

Appendix - DNASTable® Protocol

DNASTable is a unique storage medium that preserves genomic DNA, plasmids, bacterial artificial chromosomes (BACs), PCR products and oligonucleotides at room temperature. DNASTable allows for long-term stabilization of DNA samples with easy sample recovery by simply adding water.

Each tube or plate contains DNASTable provided as a coating at the bottom of the tube or well, which protects picogram to microgram amounts of DNA. DNASTable is formulated so that upon application of liquid samples, the matrix dissolves and forms a protective coating around the DNA. The sample must then be completely dried for maximum protection and stability for storage at ambient temperatures.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

DNASTable products and kits should be stored dry in their original unopened packaging at ambient laboratory temperatures until ready for use. Prolonged exposure to light may cause fading or color change of DNASTable; however, this will not affect the protective properties of the matrix. To prevent color change, store dried samples in a moisture-barrier bag or wrapped in aluminum foil to protect from light.

Procedures

NOTES ON SAMPLE PREPARATION

Types of DNA. All types of DNA can be stored in DNASTable, including genomic DNA, plasmids, oligonucleotides, PCR products, artificial chromosomes (BACs), and DNA from complex sources (e.g. forensics or genetic identify DNA samples.)

Purification Techniques. Most standard molecular biology techniques and/or commercially available kits are compatible with DNASTable storage. Purified DNA that is DNase-free should be resuspended in water or TE buffer (10 mM Tris Cl, 1 mM EDTA) prior to application into DNASTable.

Determining yield. The concentration of the DNA sample should be determined prior to sample application into DNASTable. Although not essential, applying a known amount of DNA into DNASTable for storage can facilitate sample retrieval and subsequent applications. For optimal results, do not exceed 30 µg of total DNA per tube or well in a maximum volume of 50 µl. For oligonucleotides, we recommend storage of 20 µl aliquots, with a concentration of ≤100 µM per oligo (2 nmol of each oligo).

SAMPLE DRYING AND STORAGE

1. Determine the amount of purified DNA in the sample, and calculate the amount to be applied into DNASTable wells or tubes.
2. Gently apply the sample directly into the center of each tube or well containing DNASTable. The final volume of the sample applied to each well should be ≤50 µl.
3. Mix the sample thoroughly with gentle pipetting. Avoid forming air bubbles.
4. Dry the uncovered sample completely at room temperature (15-25°C). We recommend using a laminar flow hood or drying under a vacuum concentrator to ensure complete drying (see table below for drying times). **Do not dry samples on the bench.**

Table – Drying times in a laminar flow hood*

Sample Volume (µl)	Drying Times (hrs) Tubes	Drying Times (hrs) (96-well plate)	Drying Times (hrs) (384-well plate)
5	4	4	4
6–10	6	6	12
11–20	12	8	24
21–50	28	18	48
51–100	56	24	68
101–125	72	24	78

***Drying times will be reduced if using a vacuum concentrator**

5. Store samples with a desiccant packet in the original pouch and heat-sealed. Alternatively, store dried samples in a dry storage cabinet at room temperature.