CYRN17-CHANGYU Poly Carrier Nucleic Acid Precipitation Aid

Catalog number	Package
CYRN1701	1 ml
CYRN1702	5 ml

Storage: room temperature or 4 °C for one year; longer at -20 °C.

Description

Low-temperature ethanol precipitation is the most common method for recovering DNA and RNA from liquid samples. However, ethanol precipitation does not recover nucleic acids completely and typically loses at least about 30%. When nucleic acid concentration is very low or DNA is shorter than 200 bp, ethanol precipitation may recover only 50%. Poly Carrier is a molecular-biology-grade polymer solution: adding 5-10 μl of Poly Carrier during ethanol precipitation markedly improves nucleic acid recovery, raising recovery of trace DNA to 95-98%. It also selectively removes short primers (shorter than 22 bp) and dNTPs, making it useful for recovering labeled probes and removing unincorporated dNTPs. Unlike biological co-precipitants such as glycogen and tRNA, Poly Carrier contains no nucleic acid contamination and no DNase or RNase activity; it does not interfere with restriction digestion, ligation, transcription, PCR, transformation or transfection, nor with nucleic acid electrophoresis or DNA-protein interactions. Poly Carrier has become one of the most widely used nucleic acid co-precipitants.

Features

Markedly improves the yield of DNA or RNA precipitation.

Recovery of trace DNA and RNA (20 pg) reaches 95-98%.

Does not affect restriction digestion, ligation, transcription, PCR or other reactions.

Does not affect electrophoresis or DNA-protein interactions.

❖ Instructions for use

1. Improving recovery of DNA or RNA by precipitation.

1) Add 4-8 μl of Poly Carrier to 1 ml of RNA or DNA solution and mix by inversion.

2) Precipitate RNA or DNA by standard ethanol precipitation. For example, add 3 M sodium acetate, pH 5.2 (RNase-free for RNA) to a final concentration of 0.3 M (about 1/10 volume), then add 2 volumes of absolute ethanol, mix and leave at room temperature or at 4 °C for 10-30 minutes. Centrifuge at 12,000 rpm for 10 minutes, discard the supernatant, wash once with 70% ethanol, remove the supernatant, air-dry the pellet and dissolve it in an appropriate volume of DEPC-treated water (for RNA) or TE buffer.

2. Improving DNA or RNA yield during extraction.

Add 4-8 μl of Poly Carrier per ml of total RNA extraction reagent TRIpure (TRIzol) or DNA extraction reagent DNAzol, then continue according to the instructions for those products.

Notes

Note: Poly Carrier increases the optical density reading of RNA or DNA. To correct for this, run a blank control in parallel using the same reagents and Poly Carrier but without RNA or DNA, and dissolve the final Poly Carrier pellet in the same solution as the sample. Measure A260 and A280 for both sample and blank, and subtract the blank values from the sample values to obtain the actual optical density. If absolute accuracy is not required, the value can be estimated.

This product is furnished for LABORATORY RESEARCH USE ONLY. Not for diagnostic or therapeutic use.