

VLP-RNA Extraction Control

Distinguish a true negative
from a false negative result

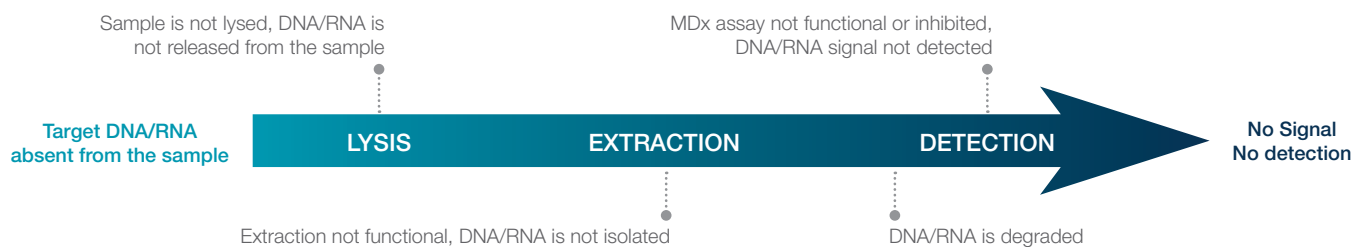
Meridian's VLP-RNA Extraction Controls offer a simple and effective way to reduce false negative results in RT-qPCR assays. The controls are composed of virus-like particle (VLP) shells packaged with a defined number of copies of target RNA molecules that contain no known homology (the RNA sequence can also be customized up to 1000nt). By closely mimicking a diagnostic sample, these controls enable labs to test the entire process of an RT-qPCR assay including lysis/extraction, reverse transcription and amplification.

VLP-RNA Extraction Control

- Contains a defined number of copies of target RNA molecules, encapsidated within a virus-like particle (VLP)
- RNA sequence is customizable up to 1000nt
- Closely mimics the test sample, undergoing the same processing from lysis and extraction to RT-qPCR detection
- Non-infectious material for ease of handling and shipping
- Compatible with commonly used RNA extraction methods and lyophilization for creating freeze-dried mixes

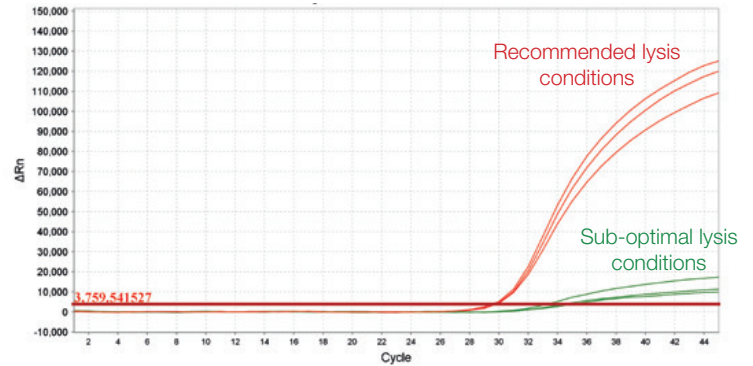
PRODUCT	CAT NO.	SIZES
VLP-RNA Extraction Control Red	MDX068	1 mL (~1x10 ⁴ copies/μL)
		20 mL (~1x10 ⁴ copies/μL)
VLP-RNA Extraction Control Orange	MDX069	1 mL (~1x10 ⁴ copies/μL)
		20 mL (~1x10 ⁴ copies/μL)
VLP-RNA Extraction Control	MDX071	<i>Please enquire</i>

POSSIBLE CAUSES OF NEGATIVE DETECTION IN A RT-qPCR ASSAY.



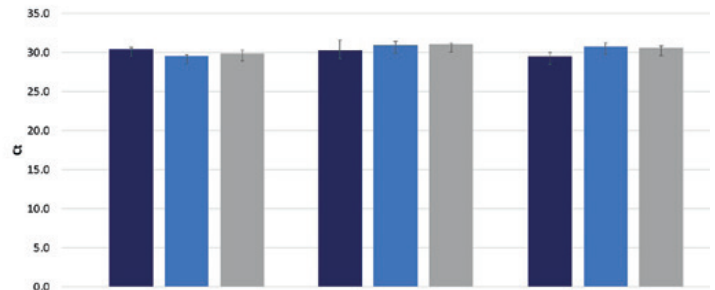
Monitors quality of sample lysis step

Amplification traces of VLP-RNA Extraction Control isolated using the ISOLATE II RNA Mini Kit with the recommended (Red) or sub-optimal (Green) lysis conditions. The RT-qPCR results demonstrate how the VLP-RNA Control Extraction can help to monitor the quality of the sample lysis step.



Maintains stability in the presence of nucleases found in biofluids

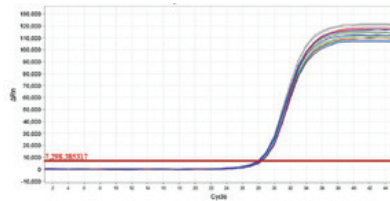
VLP-RNA Extraction Controls were lyophilized and incubated at ambient temperature for 24 hours (dark blue); incubated at ambient temperature for 24 hours (light blue) or spiked directly into the lysis buffer (grey) for blood, plasma and serum samples. The RT-qPCR results illustrate that the VLP-RNA Extraction Control protects packaged RNA from degradation by nucleases in these biofluids until they are ready for analysis.



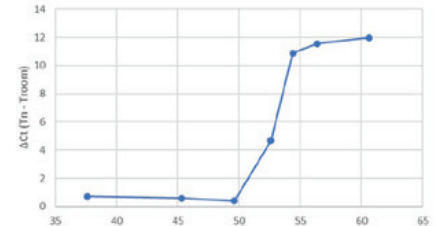
■ Lyophilized VLP incubated 24h at room temp with biofluid | ■ VLP incubated 24h at room temp with biofluid | ■ VLP spiked directly into the lysis buffer

Highly stable and lyophilization compatible

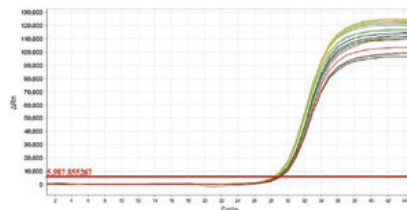
A) Stable after freezing/thawing cycles. VLP-RNA Extraction Controls were submitted to various freeze/thaw cycles: 0 (blue), 1 cycle (black), 5 cycles (red), 10 cycles (grey) and 20 cycles (green) and then analysed.



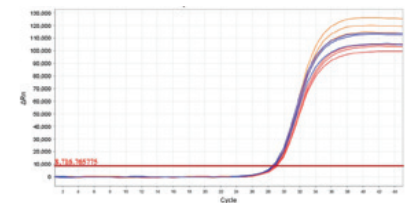
B) Thermal resistance stability. VLP-RNA Extraction Controls were pre-treated at different temperatures for 10 minutes and then analyzed.



C) Shelf-life. VLP-RNA Extraction Controls were stored for a month, in different conditions, ambient temperature (black), 4°C (green) and -20°C (red) before being analyzed.



D) Lyophilization compatible. VLP-RNA Extraction Control are resistant to nucleases even when lyophilized. Lyophilized and nuclease treated (blue), not lyophilized and nuclease treated (orange) not lyophilized and no nuclease treated (red).



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