

Magnetic bead

[Extraction Principle]:

This magnetic bead is a superparamagnetic nano-sized Fe_3O_4 hydroxyl magnetic bead particle with a surface modified by a large number of silanol groups. It features high magnetic response, high dispersion, high suspension, and high nucleic acid binding rate. It can specifically bind to nucleic acids in solutions under high salt and low pH conditions through hydrophobic interactions, hydrogen bonding, and electrostatic interactions, without binding to other impurities (such as proteins). It can quickly separate nucleic acids from biological samples and is suitable for the separation of viral DNA/RNA in various samples such as serum/plasma/whole blood/saliva/urine and various protective fluids. The operation is safe and simple, making it highly applicable for automated and high-throughput extraction of nucleic acids.

[Main components]:

Product model	Specification
LJL10001S	10 ml
LJL10001M	50 ml
LJL10001L	100 ml
LJL10001K	400 ml
LJL10001P	1000ml

[Storage Conditions and Expiration Date]:

RT (recommended for long-term storage >7 days at 2~8℃), with an expiration date of 24 months.

[Product Features]:

Composition	60~70% Fe_3O_4 、0~10% FeO or 30% SiO_2
Appearance	Yellow to brown
Concentration	35~45 mg/ml
Hydration average particle size	~500 nm
Magnetic core	Fe_3O_4
Surface groups	Silanol
Magnetic Type	Superparamagnetism
Saturation magnetization	40-60 emu/g, In the magnetic bead preservation solution, complete separation can be achieved within 5-10 seconds using a standard magnetic rack
Nucleic acid binding affinity	~50 ug/20 μl
Suspension property	Almost no sedimentation in 60 minutes
Preservation solution	Deionized water、0.1%Proclin 300

This product is for research use only. Please do not use it for clinical diagnosis or any other purposes!

[Usage and Dosage]:

When the total nucleic acid amount during extraction does not exceed 50ug and the total volume of the solution does not exceed 1ml, the recommended usage amount is 20μl.

[Precautions]:

1. Operations such as freezing, drying, and centrifugation can lead to the agglomeration of magnetic beads, making it difficult to resuspend and disperse them, and affecting the chemical properties of the functional groups on the surface of the magnetic beads.
2. Before using this product, be sure to shake or ultrasonicate it thoroughly to maintain a uniform suspension of the magnetic beads.
3. This product needs to be used in conjunction with magnetic separation equipment.