

Linear Acrylamide Solution

5mg/mL in water

Product	Cat#	Package size
Linear Acrylamide Solution (5mg/mL in water)	M3433.0005	5 x 1mL

Product description

Linear acrylamide (5 mg/mL) serves as a nucleic acid coprecipitation reagent and is ideal for purification of RNA and DNA samples used for PCR and real-time PCR reactions, as small amounts of contaminating nucleic acids can be amplified if other carriers are used, for example tRNA from yeast.

Linear acrylamide has been shown to precipitate picogram amounts of DNA fragments larger than 20 base pairs while failing to precipitate shorter fragments and free nucleotides. This feature makes linear acrylamide useful for separating reaction products from unincorporated nucleotides and oligonucleotide primers. Like glycogen, it is preferred over yeast RNA as a coprecipitant for applications where added nucleic acid could interfere or compete with subsequent enzymatic reactions. Linear acrylamide offers the additional advantage that it is not derived from a biological source or treated with reagents (e.g., proteases) derived from biological sources. For this it might be the most appropriate coprecipitant to use when precipitating DNA and RNA for PCR and RT-PCR reactions, respectively. In these procedures, small amounts of contaminating nucleic acids present in the carrier could also be amplified, generating spurious background.

Product Specifications

Concentration:	5mg/mL
Endonuclease/nickase activity:	not detected
Storage Buffer:	nuclease and protease free water

Protocol for DNA precipitation

- Add 1/10 volume of 3M Na-Acetate to the sample.
- Add Linear Acrylamide Solution to a final concentration of 10-20 µg/mL, mix well.
- Add one volume of 100% isopropanol or two volumes of 100% ethanol.
- Chill at least 15 min at -20°C, centrifuge at $\geq 10,000 \times g$ for at least 15 minutes.
- Carefully remove the supernatant fluid, and resuspend the pellet in an appropriate buffer.

For precipitation of oligonucleotides, follow the same procedure, using ethanol instead of isopropanol for best recovery. Wash with 80% ethanol to remove excess salt.

Stability/Storage: Linear Acrylamide Solution is shipped at RT and should be stored at -20°C.

References

1. Gaillard C and Strauss F (1990) Ethanol precipitation of DNA with linear polyacrylamide as a carrier. *Nucleic Acids Research* 18:378.
2. Wang E (2005) RNA amplification for successful gene profiling analysis. *J Transl Med.* 25(3):28

Product Use Limitations

Linear Acrylamide Solution is developed, designed, and sold for research purposes only. It is not to be used for human, diagnostic or drug purposes or to be administered to humans unless expressly cleared for that purpose by the Food and Drug Administration in the USA or the appropriate regulatory authorities in the country of use. All due care and attention should be exercised in the handling of many of the materials described in this manual.

Safety information

This product does not require a Material Safety Data Sheet because it does neither contain more than 1% of a component classified as dangerous or hazardous nor more than 0.1% of a component classified as carcinogenic. However, we generally recommend, when working with chemicals, always wear a suitable lab coat, disposable gloves, and protective goggles.

Genaxxon bioscience takes no liability for damage resulting from handling or contact with this product.

Related products

Product	Cat#	Package size
tRNA from yeast	S5314	100mg, 500mg
Glycogen	M6045	5g, 10g, 25g