less inverter motor having maximum spin speed 4,000rpm. HEPA filter reduces infection possibility.

Robotics



Smooth and highly accurate gripper robot. Safety interlock shuts down if the front door is opened during a run.

Dispensing system



Use syringe model 7 reagent lines for dispensing reagents with high accuracy. Two containers for separate collection of waste fluid.

Specification

Model	KF-4000
Maximum sample per run	48 (processing each 24 samples at a time)
Processing tube	Specially designed 6-hole tube unit
Protocol	Genomic DNA: 0.5-2ml whole blood, 2-7ml whole blood, animal tissue Plasmid DNA One protocol is included in instrument price.
Power supply	Voltage, AC 100V (able to operate at 115V or 230V by using transformer); Capacity, 1.5KVA
Dimension	W 920 X D 740 X H 1520 (mm) / W 36 X D 29 X H 60 (inch)
Weight	280kg / 617lbs, 305kg / 676lbs with a transformer
Option	Sample tracking software *Barcode reader and PC are not included.

Protocols

Protocol	Extraction method	Anticoagulant	Pretreatment	Yield	Purity (A260/A280)
Blood DNA (up to 2ml)	Phenol method	EDTA2Na Sodium citrate	Fresh or frozen at -80C	20-40ug/1-2ml	1.8
Large volume blood DNA (2-7ml)	Non-phenol method	EDTA2Na	Frozen at -80C	140-400ug/7ml	1.9
Animal tissue DNA	Phenol method		Proteinase K	25-65ug/10-30mg	1.7-1.9
Plasmid DNA	Alkaline method			8ug/1.5ml	1.7-1.9

* The yield depends on sample.

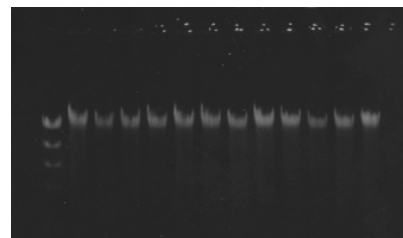
Genomic DNA from 7ml whole blood

Sample: EDTA treated 7ml of human whole blood

Pretreatment: Freezing at -80 C for 16hrs

Isolation condition: 7ml Whole blood protocol with default parameters.

Electrophoresis condition: 5ul from 500ul of final DNA solution was loaded on a 0.7% agarose gel in 1 X TAE buffer. From left: DNA size marker (λ /HindIII), isolated DNA



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