

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. 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 preparation packs 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

For use on TwoMP systems:

Biomolecules targeted	Nucleic acids (RNA, DNA)
Compatibility	TwoMP and TwoMP Auto
Shelf life	6 months from manufacturing date (unopened)
Storage	18 – 25 °C. Slides must be used within 4 weeks of opening and before the shelf life expires, whichever is earlier.
Packaging	5 slides per box
Mass range	dsDNA: 100 – 5000 base pairs* ssRNA: 200 – 10,000 bases*

For a guide to RNA analysis with MP, refer to the whitepaper, [Best practices for mass photometry analysis of mRNA](#).

For use on KaritroMP systems:

Particles targeted	AdV, LVV
Compatibility	KaritroMP
Shelf life	4 months from manufacturing date (unopened)
Storage	18 – 25 °C. Slides must be used within 4 weeks of opening and before the shelf life expires, whichever is earlier.
Packaging	5 slides per box

*Upper mass limits are approximate due to sample and buffer dependence.

Usage notes for TwoMP users: MassGlass NA slides are optimized and validated for measuring nucleic acids. Measurements that include proteins, whether alone or in protein–nucleic acid complexes, can result in variable or inconsistent outcomes. For protein studies, we recommend using MassGlass UC slides (MP-CON-21022 or MP-CON-21023). For protein–nucleic acid interaction studies, we recommend running parallel controls on MassGlass UC slides to confirm the measurements of the protein component and strengthen confidence in your findings.

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. For detailed information on usage, please refer to the Consumables User Guide for your instrument, available at our eshop: refeyn.com/eshop.

How to order

Product code	Product name	Compatible instruments	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 cassettes), 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 cassettes), 1 box of lens cleaning tissues (25 sheets).
MP-CON-21032	KaritroMP – MassGlass NA Sample Prep Kit	KaritroMP	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.



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