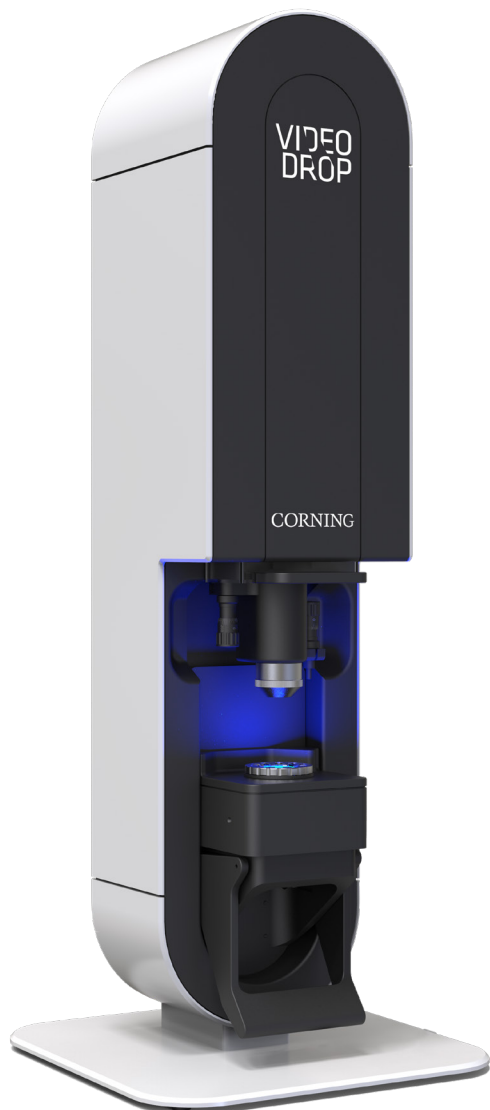


Corning® Videodrop

A real-time tool for measuring the size and concentration of nanoparticles in one drop

CORNING



The Corning Videodrop utilizes the principles of interferometry in conjunction with microscopy to sense, detect, characterize, and track single nanoparticles in real time. The operation of this bioproduction analytical device is seamless thanks to its intuitive software interface and efficient sample handling protocol.

One 5 to 10 μL drop is placed on a specialized Videodrop slide within a magnetic sample holder. The operator prepares the stage for analysis by lifting the handle and lowering the sample protective shield. Preview mode confirms the Blue LED saturation is within parameters. The technician selects 'record' to initiate real-time analysis of the nanoparticle concentration and Brownian motion of the bioproduction batch. Cleaning occurs with a laboratory lint-free Kimwipe (Kimberly Clark) infused with certified detergents to absorb the drop on both the slide and objective lens. Data is readily available to review and export immediately after the desired number of particles are detected.

The Videodrop device aligns with the cell and gene therapy segment of the bioproduction market due to the correlation of collecting physical titer of viral vectors such as lentivirus, retrovirus, adenovirus, and extracellular vesicles (EVs) in the range of 80-500 nanometers. Videodrop outputs are linear compared to p24 ELISA, RT-qPCR, and NTA assays (Figure 1). The unit exhibits the ability to toggle from a nanoscale view to a microscopic view up to 10 μm to view the impurities of debris and aggregates. The Audit Trail software extension will allow users to track actions that have occurred within the software interface during operation accommodating GMP facility requirements. A Corning associate will set up and tune the equipment upon procurement. A 12-month Service Contract is optional and includes 1-annual Preventative Maintenance.

With its small footprint, ease of use, and processing speed, the Corning Videodrop is the ideal tool for characterizing nanoparticles and aims to accelerate clinical trials of drug, cell and gene therapy, and vaccine production.

Features

- ▶ Speed under 1 minute for
 - Loading
 - Processing
 - Cleaning
- ▶ No calibration or wash is needed
- ▶ Repeatable and reproducible
 - No inter-operator bias
 - No parameter adjustment

Specifications

Size of Biological Nanoparticles (Hydrodynamic diameter)	80 to 500 nm
Concentration	1.10^8 to 1.10^{10} part./mL
Minimal system requirements	<ul style="list-style-type: none"> ▶ Windows® 10 or 11 PC ▶ 16 GB of RAM ▶ Hard drive with at least 4 TB (terabyte) storage capacity ▶ Processor with at least 8 cores (min. of 3.6 to 5 GHz of frequency per core) ▶ USB SS port available
Electrical	<ul style="list-style-type: none"> ▶ 120V, 60 Hz, 30 VA ▶ 230V, 50 Hz, 30 VA
External power supply (tension, power, tolerance)	12V, 36 W, $\pm 10\%$
Weight	39.69 lbs. (18 kg)
Material	Painted aluminum
Footprint (L x W x H)	11.82 x 11.82 x 31.15 in. (30 x 30 x 79.1 cm)
Maximum optical output power	4.5 W
Optical wavelength	450 nm
Optical risk group	3 (according to EN 62471)
Operating temperature	2°C to 40°C
Operating humidity	30% to 75% relative humidity (non-condensing)
Storage and transport temperature	-20°C to 60°C
Storage and transport humidity	30% to 85% relative humidity (non-condensing)

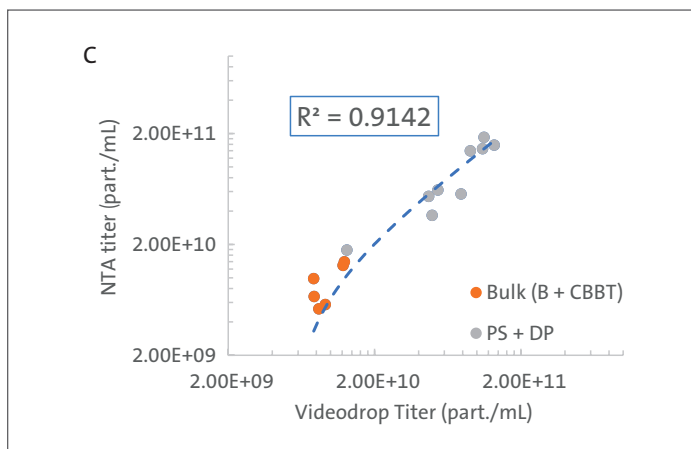
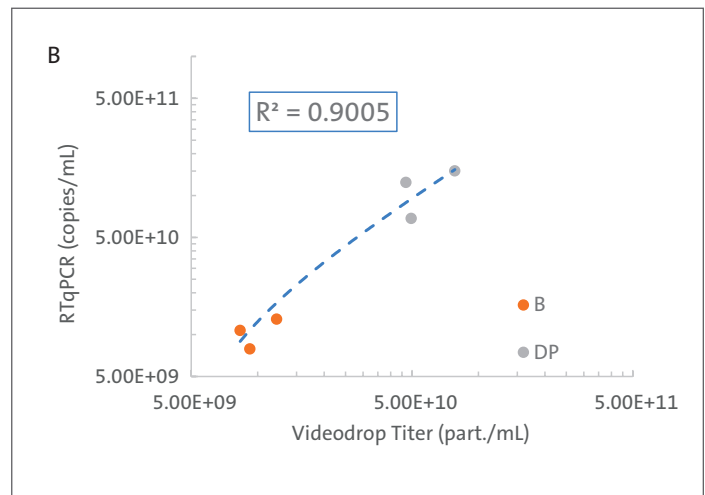
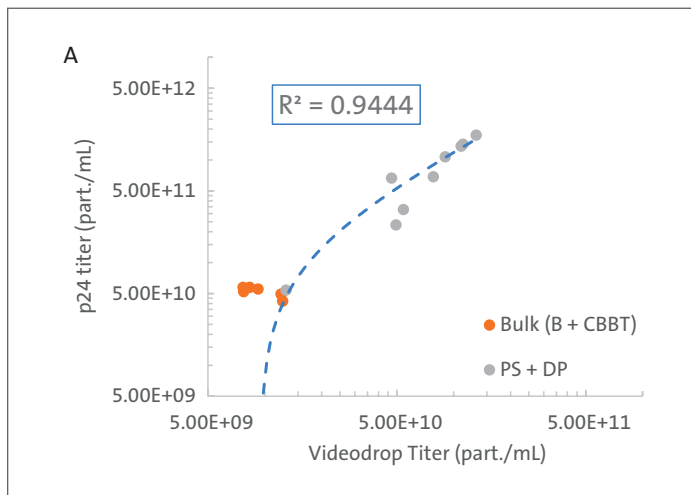
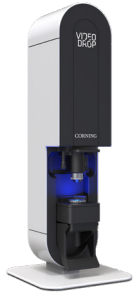


Figure 1. Lentiviral vector quantification method comparison. (A) Comparison between p24 ELISA and Videodrop titers. (B) Comparison between RT-qPCR and Videodrop titers. (C) Comparison between NTA and Videodrop titers.



Ordering Information

Products may not be available in all markets.

Corning Videodrop Device

Cat. No.	Description	Qty/Cs
VD-1000	Videodrop device for characterizing nanoparticles	1

Spare Parts and Accessories

Cat. No.	Description	Qty/Cs
VD-1000-AT	Videodrop Audit Trail	1
VD-1000-GS	Videodrop glass slides	50
VD-1000-SH	Videodrop sample holder	1
VD-1000-PC	Videodrop protective cover	1
VD-1000-LPC	LED protective cover	1

Services

Contact Videodrop@corning.com for more information.

Cat. No.	Description
VD-1000-SC	Videodrop Service contract (12 months)
VD-1000-PM	Videodrop Preventative maintenance

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