# PuroSPIN™ 96-well Silica Membrane DNA/ RNA Purification Plate

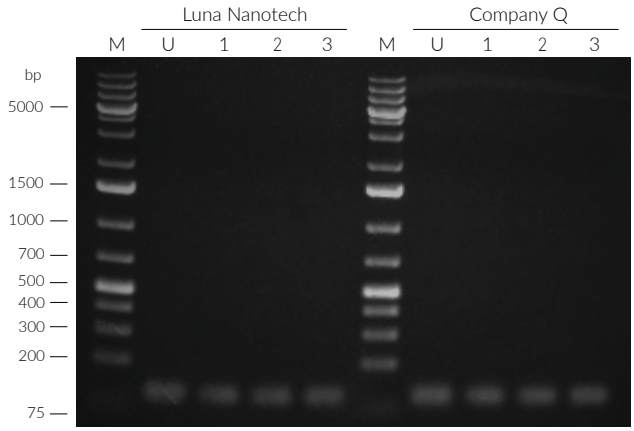
Speed up your RNA and DNA processing purification by going high throughput! Our Purification Plate allows the user to process up to 96 samples simultaneously. Each well features a thick silica membrane to maximize nucleic acid binding and recovery of RNA and DNA from many sample types.

**Features:**

- Each well features a thick silica membrane to maximize nucleic acid binding and recovery of RNA and DNA from many sample types.
- Allow the user to process up to 96 samples simultaneously.
- Processing can be done via centrifugation or vacuum.

| Features | Specifications |
|---|---|
| Loading volume | Semi-skirted: 1.2 mL<br>Full-skirted: 800 µL |
| Binding capacity | RNA: 200 µg<br>Plasmid DNA: up to 20 µg<br>PCR Product: up to 20 µg<br>Genomic DNA: 100 µg |
| Elution volume | ≥ 30 µL |
| DNA binding technology | Silica membrane |
| Applications | High throughput extraction of genomic DNA and RNA from bacteria, viruses, yeast, cultured cells, blood, buccal swabs, animal tissue, plasmid DNA purification, PCR product cleanup, gel extraction |

## Purification of Short DNA Fragments

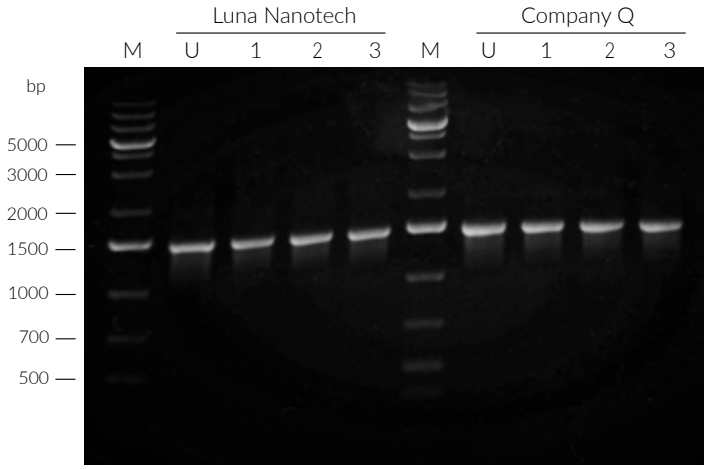



| | Sample | Yield (µg) | $A_{260/280}$ | $A_{260/230}$ |
|---|---|---|---|---|
| 100 bp | Luna Nanotech | 1.31 | 1.95 | 2.30 |
| | Luna Nanotech | 1.44 | 1.88 | 2.32 |
| | Luna Nanotech | 1.36 | 1.89 | 2.36 |
| | Company Q | 1.79 | 1.834 | 2.28 |
| | Company Q | 2.09 | 1.81 | 1.60 |
| | Company Q | 1.85 | 1.82 | 2.14 |

**Figure 1.** 100 bp DNA fragments were extracted from PCR reaction mixtures using Luna Nanotech's PuroSPIN-96™ PCR Product Purification Kit and a standard spin column PCR Purification Kit from Company Q, according to the manufacturer's recommended protocol, in triplicate. DNA samples were resolved on a 1% w/v agarose gel. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder and Lanes U represent un-purified PCR product. DNA concentration and purity were measured using Thermo Scientific's NanoDrop™ One system.

| Product Description | Skirt Format | Catalog No. |
|---|---|---|
| PuroSPIN™ 96-well Silica Membrane DNA/RNA Purification Plate, 10 Plates | Full skirt | USP-096F |
| | Semi-skirt | USP-096S |

## Purification of Long DNA Fragments




| | Sample | Yield (µg) | $A_{260/280}$ | $A_{260/230}$ |
|---|---|---|---|---|
| 1500 bp | Luna Nanotech | 4.85 | 1.85 | 2.24 |
| | Luna Nanotech | 5.10 | 1.82 | 2.23 |
| | Luna Nanotech | 5.3 | 1.84 | 2.21 |
| | Company Q | 4.18 | 1.83 | 2.39 |
| | Company Q | 4.42 | 1.83 | 2.40 |
| | Company Q | 4.32 | 1.83 | 2.36 |

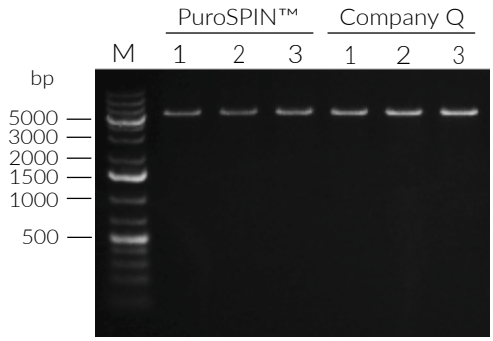
**Figure 2.** 1500 bp DNA fragments were extracted from PCR reaction mixtures using Luna Nanotech's PuroSPIN-96™ PCR Product Purification Kit and a standard spin column PCR Purification Kit from Company Q, according to the manufacturer's recommended protocol, in triplicate. DNA samples were resolved on a 1% w/v agarose gel. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder and Lanes U represent un-purified PCR product. DNA concentration and purity were measured using Thermo Scientific's NanoDrop™ One system.


Luna Nanotech
Nano for Bio

**Luna Nanotech Inc.**
85 Citizen Court, Unit 13
Markham, ON, Canada
L6G 1A8

**Email**: info@lunanano.ca
**Phone**: 1-800-474-4055
**Web**: www.lunanano.com

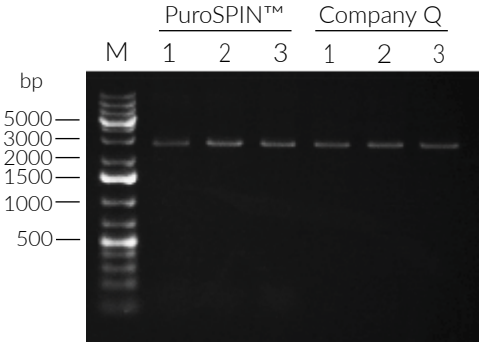
## Comparison of Luna Nanotech's 96-well silica plates to Competitor Q's individual silica spin columns




| | Sample | Conc. (ng/µL) | $A_{260/280}$ | $A_{260/230}$ |
|---|---|---|---|---|
| p11 | Luna Nanotech | 7.76 | 1.92 | 2.07 |
| | Luna Nanotech | 7.36 | 2.03 | 1.79 |
| | Luna Nanotech | 9.38 | 2.03 | 1.90 |
| | Company Q | 5.11 | 1.86 | 0.58 |
| | Company Q | 7.5 | 1.82 | 1.35 |
| | Company Q | 6.54 | 1.86 | 0.51 |

**Figure 1.** p11 plasmid DNA was purified from 1.5 mL of DHα *Escherichia coli* cultures using Luna Nanotech's PuroSPIN-96™ Plasmid Miniprep Kit and a plasmid miniprep kit (silica spin column based) from Company Q according to the manufacturer's recommended protocol, in triplicate. FastDigest HindIII was used to linearize the purified plasmid DNA (5704 bp) and samples was resolved on a 1% w/v agarose gel. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder.

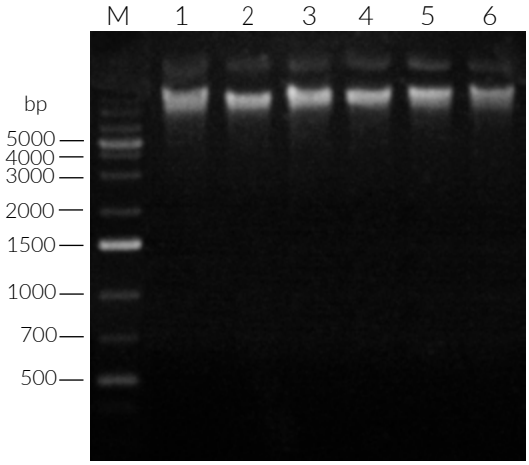
## Comparison of Luna Nanotech's 96-well silica plates to Competitor Q's individual silica spin columns




| | Sample | Conc. (ng/µL) | $A_{260/280}$ | $A_{260/230}$ |
|---|---|---|---|---|
| pUC19 | Luna Nanotech | 9.76 | 1.88 | 1.49 |
| | Luna Nanotech | 10.74 | 1.92 | 1.21 |
| | Luna Nanotech | 11.65 | 1.97 | 1.85 |
| | Company Q | 5.95 | 1.93 | 0.57 |
| | Company Q | 6.40 | 1.89 | 0.53 |
| | Company Q | 6.17 | 1.86 | 0.54 |

**Figure 2.** pUC19 plasmid DNA was purified from 1.5 mL of DHα *Escherichia coli* cultures using Luna Nanotech's PuroSPIN-96™ Plasmid Miniprep kit and a plasmid miniprep kit (silica spin column based) from Company Q according to the manufacturer's recommended protocol, in triplicate. FastDigest HindIII was used to linearize the purified plasmid DNA (2686 bp) and samples was resolved on a 1% w/v agarose gel. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder.

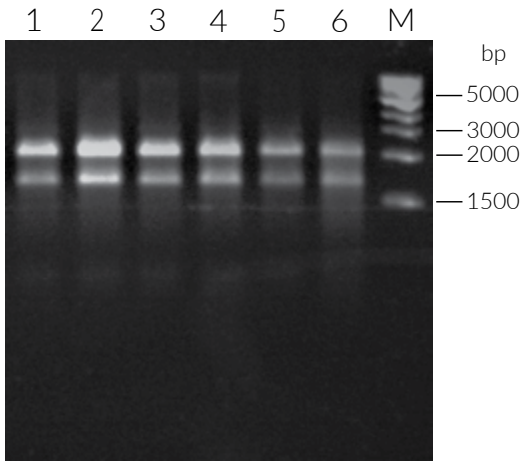
## Genomic DNA from Bacteria




| Sample | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Conc. (ng/µL) | 35.25 | 36.82 | 38.23 | 35.01 | 41.87 | 32.07 |
| Yield (µg) | 3.53 | 3.68 | 3.82 | 3.50 | 4.19 | 3.21 |
| $A_{260/280}$ | 1.69 | 1.71 | 1.71 | 1.70 | 1.67 | 1.68 |
| $A_{260/230}$ | 1.26 | 1.35 | 1.35 | 1.23 | 1.06 | 1.28 |

**Figure 2.** Genomic DNA was extracted from *Escherichia coli* using Luna Nanotech's PuroSPIN-96™ Genomic DNA Purification Kit according to the manufacturer's recommended protocol. DNA samples were resolved on a 1% w/v agarose gel and concentration and purity were measured using Thermo Scientific's NanoDrop™ One system. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder.

## Total RNA from Bacteria




| Sample | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| Conc. (ng/µL) | 180.15 | 305.46 | 196.18 | 231.75 | 122.61 | 246.25 |
| Yield (µg) | 18.02 | 30.55 | 19.62 | 23.18 | 12.26 | 24.62 |
| $A_{260/280}$ | 2.16 | 2.19 | 2.16 | 2.18 | 2.15 | 2.18 |
| $A_{260/230}$ | 2.55 | 2.53 | 2.59 | 2.53 | 2.65 | 2.56 |

**Figure 2.** Total RNA was extracted from *Escherichia coli* using Luna Nanotech's PuroSPIN-96™ Total RNA Purification Kit according to the manufacturer's recommended protocol. RNA samples were resolved on a 1% w/v agarose gel and concentration and purity were measured using Thermo Scientific's NanoDrop™ One system. Lane M represents the Thermo Scientific™ GeneRuler 1kb Plus DNA Ladder.

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