

ArcPure™ Viral DNA Isolation and Sample Preparation Kits*

for manual purification of PCR-ready DNA in 30 minutes or less

Arcxis Biotechnologies® has developed an exceptionally cost-effective approach to efficient and expeditious extraction, purification and concentration of nucleic acids using standard laboratory equipment.



ArcPure™ Kits Deliver:

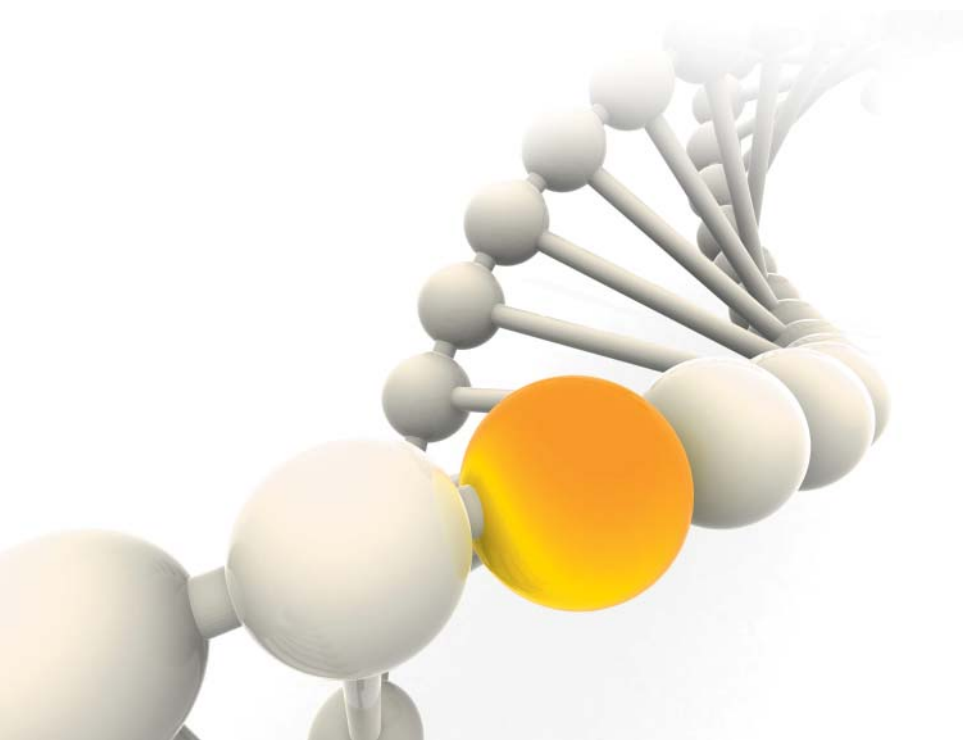
- DNA Extraction
- Purified Nucleic Acids In ≤ 30 Mins
- Reliable Removal of All Relevant Contaminants & Inhibitors
- Robust 10x Viral DNA Concentration



The ArcPure™ Viral DNA Isolation and Sample Preparation Kit combines the efficiency of selective-binding silica-based membranes with broad sample volume tolerance (up to 0.20 ml) for maximum processing flexibility.

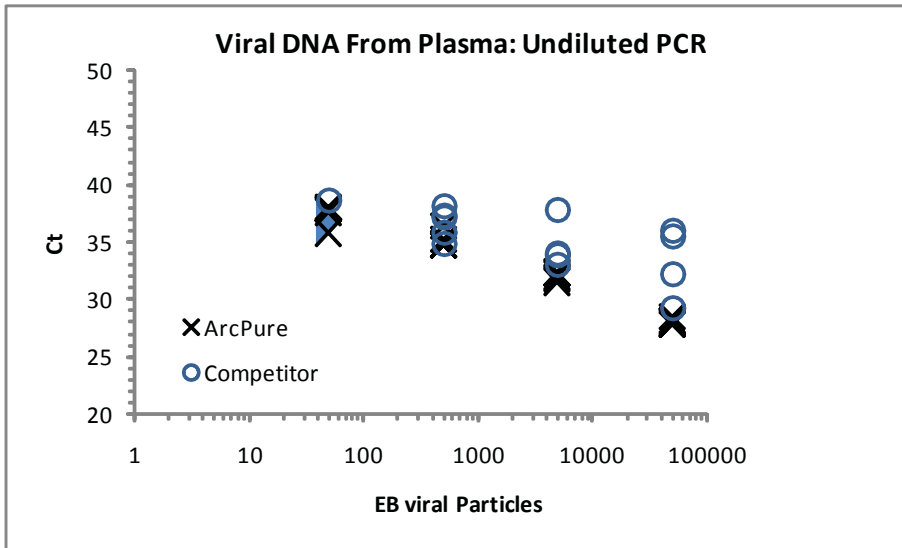
Moreover, the ArcPure™ Viral DNA kit is a cost effective preparation system that increases downstream assay sensitivity and linear dynamic range by maximizing yield through the use of proprietary buffers and materials for viral DNA extraction and purification. Samples prepared using the ArcPure™ Viral DNA kit are free of contaminants that inhibit DNA polymerase used in virtually all DNA amplification reactions.

- Minimize Lab Expense
- Maximize Sample Yield
- Manage Your Workflow

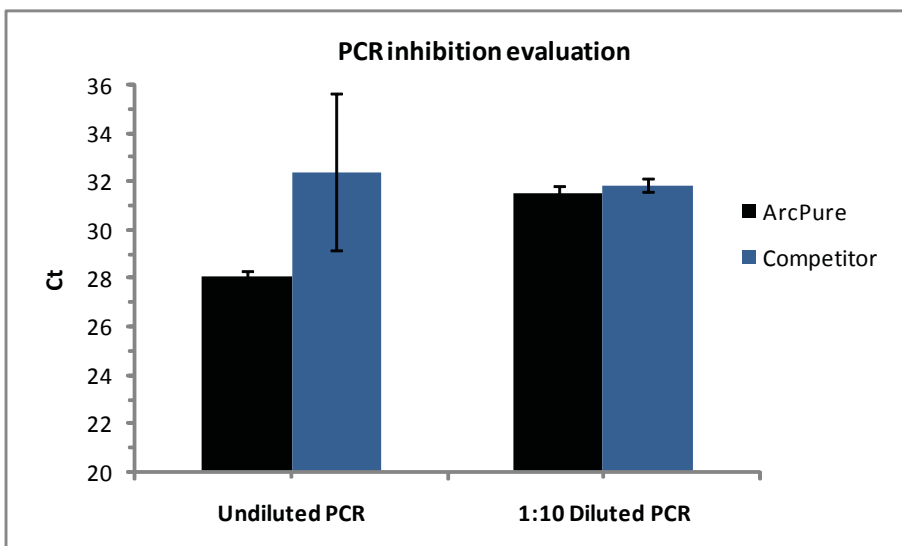


ArcPure™ Viral DNA from Plasma Maximize Sensitivity and Minimize Inhibition

Arcxis Biotechnologies® has developed a viral DNA purification kit that offers customers increased assay sensitivity. The ArcPure™ kit generates high purity samples that do not inhibit DNA polymerases enabling higher sample to master mix ratios in downstream PCR reactions.



EBV in Plasma (undiluted PCR)				
Virus Particles	ArcPure™	CV	Competitor	CV
50,000	5/5	0.85%	5/5	9.99%
5,000	5/5	1.09%	4/5	6.24%
500	5/5	1.96%	5/5	3.56
50	5/5	2.43%	1/5	NA
0	0/5	NA	0/5	NA

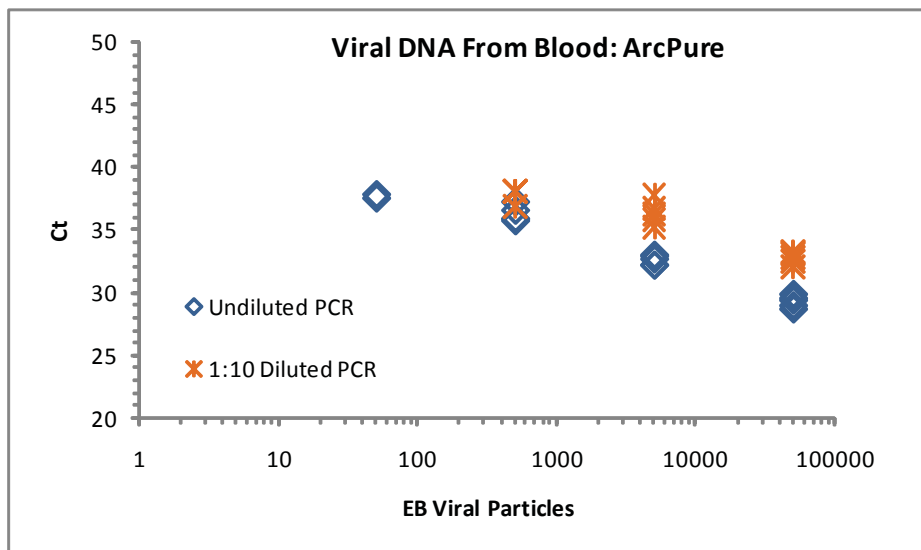


In a series of experiments we have compared the performance of the ArcPure™ Viral DNA isolation kit to a market leading viral DNA isolation product. Direct comparisons of viral DNA isolation were performed on plasma samples containing commercially available intact Epstein Barr virus (EBV). Detection of EBV was determined using quantitative real time PCR. The data demonstrate the isolation and purification of viral DNA was linear over 4 logs of viral particle concentration. The ArcPure™ Viral DNA isolation kit demonstrated improved reproducibility, compared to the competitor, over the entire concentration range. We further found that samples prepared using the ArcPure™ Viral DNA isolation kit were at least one order of magnitude more sensitive at the limit of detection compared to the market leading viral DNA isolation kit. This increased downstream assay sensitivity is a result of reduced PCR enzyme inhibition. Samples prepared using the ArcPure™ Viral DNA isolation kit can be run at nearly a 1:1 ratio with a 2X PCR assay master mix (10 µl sample in 25 µl reaction), while the competitors kit are only effective after 1:10 dilution of the prepared sample.

ArcPure™ Viral DNA from Whole Blood

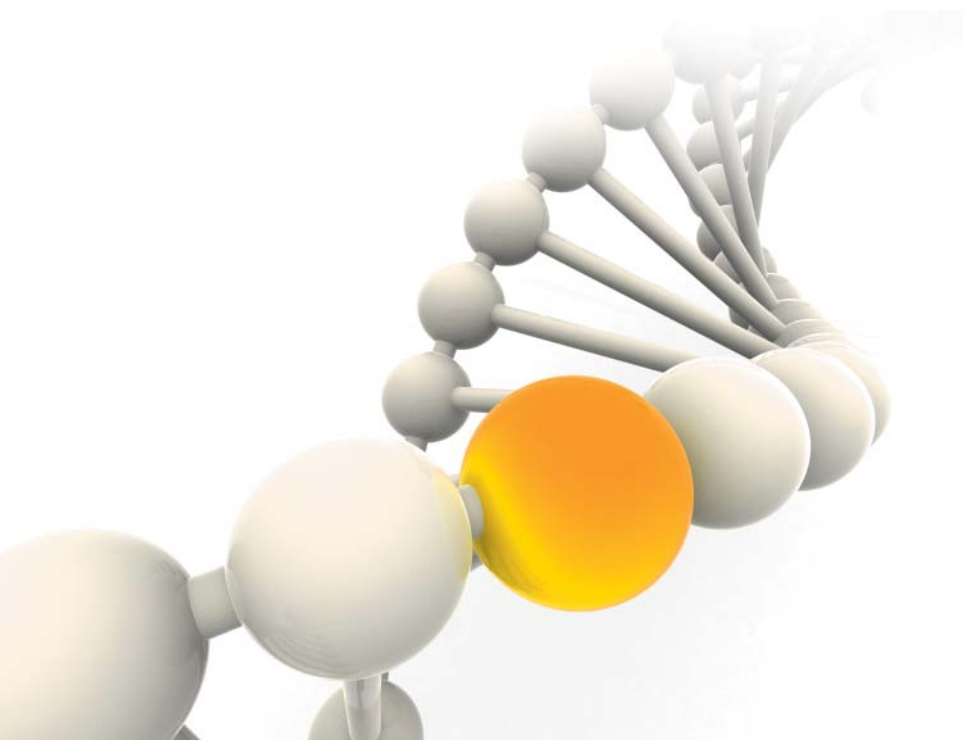
Maximize flexibility by using multiple sample types

Arcxis Biotechnologies® Viral DNA purification kit can be used for the isolation of viral DNA from both plasma and whole blood offering the customer flexibility in their sampling protocols.



In addition to the ability to extract viral DNA from plasma, the ArcPure™ kits offer the capability to extract viral DNA from whole blood. The extraction of viral DNA from whole blood is challenging due to high levels of heme and protein. The ArcPure™ Viral DNA kit is an effective tool for the isolation of viral DNA even in the presence of large amounts of genomic DNA in whole blood. In a series of experiments we have evaluated the performance of the ArcPure™ viral DNA isolation kit for the isolation of viral DNA from whole blood. The data demonstrate the isolation and purification of viral DNA was linear over 3 logs of viral particle concentration. We found while the kit was able to produce detectable viral DNA at the lowest concentration tested, several of the samples at this concentration range were undetectable. This appears to be a result of decreased efficiency at the lowest concentration range and not a result of inhibition of DNA Polymerase in the real-time PCR reaction. Similar to the extraction of viral DNA from plasma, whole blood samples prepared using the ArcPure™ Viral DNA isolation kit can be run at nearly a 1:1 ratio with a 2X PCR assay master mix (10 µl sample in 25 µl reaction) without PCR inhibition.

ArcPure™ EBV in Whole Blood				
Virus Particles	1:1 dil.	CV	1:10 dil.	CV
50,000	5/5	1.61%	5/5	1.39%
5,000	5/5	1.18%	5/5	2.72%
500	5/5	1.76%	3/5	1.76%
50	2/5	NA	0/5	NA
0	0/5	NA	0/5	NA



ArcPure™ Kits

Manual Nucleic Acid Sample Preparation



ArcPure Viral DNA Spin Column

Procedure:

- Cell Lysis
- Nucleic Acid Binding
- Wash
- Elution

DNA purification for a wide range of downstream applications

Ordering Information	Product information
web: http://store.arcxis.com phone orders: +1.925.621.7950 Email: orders@arcxis.com	ArcPure™ Viral DNA Isolation and Sample Preparation Kit: Cat. No. 890-0101-01
Preparations per Kit	100
Sample Types	plasma** whole blood
Sample Volume	Up to 200 µl
Purified End Product	Viral DNA
Elution Volume	20 – 150 µl
Processing Time	≤ 30 minutes
For use in a Wide Range of Downstream Applications	<ul style="list-style-type: none"> • Real-time PCR • Microarray Analysis • Gel Electrophoresis
DNA purification for:	<ul style="list-style-type: none"> • Viral Genotyping • Viral Epidemiology • Infectious Disease Research

**EDTA or sodium citrate preserved plasma



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Performance cannot be guaranteed for every viral species. Specific applications must be validated by the user.

*ArcPure Viral DNA Isolation and Sample Preparation Kits are intended for Research Use Only.

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