

MassGlass® NA Sample Prep Kits

Refeyn's MassGlass NA slides come pre-coated and ready to use, enabling fast and reliable mass photometry measurements of RNA and DNA (on TwoMP and TwoMP Auto systems), as well as lentiviral vectors (LVV) and adenoviral vectors (AdV) (on Karitro® systems).

Their specialized cationic surface ensures consistent particle detection without additional preparation steps. Paired with clean silicone sample well cassettes, these slides deliver an optimal interface for accurate, reproducible measurements.

Analysis of RNA and DNA with TwoMP

Mass photometry (MP) is a powerful bioanalytical technique that measures the mass of biomolecules in solution by detecting the interference between the light they scatter when they land on the surface of a glass slide and the light reflected by that surface.

While most proteins naturally adhere to uncoated glass slides (MassGlass UC), nucleic acids such as RNA and DNA do not interact with glass due to their strong negative charge. MassGlass NA slides (**Fig. 1**) address this limitation with a cationic coating that enables reliable and reproducible mass photometry measurements of RNA and DNA.

MassGlass NA slides eliminate the need for further surface functionalization, allowing researchers to study nucleic acids in a single, streamlined experiment. Fully compatible with Refeyn's TwoMP and TwoMP Auto instruments, MassGlass NA slides work out of the box, reducing variability and saving valuable preparation time.

To learn more about analyzing RNA with mass photometry, visit www.refeyn.com/mrna-characterization or download the Refeyn whitepaper, [Best practices for mass photometry analysis of mRNA](#).

Analysis of large vectors with KaritroMP

Characterizing viral vectors (LVV and AdV) and other vectors, such as virus-like particles (VLP), is crucial for optimizing workflows for cell and gene therapies, as well as vaccine development, ensuring the safety and efficacy of drug delivery platforms. The Karitro instrument (KaritroMP) employs macro mass photometry for fast, simple, and qualitative vector analysis. With the ability to quickly assess the purity and stability of produced viruses and particles before making further decisions, it is perfectly suited to compare different production/purification methods and batch-to-batch variations.

MassGlass NA Sample Prep Kits for KaritroMP allow the measurement of multiple samples (13 samples plus a calibrant) out of the box, generating rapid, consistent and reproducible results. They have been engineered to facilitate the safe handling of BSL-2 samples in a controlled environment, such as a biosafety hood. Once the sample has been diluted to the appropriate concentration (10^8 – 10^9 particles/mL) and manually pipetted into the wells, the carrier is closed with a lid, allowing the sample carrier to be safely removed from the biosafety hood and placed on the KaritroMP instrument.



Fig. 1. MassGlass NA slides. A silver package of MassGlass NA slides (left) contains a plastic box (right) that holds five slides.

Product specifications

Packaging	5 slides per box
Shelf life	6 months from manufacturing date (unopened). Minimum guaranteed shelf life: 2 months from date of dispatch.
Storage	18–25 °C. Once opened, use slides within 1 month or before the shelf life expiration date, whichever comes first.
Handling	Open and use MassGlass slides in a clean environment to avoid particle build-up on the surface. Close the box when not in use. Avoid direct contact with the surface to minimize contamination and abrasion.
Usage	For detailed information on usage, please refer to the Consumables User Guide for your instrument, available at: refeyn.com/eshop .

System compatibility and supported analytes

TwoMP and TwoMP Auto

Nucleic acids (DNA, RNA)
Mass range¹: dsDNA: 100–5,000 bp; ssRNA: 200–10,000 bases.

KaritraMP

Viral particles (AdV, LVV)

¹ Upper mass limits are approximate and depend on sample and buffer.

Guidance for measurements involving proteins

MassGlass NA slides are optimized and validated for measuring nucleic acids. Measurements that include proteins, either alone or in protein-nucleic acid complexes, can produce inconsistent outcomes. For protein studies, we recommend using MassGlass UC slides (MP-CON-21022 or MP-CON-21023). For protein-nucleic acid interaction studies, run parallel controls on MassGlass UC slides to confirm measurements of the protein component and increase confidence in your findings.

How to order

Product code	Product name	Compatible systems	Description
MP-CON-21028	MassGlass NA Sample Prep Kit	TwoMP	Enables up to 60 measurements. For nucleic acid applications only. Includes: 10 MassGlass NA sample carrier slides (2 boxes, 5 slides per box), 10 sample well cassettes (6 wells per cassette), 1 box of lens cleaning tissues (25 sheets).
MP-CON-21029	MassGlass NA Auto Sample Prep Kit	TwoMP Auto	Enables up to 240 measurements. For nucleic acid applications only. Includes: 10 MassGlass NA sample carrier slides (2 boxes, 5 slides per box), 10 sample well cassettes (24 wells per cassette), 1 box of lens cleaning tissues (25 sheets).
MP-CON-21032	KaritraMP – MassGlass NA Sample Prep Kit	KaritraMP	Enables up to 140 measurements. Includes: 10 MassGlass NA sample carrier slides (2 boxes, 5 slides per box), 10 sample carrier lids, 10 sample well cassettes (14 wells per cassette), 1 box of lens cleaning tissues (25 sheets).

For detailed information and to place orders, visit refeyn.com/eshop or contact orders@refeyn.com. Step-by-step consumables guides are also available for each instrument at refeyn.com/eshop.