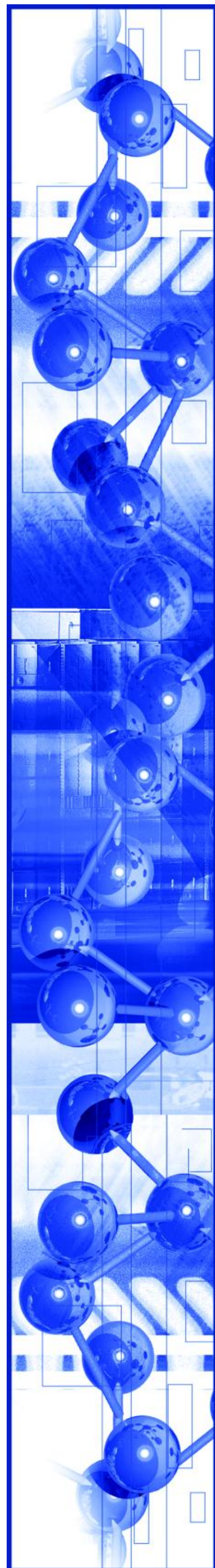
amresco® **Product Information**



Linear Acrylamide
5 mg/mL Solution

Code	Description	Size
K548-5x1mL	Linear Acrylamide 5 mg/mL Solution	5X1mL

General Information:

The purification of nucleic acids for PCR, RT-PCR and other enzymatic reactions by alcohol precipitation is an essential step to yield high quality results. Traditional alcohol precipitation procedures require co-precipitants like glycogen or yeast RNA to improve recovery of nucleic acids. Recently, linear polyacrylamide has been shown to effectively precipitate nucleic acids (down to picogram quantities) when used with ethanol (1). Specifically, DNA fragments >20 base pairs have been shown to precipitate from solution while shorter fragments and free nucleotides remain in the supernatant.

The addition of linear acrylamide (a neutral carrier) during alcohol precipitation offers several advantages to the more popular precipitation procedures using glycogen or yeast RNA. Because glycogen, yeast RNA and other popular co-precipitants are either derived from biological sources or treated with reagents derived from biological sources, there is the potential of trace nucleic acid contamination or nuclease contamination from the source. The introduction of minor contamination may lead to amplification of the background or worse, degradation of the final precipitation product.

Linear acrylamide eliminates the risk of trace contaminants being introduced to the precipitation process because it is chemically synthesized and rigorously tested for nuclease contamination. Linear acrylamide also will not interfere with spectrophotometric readings at 260nm and 280nm. These clear advantages make linear acrylamide the best choice for precipitating DNA and RNA for amplification reactions.

(1) Gaillard, C. and Strauss, F. Nucleic Acids Res. **18**, 378.

Alcohol precipitation procedure using linear acrylamide:

1. Linear acrylamide should be added to the sample to a final concentration of 10-20 ug/mL and thoroughly mixed.
2. Add either one volume of isopropanol or two volumes of ethanol to the sample. (Ethanol is recommended for precipitating oligonucleotides).
3. Place the samples at –20C for 10 minutes and centrifuge for at least 10 minutes at $\geq$ 10,000 x g.
4. Remove the supernatant very carefully and resuspend the pellet in H_2O, TE Buffer or other appropriate buffer.

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