PALL Laboratory

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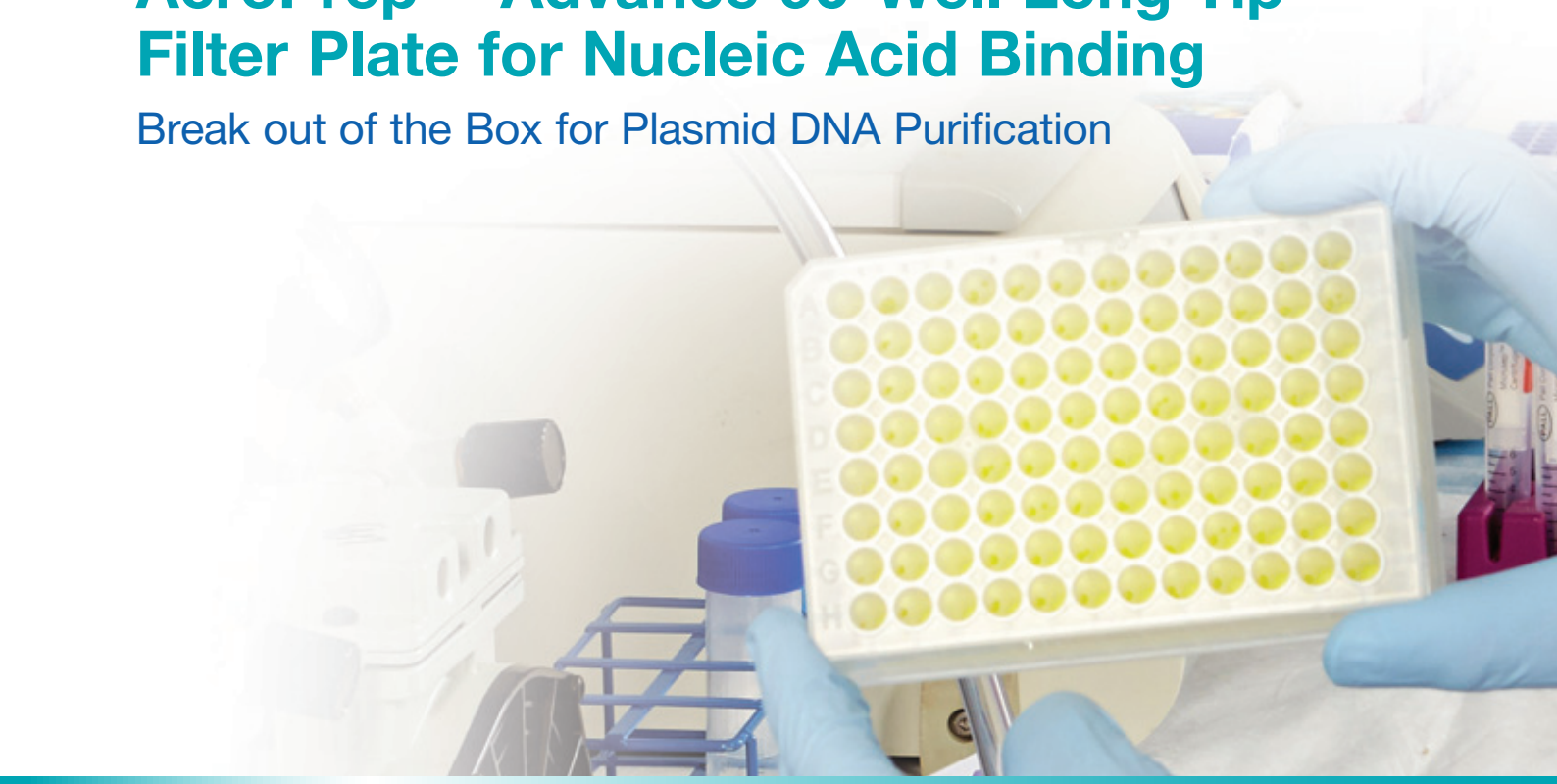
AcroPrep™ Advance 96-Well Long Tip Filter Plate for Nucleic Acid Binding

Break out of the Box for Plasmid DNA Purification



Description

The Pall AcroPrep Advance 96-well Long Tip Filter Plate for Nucleic Acid Binding (Pall NAB plate) incorporates a silica-based quartz glass fiber media for efficient binding of DNA and RNA, while providing smooth flow and rapid processing of samples. This media offers researchers the flexibility to purify plasmid DNA (pDNA) from bacteria, and genomic DNA (gDNA) or total RNA samples from cell culture: a single plate for multiple applications. Reducing the chance of cross contamination is critical for reproducible quality results. Pall's new long tip plate minimizes hanging drop formation thus reducing the possibility of cross contamination. The Pall NAB plate is a multipurpose plate providing flexibility in applications, reduced risk of cross contamination, and smooth flow for sample processing.

1. **Economical** – Cost savings of up to 80%* over leading commercial plasmid DNA purification kits.
2. **Flexible** – Single filter plate suitable for multiple applications and methods to fit your research needs.
3. **Sustainable** – No wasted reagents, purchase and use only what you need.

*Values are based on Pall Laboratory and leading competitor US 2016 published list prices

Applications

Plasmid DNA purification

- Restriction digests
- Cloning
- Sanger sequencing

Maximum yields and quality of nucleic acid purification

- New outlet tip geometry provides direct flow of samples into receiver plate without concerns of cross contamination
- Silica-based quartz glass fiber media that allows efficient binding of plasmid DNA, genomic DNA, and RNA, while providing smooth flow and rapid processing of samples
- Manufactured in accordance with standard ANSI/SLAS guidelines, allowing the entire DNA purification process to be performed on automated equipment

Clarification of cell lysates can be performed by either filtration or centrifugation. In the past, centrifugation was the primary method used to sediment cellular debris. Sedimentation has several limitations for many applications where small-scale, high-throughput processing is required.

Filtration, which is easily automated, is relatively quick and allows the use of additional wash steps to maximize sample recovery. Filtration can be easily achieved utilizing Pall's AcroPrep Advance filter plate for lysate clearance.

Following clarification of cell lysates by either filtration or the older centrifugation method, purification of plasmid DNA can be efficiently performed using the Pall NAB plate.

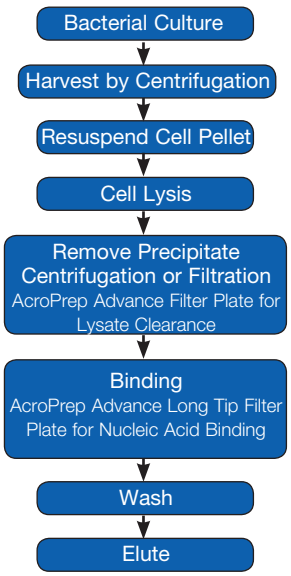


Table 2

The yield and purity (A_{260}/A_{280}) for high-copy number plasmids

Plate/Kit	Lysate Clarification	Average Yield (µg/well)	A_{260}/A_{280}
Pall NAB Plate	Centrifugation	6.4	1.87
	Filtration	7.1	1.87
Commercial Kit 1 (CK1)	Filtration	10.4	1.91
Commercial Kit 2 (CK2)	Filtration	10.9	1.92

E. coli DH5α cells transformed with plasmid pGEM◆-luc were grown overnight in LB medium containing 100 µg/mL of ampicillin. The pGEM-luc plasmids were purified using Pall NAB plates and two commercially available plasmid DNA purification kits. Plasmid DNA yield and purity (A_{260}/A_{280}) were determined with the NanoDrop◆ 8000 UV/Vis spectrophotometer.

While leading competitive pDNA kits may offer plasmid yields of over 10 µg/well, performance of most typical downstream applications requires less than 1 µg of pDNA. Therefore pDNA quality, not yield, is the critical factor to judge performance by. Performance of pDNA obtained with the Pall NAB plate in common downstream applications as restriction digestion, PCR, and Sanger sequencing was similar to that obtained with commercial kits*.

Pall NAB plates provide the adequate yield and the high quality that is critical for downstream applications. Pall offers this solution at a drastically reduced cost while affording greater flexibility to your workflow.

**Reference application note: Pall NAB plate for High-Throughput Purification of Plasmid DNA*

Ordering Information

AcroPrep Advance 96-Well Long Tip Filter Plate for Nucleic Acid Binding

Part Number	Description	Pkg
8133	Long Tip Filter Plate for Nucleic Acid Binding	5/pkg

Accessories and Replacement Parts

5017	Multi-well Plate Vacuum Manifold	1/pkg
5225	Adapter Collar for Centrifugation	2/pkg
5226	Adapter for PCR Receiver Plate	2/pkg
5230	Cap Mat for Incubation	5/pkg
8001	AcroPrep Advance Multi-well Plate Lids	10/pkg

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