



VIDEO
DROP

SK

**SIZE
KINETICS**

Real-time monitoring
of transfection mix
complexation

**VIDEO
DROP**

myriade

Reagent-based transfection is the primary method for producing viral vectors (LV or AAV). However, despite its significance, this critical step often lacks real-time monitoring and quality controls.

Videodrop **SK** offers a revolutionary approach to transfection workflow optimization.

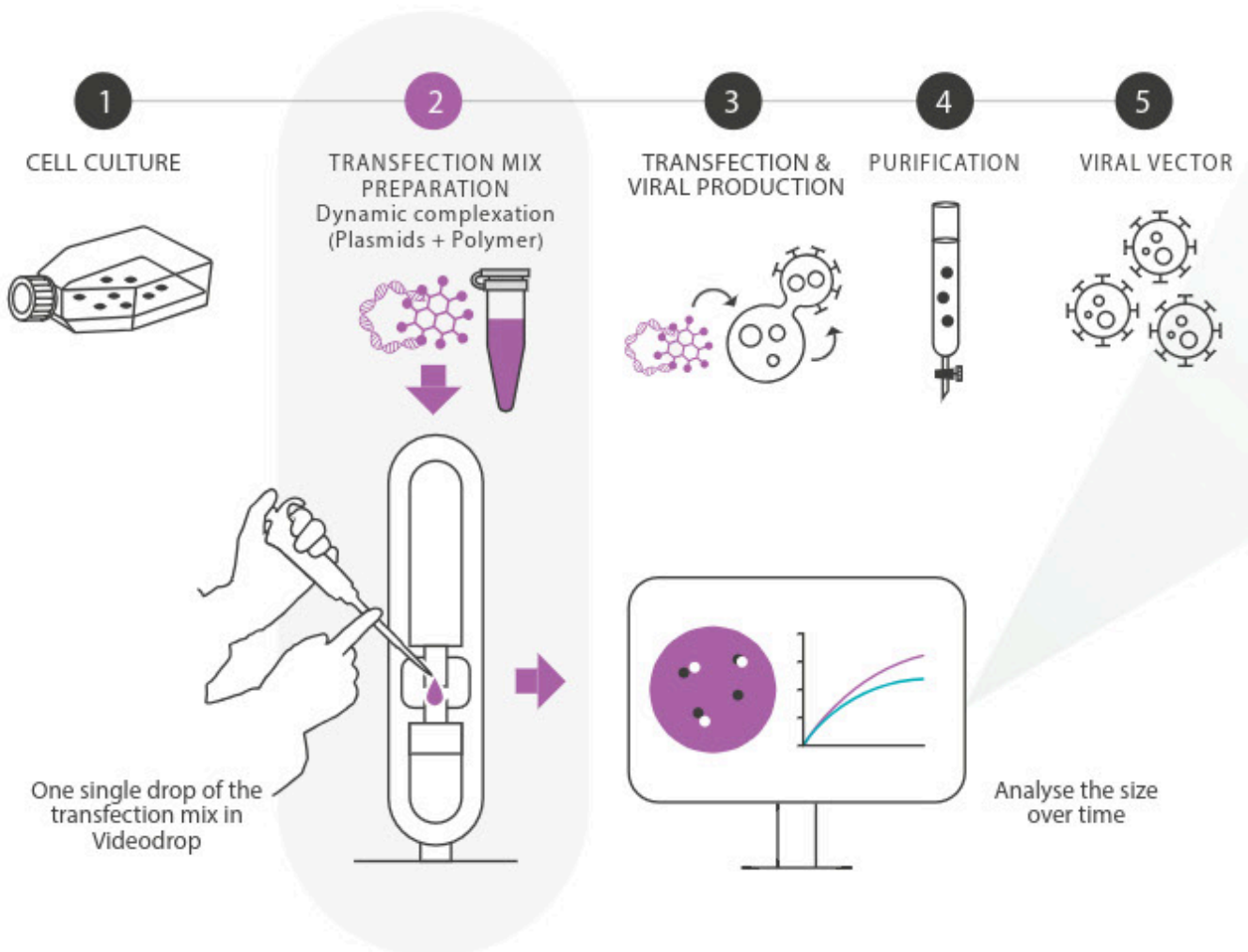
Automated Kinetics Monitoring

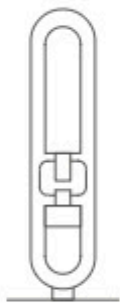
- Size measurement every 15 s, from 80 nm to 2 µm
- On the same sample droplet
- Over a defined time period up to 4 hours

Real-Time Visualisation Transfection reagent/DNA complexes formation

- Microscopic imaging
- Real-time kinetic curves construction

Videodrop SK in Viral vector production UPSTREAM process

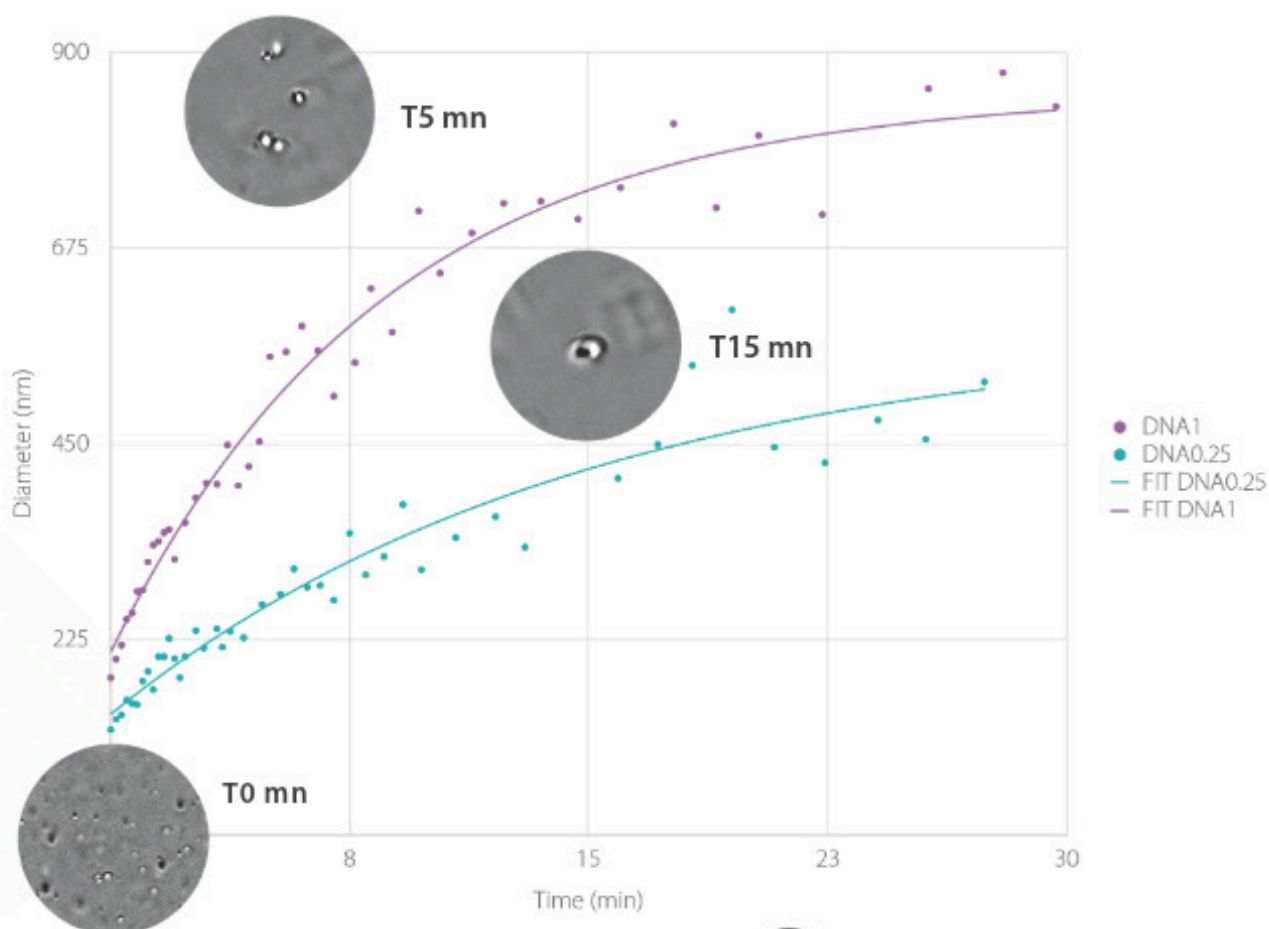




Screening of transfection mix conditions

Videodrop enables in-depth real-time kinetic studies to monitor the impact of various conditions (DNA concentration, ratios, media type, pH levels) on the size evolution of transfection complexes over time. Studies¹ show a clear correlation between size of the formed transfection reagent/DNA complex and the transfection efficiency.

On this paper, we tested 2 concentrations of DNA (3 plasmids : 1 and 0.25 $\mu\text{g}/10^6$ cells) mixed with the same proportion of PEIPro® (Polyplus). Videodrop allows to follow in real-time the DNA/PEIPro® complexation and highlight the kinetics difference between two conditions.



By incorporating Videodrop into their workflows, scientists can **achieve a new level of control and optimize transfection efficiency**, ultimately leading to faster and more cost-effective upstream processes.



The Simplest Analytical Tool
for Real-Time
Transfection
Mix monitoring



VIDEO DROP



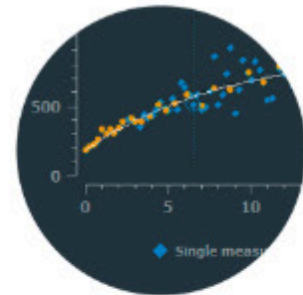
Real-time monitoring of
transfection mix complexation



In a single drop
(5-10 μ L)



Real time
visualisation



Size kinetics