

MagPure Particles G (monodisperse spherical silicon-based magnetic beads)

Description

Magnetic bead nucleic acid purification technology uses nano or micron superparamagnetic material as the matrix, generally black ferric oxide or yellowish brown ferric oxide as the magnetic material. The surface of bead is coated with appropriate functional groups, which can adsorb nucleic acid. Magnetic beads commonly used for nucleic acids, containing carboxyl groups, hydroxyl groups, or silicon groups. Silicon-based magnetic beads are the most common, and its principle of adsorbing nucleic acid is consistent with the classical glass milk purification technology or glass fiber filter membrane purification method. Magpure particles is a kind of polydisperse fast speed silica magnetic beads. The core is ferric oxide, accounting for 50%, and the surface coating is silica, accounting for 50%. The product can be used for plasmid extraction, gel DNA recovery, product purification, genomic DNA and RNA extraction, and viral nucleic acid extraction.

Principle

High salt mediated binding: in the solution containing 2 ~ 4M guanidine isothiocyanate, magpure particles can selectively recover DNA molecules, and impurities such as protein polysaccharides are not adsorbed.

Alcohol mediated binding: in the solution containing guanidine salt and alcohol (>25%), magpure particles can selectively recover DNA/RNA molecules, and proteins and other impurities are not adsorbed.

After biological samples are treated with digestive solution or lysis Buffer, DNA/RNA is released from cells, organelles and protein complexes (ribosomes and nucleosomes) into reagents. After magpure particles and binding solution are added, DNA/RNA is adsorbed to the surface of magpure particles to form DNA/RNA bead complex. Under the action of the magnetic field, the magnetic beads are separated and collected, and the impurities such as protein are removed with the waste liquid. After two or three steps of further cleaning, the DNA/RNA magnetic bead complex is resuspended in sterilized water or TE buffer, and the DNA/RNA falls off from the surface of the magnetic beads, so as to achieve the purpose of purification.

Ordering Information

CAT.No.	Product Name	Package
C14120	MagPure Particles G	100 ml
C14121		400 ml
C14122		3 x 400 ml
C14122		10 x 400 ml

Specifications

Concentration	40mg/ml
Appearance	Suspension of dark brown particles
Surface functional group	Si-OH, Silanol
Dispersibility	Monodisperse, spherical
Particle size	1.0~1.5um
Preservation conditions	Room Temperature, valid for up to 2 years. It is recommended to store in 2-8 to prevent microbial growth.
Magnetic response speed	~30 seconds
Settling velocity	>3 minutes
High salt Mediated Binding	>2M guanidine isothiocyanate, DNA recovery up to 80%
Alcohol Mediated Binding	2M guanidine hydrochloride / isopropanol (30%), and the recovery of DNA / RNA was as high as 85%
PEG8000 Mediated Binding	The recovery of DNA / RNA was as high as 85%
DNase/RNase	Not detected
DNA residue	Not detected
Recommended application	genomic DNA extraction, RNA extraction, viral nucleic acid extraction Circulating DNA Isolation