

# Magnetic PCR Product Purification Kit



## 1. Description

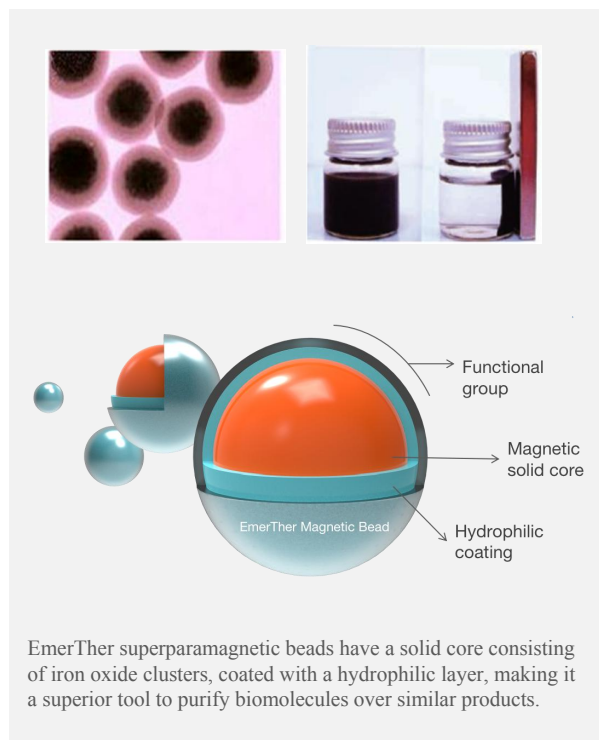
EmerTher® Magnetic PCR Product Purification Kit is intended for fast and simple purification of PCR products (> 100 bp).

DNA fragments from PCR reactions selectively bind to EmerTher's unique superparamagnetic beads so that PCR by-products, such as primers, dimers, enzymes, unincorporated dNTPs and other contaminants, are removed during washing steps.

Highly purified DNA is then eluted with low salt elution buffer or water and can be used directly for downstream applications, including sequencing (Sanger and next-generation sequencing), restriction digestion, *in vitro* transcription, and other subsequent experiments.

## 2. Features

- Completely removal of primers to avoid the interference of primers on sequencing
- Completely removal of proteins and dNTPs
- High recovery of PCR products (> 100 bp): 75-95%
- High-throughput: no centrifugation or filtration, and the whole procedure can be performed by batches (96 samples per run)



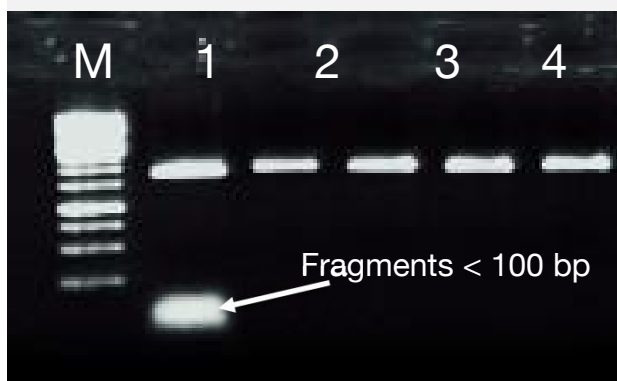
**Uniform nano-superparamagnetic bead mass production capacity + optimized technology and reagent formulation:**

**Reliable and Efficient Extraction,  
Originated from Core Technologies**

### 3. Performance

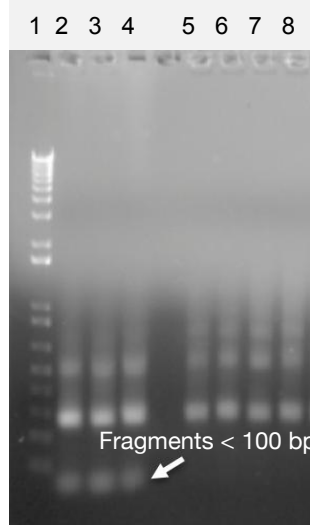
## Representative Extraction Results shown by Gel Electrophoresis

Experiment 1



M: MW marker  
 1. PCR products  
 2-5. PCR products after purification (Fragments <100bp have been succesfully removed.)

Experiment 2



1: MW marker  
 2-4: PCR products  
 5-6: Purified PCR products using EmerTher kit  
 7-8: Purified PCR products using a major competitor kit

Evaluation from an academic laboratory:

Both beads cleared out excess primer (<100 bp) equally well, and the yield appears to be about the same for both. The EmerTher protocol is **much faster and easier** than the competitor's protocol.

### 4. Components of the Kits

	DF02001 (100 preps)	DF02002 (500 preps)	DF02003 (10000 preps)
PCR Product Purification Beads	4.5 mL	25 mL	450 mL

#### 【Experimental Procedures】

- Transfer 25  $\mu$ L PCR sample to a 1.5 mL centrifuge tube, add 45  $\mu$ L PCR product purification beads, gently pipette several times or shake the tube to mix [Note: Do not invert the tube during mixing, as this would incur sample loss due to possible smear to the wall of the centrifuge tube].
- Place the tube on the magnet for 20 sec and allow the beads to migrate to the magnet, discard the supernatant.
- Remove the tube from the magnet, and add 100  $\mu$ L of Wash Solution (70% ethanol), gently shake the tube to mix for 1 min. Put the tube back on the magnet and discard the supernatant.
- Repeat the step 3.
- Let beads stand for 5 min to remove residual ethanol, and discard any remaining supernatant.
- Add 20  $\mu$ L Elution Solution; gently mix with beads for 5 min to release PCR fragments from beads.
- Put the tube back on the magnet and transfer supernatant (containing PCR fragments) to a clean centrifuge tube for subsequent use or storage.

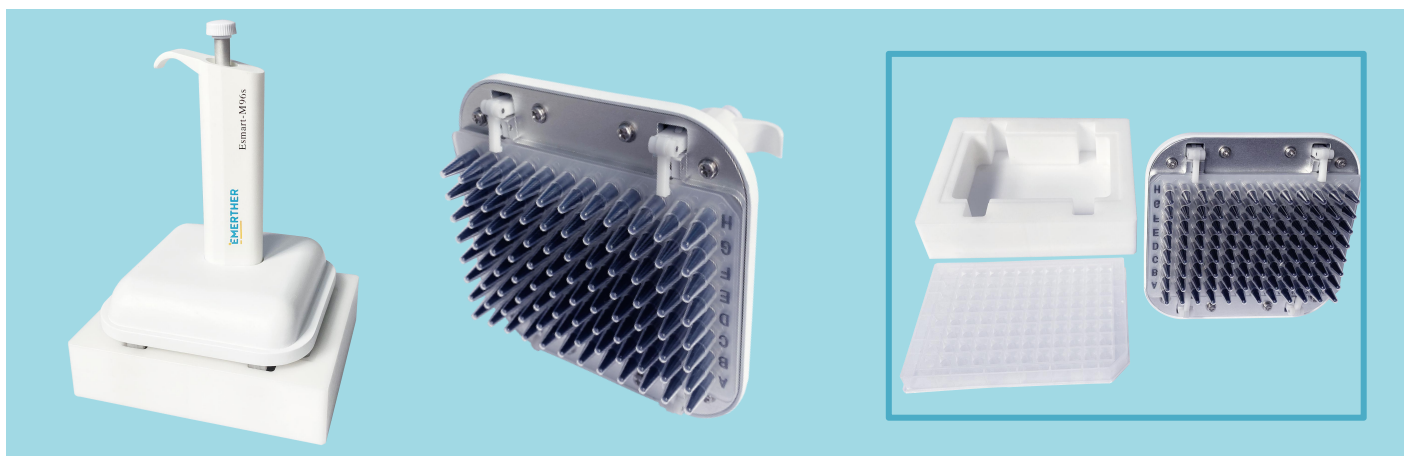
## 5. Compatible device

# EmerTher® Esmart-M96s

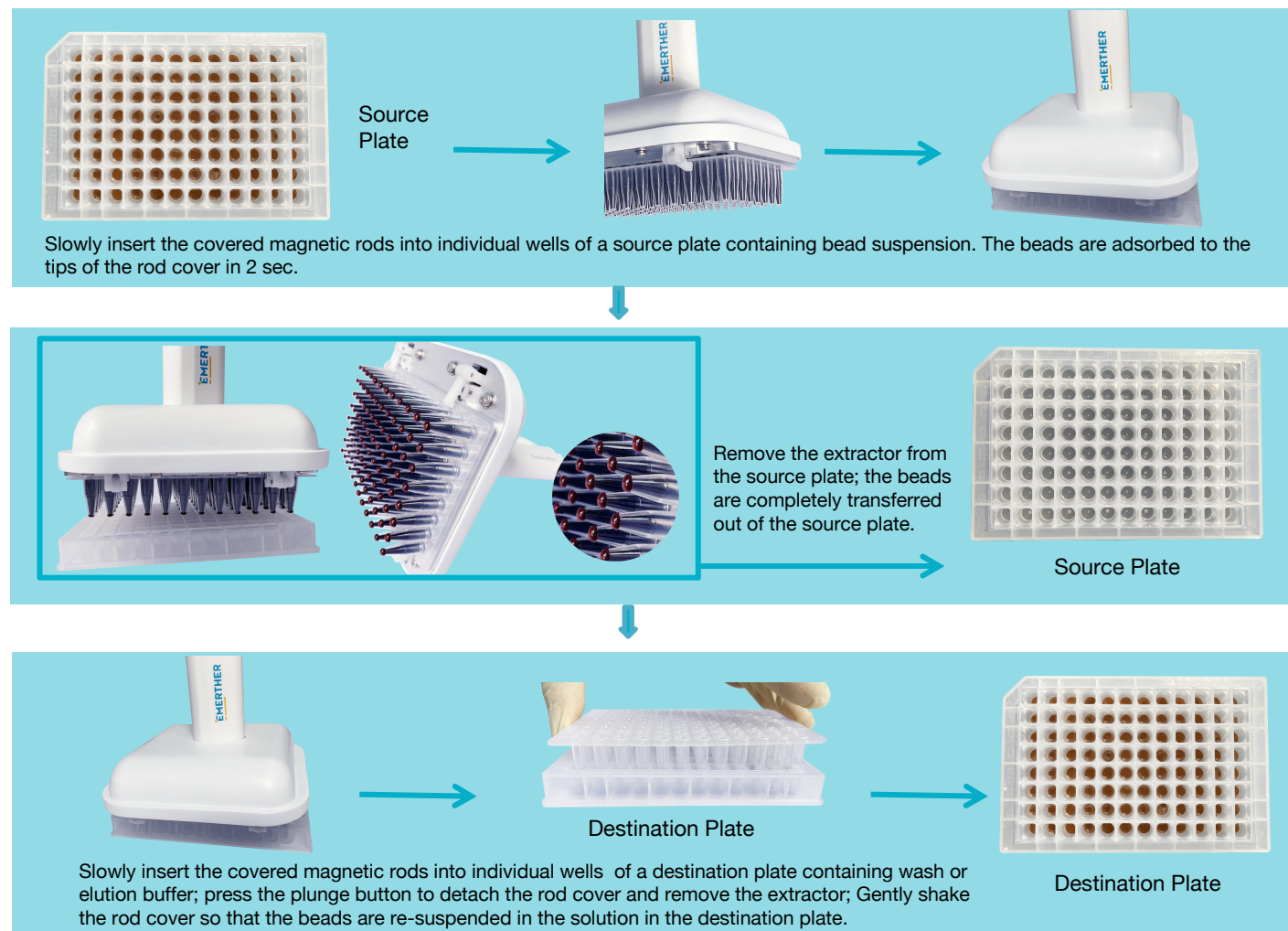
Magnetic Bead Extractor 96 Pin (20mm):

**Transfer magnetic beads from 96 wells in 5 sec**

Light weight, portable, no battery required



Move magnetic beads from source plate to destination plate



# 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

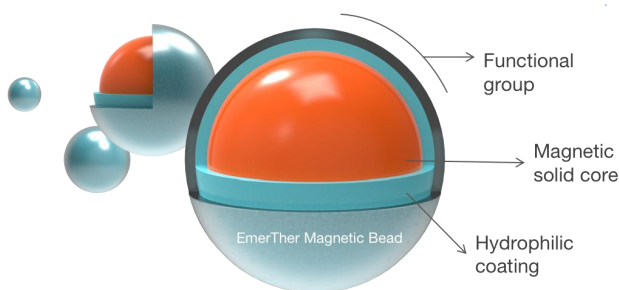


Founded in 2010, the EmerTher Company is an IVD manufacturer specialized in the development and manufacture of nano-scale superparamagnetic beads and related products for biomedical applications.

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®**  
EmagPure-32A6



**EmerTher®** Magnetic Nucleic Acid Extraction Reagent



**EmerTher®** EmagPure-96 Plus