

# Magnetic FFPE Tissue DNA Extraction Kit

CE FDA NMPA



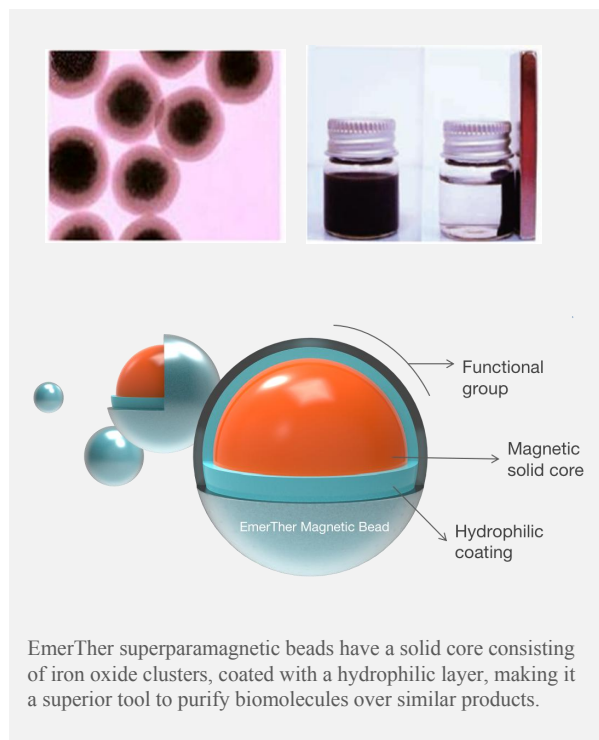
## 1. Description

EmerTher® Magnetic FFPE Tissue DNA Extraction Kit is used for extracting DNA 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, DNA release and DNA binding to magnetic beads in one step; 2) apply magnetic force enabling easy wash of the beads with buffers; 3) elute DNA from the beads using an elution buffer. The extraction procedure is fully compatible with automation.

Purified DNA can be directly used in a variety of downstream applications, 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**

## 2. Features

**Eliminate the need to use xylene**, a highly toxic solvent commonly used for dissolving paraffin.

**Convenient:** No tissue grinding is necessary.

**Efficient decoupling effect:** Effectively remove cross-linking between nucleic acids and proteins formed during formalin fixation, increasing the sensitivity and consistency of subsequent tests.

**Retain large DNA pieces**, facilitating subsequent tests.

Can be used with EmerTher magnetic FFPE tissue RNA extraction kit to extract DNA and RNA from one sample.

**Automation:** compatible with a variety of automatic magnetic bead processors; prefilled plates are available.

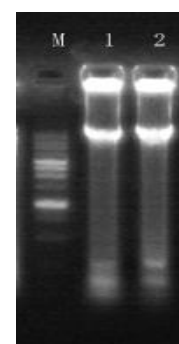
## 3. Performance

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

#### Experiment 1

Gel electrophoresis, concentration and purity determination of DNA extracted from two FFPE tissue samples

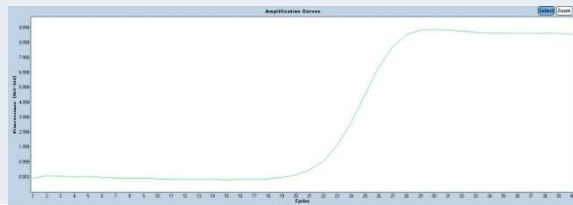
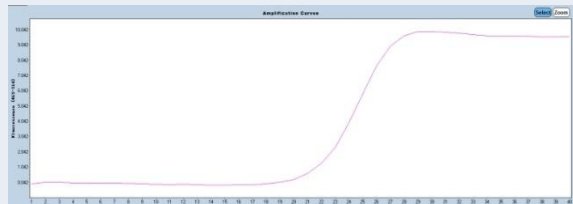
Sample No.	OD260/280	OD260/230	Conc. (ng/μL)	Total DNA (μg)
Sample 1	1.81	1.60	179.2	17.92
Sample 2	1.82	1.61	207.7	20.77



#### Experiment 2

Sample No.	OD260/280	Conc. (ng/μL)	Total DNA (μg)	UV results of DNA extracted from two FFPE tissue samples, followed by GAPDH real-time PCR experiments
Sample A	1.81	47.2	4.72	
Sample B	1.90	40.4	4.04	

GAPDH Real-time PCR System	
Component	volume
Template	2 μL
GAPDH Forward Primer	0.2 μL
GAPDH Reverse Primer	0.2 μL
2x Top Green qPCR SuperMix	10 μL
ddH2O	7.6 μL
Total volume	20 μL

Sample No.	Ct value	GAPDH Real-time PCR Result
Sample A	21.60	
Sample B	21.49	

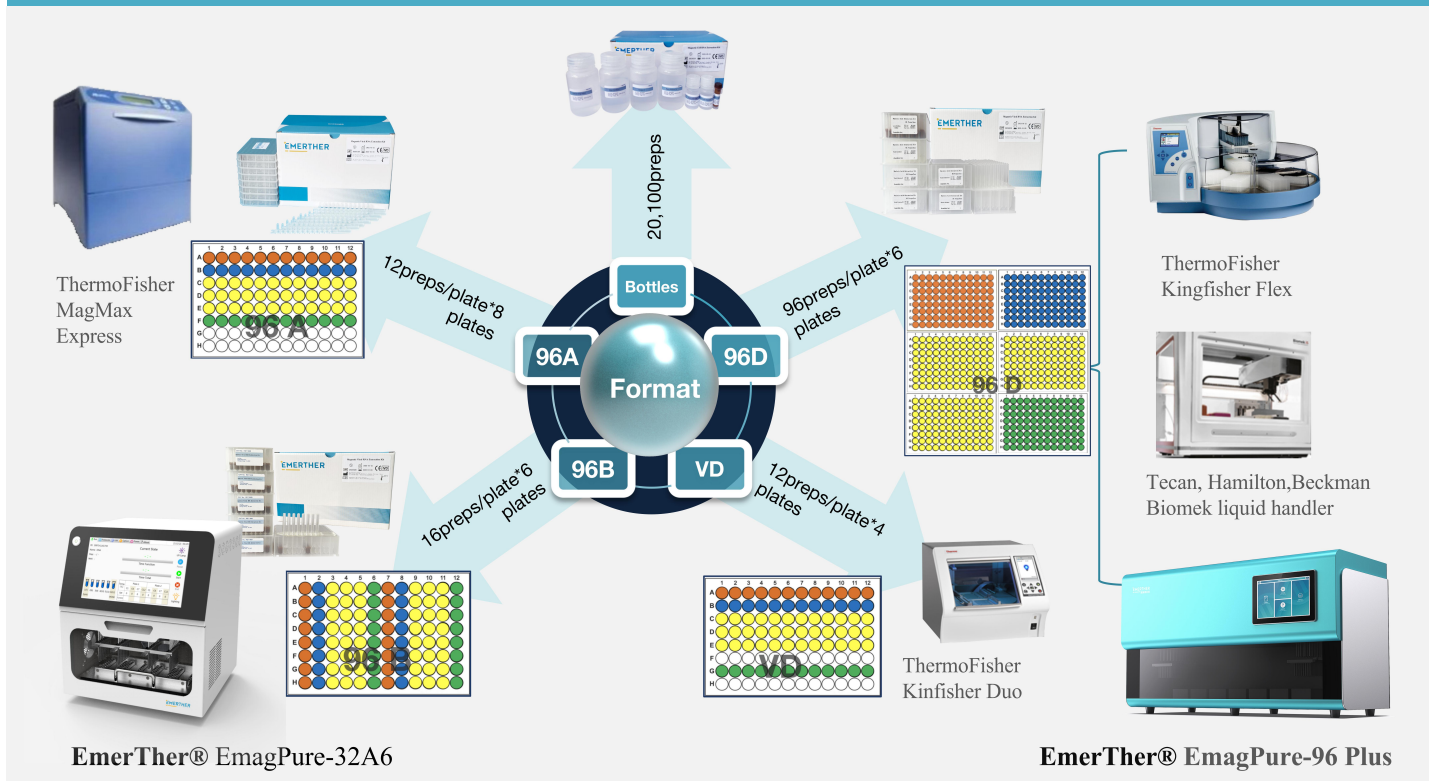
## 4. Components of the Kits

Catalog No.	DE02001 (20 preps)	DE02002 (100 preps)	DE0296B (96 preps)	DE0296D (96 preps)
Format	bottles	bottles	pre-packed plates	pre-packed 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 (75% alcohol, prepared by users)	60 mL (75% alcohol, prepared by users)		
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 hrs at 56°C in a water bath; Add 150 µL Paraffin Digestion Solution B to mix with the sample and incubate for 2 hrs at 70°C; Centrifuge at 10,000 g for 5 min; Pipette the liquid at the bottom layer (~300 µL) for DNA 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.

# Magnetic Bead Core Technology for High Throughput & Automatic Solutions

IVD Manufacturer SINCE 2010

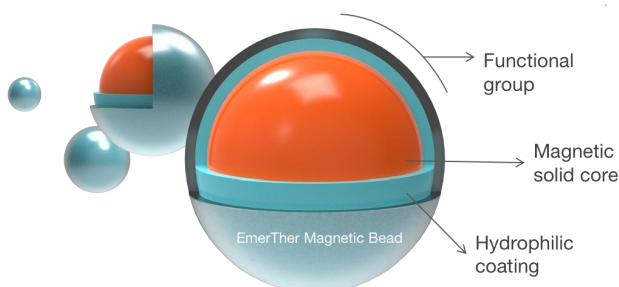
- Nucleic acid extraction
- Protein purification
- Nano-magnetic beads
- Automatic nucleic acid/protein purification instruments

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**