**Lumiprobe Corporation**
201 International Circle, 135號套房
馬里蘭州亨特瓦雷，21030
美國
手機：+1 888 973 6353
傳真：+1 888 973 6354
電子郵件：order@lumiprobe.com

## DNA Purification Columns for 1 mL Sample Volume

http://hk.lumiprobe.com/p/nap-10-dna-purification-columns

DNA Purification Columns for 1 mL Sample Volume are disposable columns pre-packed with DNA Grade Sephadex™ G-25 and water with preservative. The columns are designed for rapid (less than 15 min) and efficient DNA purification by gel filtration. They can be used for any DNA longer than 10 bases in length. The columns allow the desalting of a DNA sample, buffer exchange, and removal of low molecular impurities from reaction mixtures after oligonucleotide labeling.

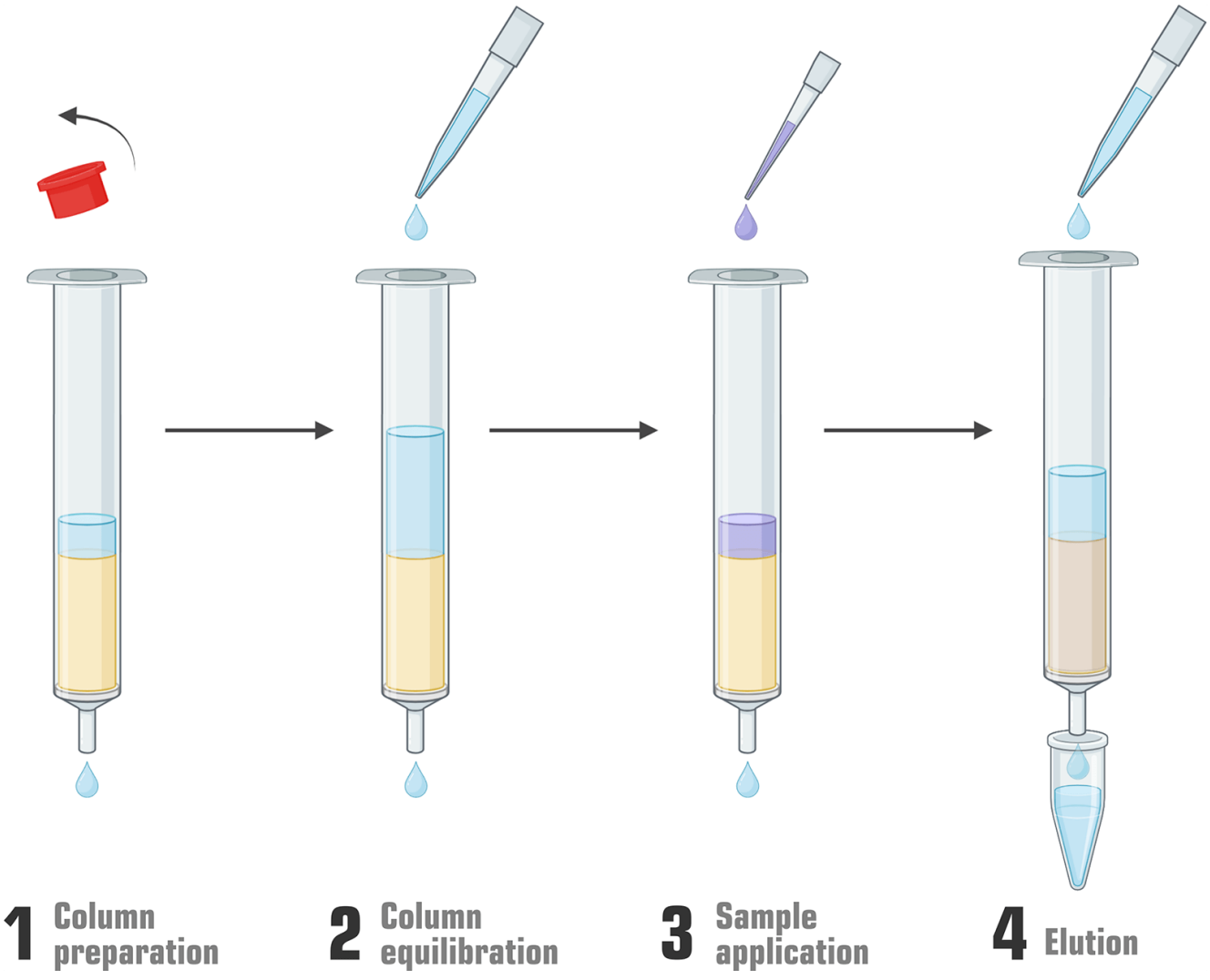
DNA Purification Columns for 1 mL Sample Volume are ideal for purifying oligonucleotides or very short DNA fragments after they have been synthesized or labeled for further use in methods such as PCR amplification and sequencing.

*Attention!* DNA Purification Columns do not remove or denature enzymes.

We supply DNA Purification Columns in packs of 10 pcs.

# Protocol for purification of oligonucleotides and short DNA fragments

All procedures are carried out at temperatures from 20 to 25 °C.



## 1. Column Preparation

- Remove the top and bottom caps from the column and allow excess liquid to flow through the column; avoid draining the gel. Complete removal of liquid from the column will reduce the filtration rate.

## 2. Column Equilibration

- Add 15 mL of equilibration buffer to the column. This volume corresponds to three full refills of the column. Any nuclease-free buffer, including water or Tris/EDTA (TE), could be used as an equilibration buffer.
  *Important!* The same buffer must be used during the elution step!
- Allow the buffer to enter the gel by gravity flow completely.

## 3. Sample Application

- Use samples with a DNA concentration of no more than 1 mg/mL; the higher concentrations may result in reduced resolution and lower yield due to increased viscosity.
- Add the DNA sample to the column in a maximum volume of 1 mL. Allow the sample to enter the gel completely.
- If the sample volume is less than 1 mL, and the task is to elute the sample using the minimum volume of buffer, do not adjust the sample volume to 1.0 mL with buffer at this point. Load the required volume of DNA solution into the column, let it completely enter the gel, and then add the remaining buffer volume up to 1 mL. For example, for the elution of 0.75 mL of sample, an additional 0.25 mL of buffer must be applied to the column. Allow the buffer to enter the gel completely.

## 4. Elution

- Place a suitable size tube under the column to collect the eluant.
- Elute the purified sample with an appropriate volume of buffer. To elute 1 mL of sample, use a buffer volume of 1.5 mL; for smaller samples, add 1.5 mL − $V_{\text{sample application buffer}}$. For example, for a 0.75 mL sample, the buffer volume will be 1.25 mL.
- If a concentrated sample is required, collect multiple 0.1 mL fractions of the eluant as the sample elutes from the column. The concentration of the various fractions can be quantified using a spectrophotometer or an analytical gel.
- Store the purified DNA at −20 °C.

---