Magnetic FFPE Tissue RNA Extraction Kit

CE NMPA

Bottle format

96B format

96D format

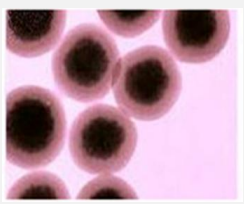
1. Description

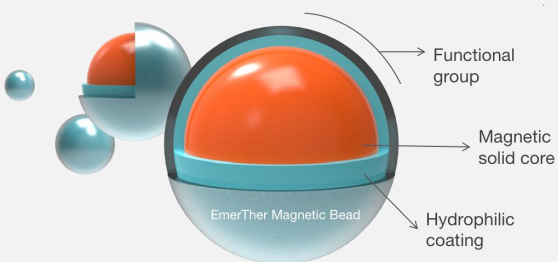
EmerTher® Magnetic FFPE Tissue RNA Extraction Kit is used for extracting RNA from formaldehyde fixed-paraffin embedded (FFPE) tissue.

The Kit contains superparamagnetic nanoparticles which are bound to nucleic acids and an efficient extraction system. The magnetic beads are coated through a unique process, enabling strong binding with nucleic acids and easy elution.

The experimental procedure is simple and efficient: 1) following pretreatment, add sample to a lysis-binding buffer to enable cell lysis, RNA release and RNA binding to magnetic beads in one step; 2) apply magnetic force enabling easy wash of the beads with buffers; 3) elute RNA from the beads using an elution solution. The extraction procedure is fully compatible with automation.

Purified RNA can be directly used in a variety of downstream experiments, including PCR, gene sequencing, etc.





EmerTher superparamagnetic beads have a solid core consisting of iron oxide clusters, coated with a hydrophilic layer, making it a superior tool to purify biomolecules over similar products.

Uniform nano-superparamagnetic bead mass production capacity + optimized technology and reagent formulation:

Reliable and Efficient Extraction,

Originated from Core Technologies

The EmerTher Company

Phone: 1-800-868-0176 (USA)

Email: support@emerther.com **Website: www.emerther.com**

US Site Address: 239 New Rd, Suite A-107, Parsippany, NJ 07054, USA

2. Features

Eliminate the need for xylene, a toxic solvent commonly used for dissolving paraffin

Eliminate the use of toxic chloroform and phenol

Convenient: No tissue grinding is necessary

Effectively remove cross-linking between nucleic acids and proteins formed during formalin fixation, preventing inhibition of reverse transcription of the extracted RNA due to cross-linkage and increasing the sensitivity and consistency of subsequent tests

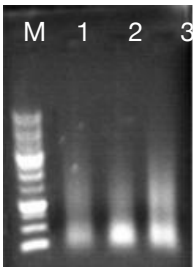
Retain large RNA pieces, facilitating subsequent testing

Automation: compatible with a variety of automatic magnetic bead processors; pre-filled plates are available

3. Performance

Representative Extraction Results shown by Gel Electrophoresis , UV and PCR Data

Experiment 1



Gel electrophoresis, concentration and purity determination of RNA extracted from three FFPE tissue samples

Sample No.	OD260/280	OD260/230	Conc. (ng/μL)	Total RNA (μg)
Sample 1	2.04	1.02	39.7	3.97
Sample 2	1.96	1.05	39.0	3.90
Sample 3	1.88	1.30	48.2	4.82

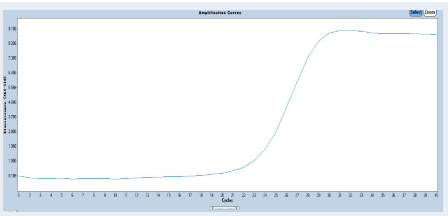
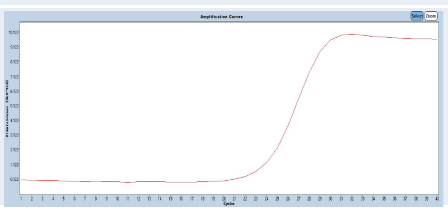
Experiment 2

Sample No.	OD260/280	Conc. (ng/μL)	Total RNA (μg)
Sample A	1.88	28.5	2.85
Sample B	1.83	31.7	3.17

UV results of RNA extracted from two FFPE tissue samples, followed by real-time PCR experiments

Real-time PCR Cycling Parameters

Step	Temp	Time	Cycles
Initial Denaturaton	94℃	1 min	1
Denaturaton	94℃	5 sec	40
Annealing	55℃	15 sec	40
Extension	72℃	10 sec	40
Cooling	37℃	1 min	1

Sample No.	Ct value	Real-time PCR Result
Sample A	23.13	
Sample B	23.62	

The EmerTher Company
Phone: 1-800-868-0176 (USA)
Email: support@emerther.com Website: www.emerther.com
US Site Address: 239 New Rd, Suite A-107, Parsippany, NJ 07054, USA

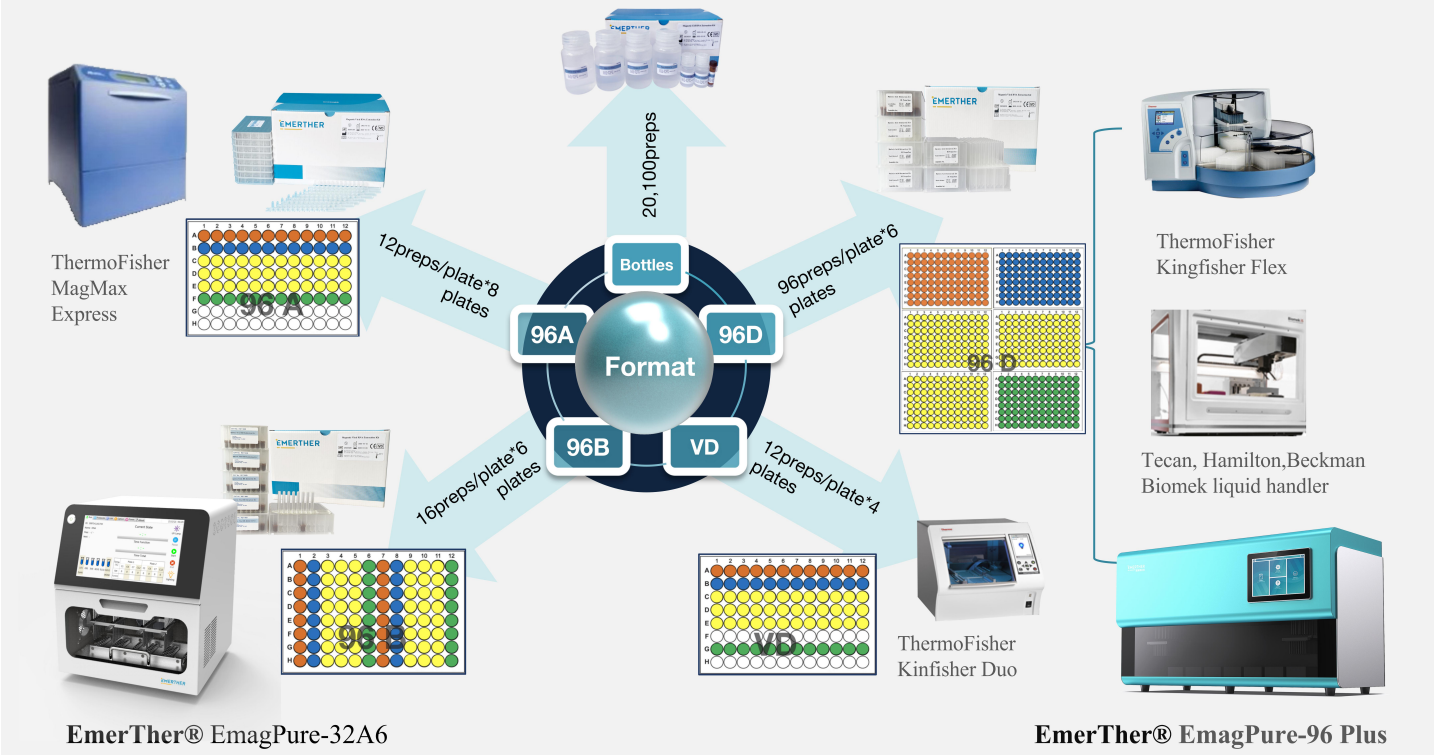
4. Components of the Kits

Catalog No.	RE06001 (20 preps)	RE06002 (100 preps)	RE0696B (96 preps)	RE0696D (96 preps)
Format	bottles	bottles	pre-filled plates	pre-filled plates
Paraffin Sample Solution	6 mL	30 mL	30 mL	30 mL
Paraffin Digestion Solution A	3 mL	15 mL	15 mL	15 mL
Paraffin Digestion Solution B	3 mL	15 mL	15 mL	15 mL
PK Dissolving Solution	0.4 mL	2 mL	2 mL	2 mL
Proteinase K	8 mg	40 mg	40 mg	40 mg
Magnetic Bead Suspension	0.6 mL	3 mL	6 pre-filled plates, 12 tip combs (8-channels each)	6 pre-filled plates, 1 tip comb (96-channels)
Lysis-binding Buffer	12 mL	60 mL		
Wash Solution I	12 mL	60 mL		
Wash Solution II	12 mL	60 mL		
Wash Solution III	12 mL	60 mL		
Elution Solution	3 mL	12 mL		

Sample pretreatment: Transfer FFPE tissue (e.g. 1-5 pieces of 10 μm-thick FFPE tissue samples) into a 1.5 mL centrifuge tube; Add 300 μL Paraffin Sample Solution, 150 μL Paraffin Digestion Solution A and 20 μL proteinase K solution, mix well and incubate for 3 hours at 56°C in a water bath; Add 150 μL Paraffin Digestion Solution B to mix with the sample and incubate for 2 hours at 70°C; Centrifuge at 10,000 g for 5 min; Pipette the liquid at the bottom layer (~300 μL) for RNA extraction.

5. Compatible instruments

Compatibility with a Variety of Automatic Nucleic Acid Extraction Instruments



Prefilled plates available for most automatic nucleic acid extraction instruments on the market.

The EmerTher Company
Phone: 1-800-868-0176 (USA)
Email: support@emerther.com Website: www.emerther.com
US Site Address: 239 New Rd, Suite A-107, Parsippany, NJ 07054, USA

Magnetic Bead Core Technology for High Throughput & Automatic Solutions

IVD Manufacturer SINCE 2010

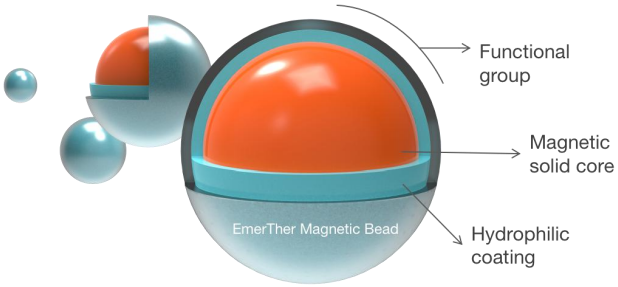
- Nucleic acid extraction
- Protein purification
- Nano-magnetic beads
- Automatic nucleic acid/protein purification instruments

Founded in 2010, the EmerTher Company is an IVD manufacturer specialized in the development and manufacture of nano-scale superparamagnetic beads and related products for biomedical applications.

We provide a number of high-quality, cost-effective products and ready-to-use solutions for biological sample collection, nucleic acid extraction, and protein purification, including:

- 3 viral transport media (non-inactivated; inactivated; inactivated without guanidine) and 3 swabs
- 20+ magnetic bead-based nucleic acid extraction kits
- 6 protein purification magnetic beads
- 6 functionalized magnetic beads
- 3 automatic nucleic acid extraction instruments
- 4 manual magnetic separators

With advanced technologies in nano-scale superparamagnetic bead products and *in vitro* diagnosis, we have helped our customers worldwide to implement automatic nucleic acid and protein extraction/purification procedures in their labs and customized products with high flexibility to meet their special needs.



EmerTher® Magnetic Nucleic Acid Extraction Reagent

EmerTher® EmagPure-32A6

EmerTher® EmagPure-96 Plus

The EmerTher Company
Phone: 1-800-868-0176 (USA)
Email: support@emerther.com **Website: www.emerther.com**
US Site Address: 239 New Rd, Suite A-107, Parsippany, NJ 07054, USA