Arc*Pure*™ Viral RNA Isolation and Sample Preparation Kits*

for manual purification of PCR-ready RNA 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.

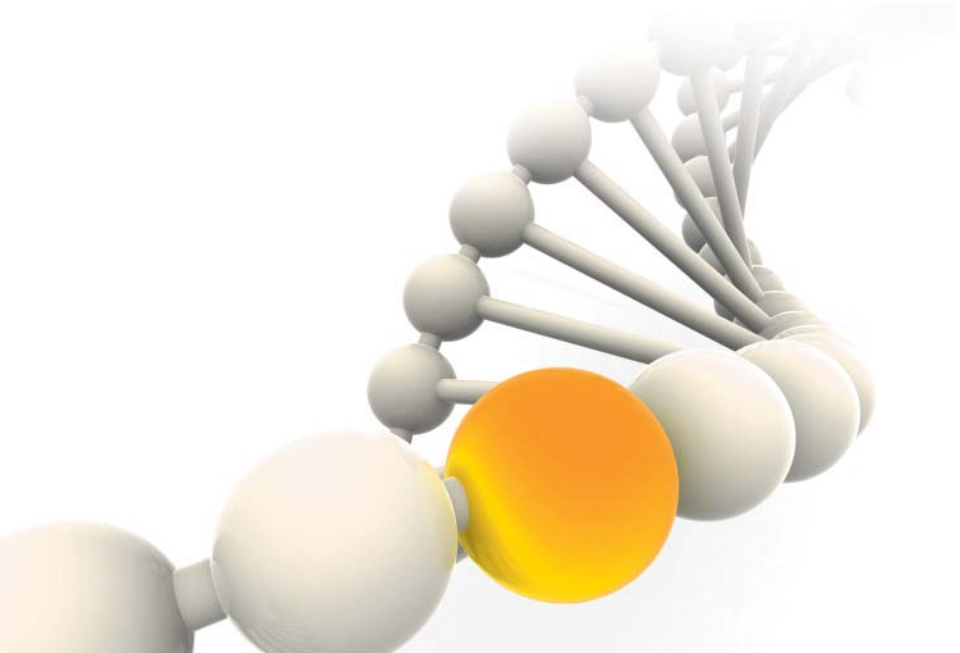
Arc*Pure*™ Kits Deliver:

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

The Arc*Pure*™ Viral RNA 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 Arc*Pure*™ Viral RNA 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 RNA extraction and purification. Samples prepared using the Arc*Pure*™ Viral RNA kit are free of contaminants that inhibit DNA polymerase used in most RNA and DNA amplification procedures.

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



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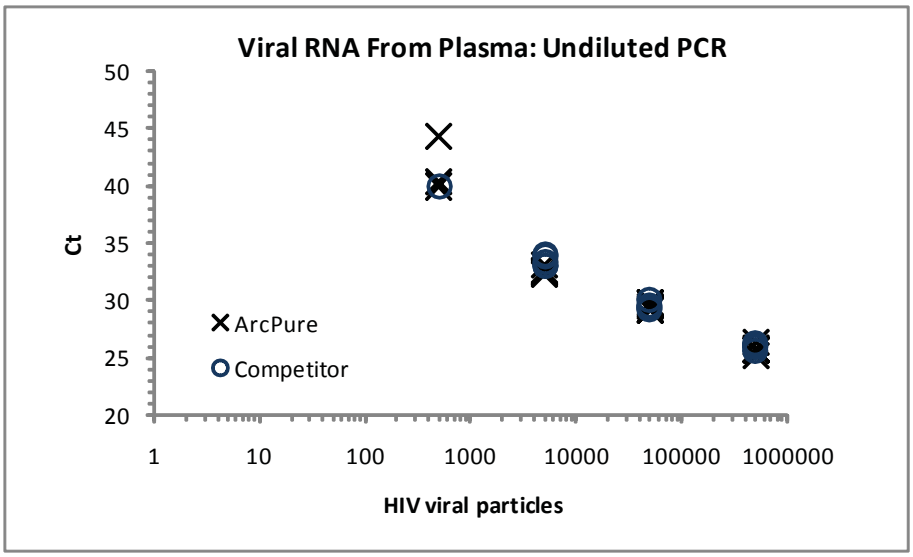
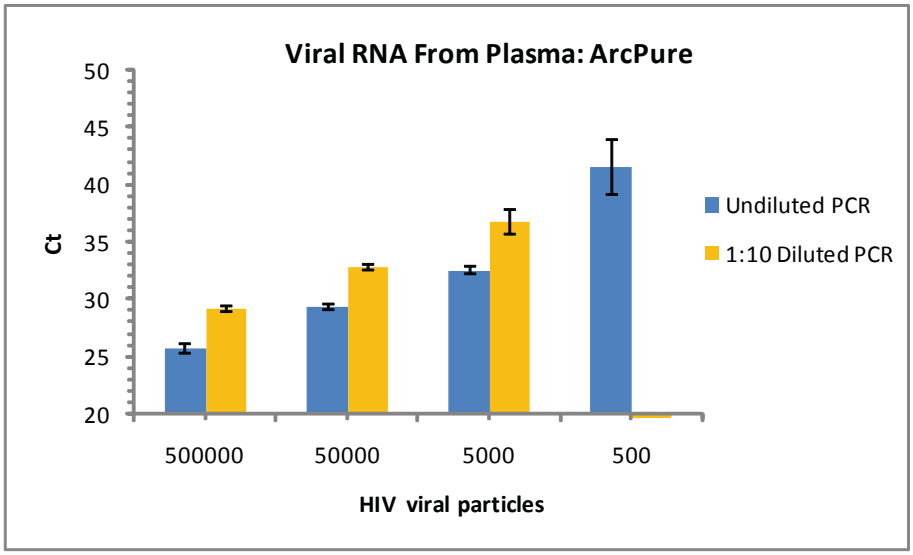
Arc*Pure*™ Viral RNA from Plasma
Maximize Sensitivity and Minimize Inhibition

Arcxis Biotechnologies® has developed nucleic acid purification kits that offer customers increased assay sensitivity. The ArcPure kits generate higher purity samples with less PCR inhibition enabling greater amounts of an extracted sample in a downstream PCR reaction.



HIV in Plasma (undiluted PCR)				
Virus Particles	**ArcPure™**	**CV**	**Competitor**	**CV**
500,000	5/5	1.64%	5/5	0.91%
50,000	5/5	0.89%	4/5	1.25%
5,000	5/5	0.96%	5/5	1.39
500	3/5	5.80%	1/5	NA
0	0/5	NA	0/5	NA



In a series of experiments we have compared the performance of the Arc*Pure*™ Viral RNA isolation kit to a market leading viral RNA product. Direct comparisons were performed using plasma samples containing commercially available intact Human Immunodeficiency virus (HIV). Detection of HIV was was determined by quantitative real time PCR. The data demonstrate the isolation and purification of viral RNA was linear over 4 logs of viral particle concentration. Compared to the competitor, the Arc*Pure*™ Viral RNA isolation kit was reproducible over the entire concentration range. We further found that samples prepared using the Arc*Pure*™ Viral RNA isolation kit have equivalent or subtle improved performance for the detection of HIV at the lowest concentration tested. Samples prepared using the Arc*Pure*™ Viral RNA isolation kit can be run as a high as 1:1 (10µl sample in 20 µl reaction) with a 2X PCR assay master mix with no apparent inhibition of the reverse transcriptase or DNA polymerase.

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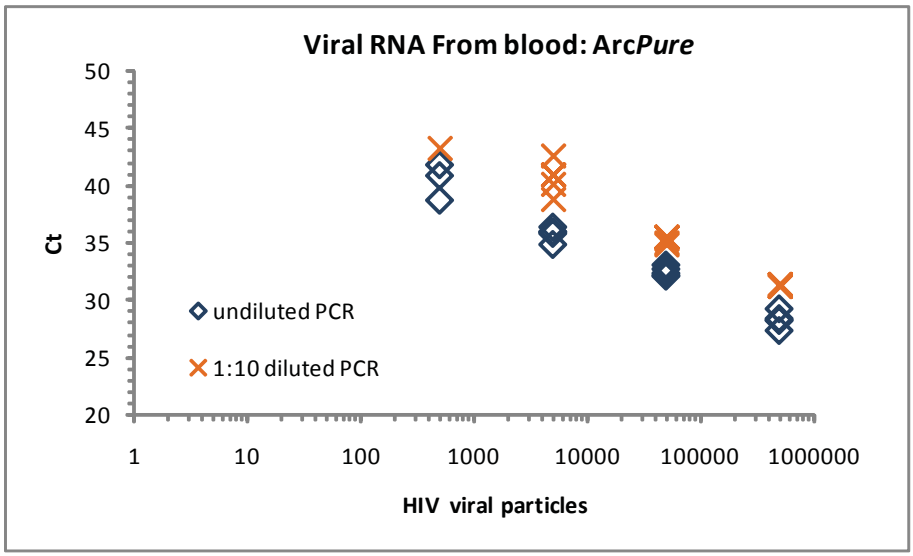
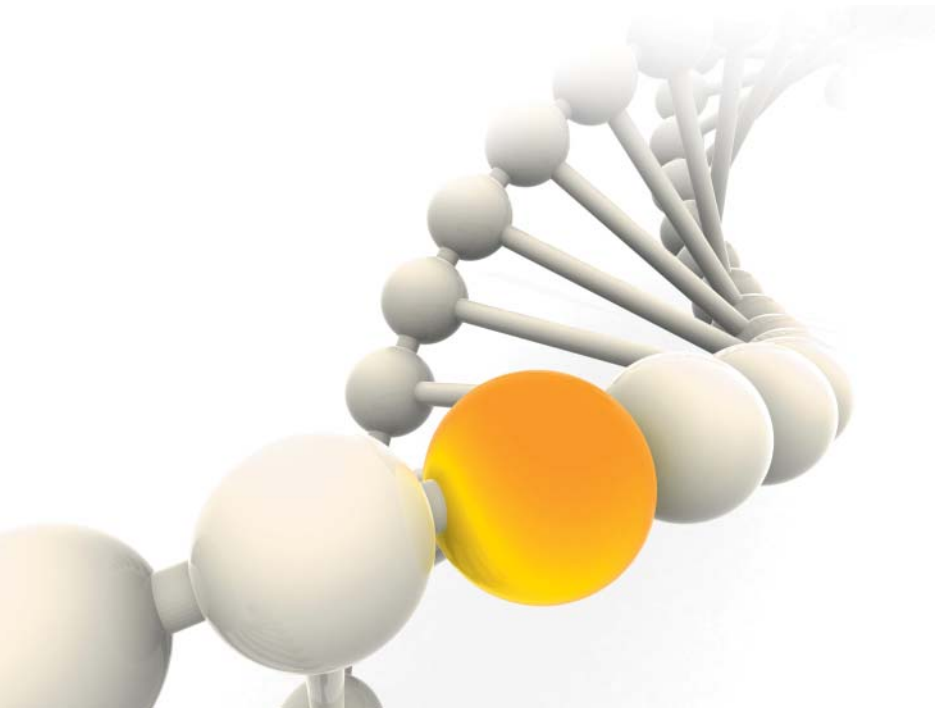
Arc*Pure*™ Viral RNA from Whole Blood
Maximize flexibility by using multiple sample types

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



Arc*Pure*™ HIV in Whole Blood				
Virus Particles	**1:1 dil.**	**CV**	**1:10 dil.**	**CV**
500,000	5/5	2.38%	5/5	0.22%
50,000	5/5	1.26%	5/5	0.91%
5,000	5/5	1.58%	5/5	3.35%
500	3/5	3.92%	1/5	NA
0	0/5	NA	0/5	NA



In addition to the ability to extract viral RNA from plasma, the Arc*Pure*™ kits offer the capability to extract viral RNA from whole blood. The extraction of viral RNA from whole blood is challenging due to high levels of heme and protein. The Arc*Pure*™ Viral RNA kit is an effective tool for the isolation of viral RNA 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 Arc*Pure*™ viral RNA isolation kit for the isolation of viral RNA from whole blood. The data demonstrate the isolation and purification of viral RNA was linear over 4 logs of viral particle concentration. We found while the kit was able to extract detectable viral RNA 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 RNA from plasma, whole blood samples prepared using the Arc*Pure*™ Viral RNA isolation kit can be run at a 1:1 ratio with a 2X PCR assay master mix (10 µl sample in 20 µl reaction) without PCR inhibition.

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Arc*Pure*™ Kits
Manual Nucleic Acid Sample Preparation

Arc*Pure* Viral RNA Spin Column

Procedure:

- Cell Lysis
- Nucleic Acid Binding
- Wash
- Elution

RNA purification for a wide range of downstream applications

Ordering Information web: http://store.arcxis.com phone orders: +1.925.621.7950 Email: orders@arcxis.com	**Product information** Arc*Pure*™ Viral RNA Isolation and Sample Preparation Kit: Cat. No.890-0100-01
Preparations per Kit	100
Sample Types	plasma** whole blood
Sample Volume	Up to 200 µl
Purified End Product	Viral RNA
Elution Volume	20 – 150 µl
Processing Time	≤ 30 minutes
For use in a Wide Range of Down-stream Applications	• Real-time PCR • Microarray Analysis • Gel Electrophoresis
RNA purification for:	• 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.

*Arc*Pure* Viral RNA Isolation and Sample Preparation Kits are intended for Research Use Only.