



truCOLLECT[®] Solution

Remote Whole Blood Collection for Confident
Genomic Data without Compromise

Fingerstick
Simplicity

Venipuncture
Quality

Lab-Ready
Automation



Collect Anywhere. Ship Ambient. Analyze More.

A TURNING POINT IN SAMPLE COLLECTION

Biomedical Research is Scaling. Sample Collection Must Evolve to Keep Pace.

The Challenge: Venipuncture remains the gold standard for whole blood collection, but it was designed for the clinic, not for the demands of modern decentralized research. As study cohorts grow more diverse, longitudinal, and geographically distributed, the scalability limitations of traditional cold-chain workflows have become the bottleneck.

TRADITIONAL VENIPUNCTURE

High Quality, Low Accessibility at Scale

- ✗ Requires clinical infrastructure and certified phlebotomists
- ✗ Cold-chain logistics drive cost and complexity
- ✗ Geographic and demographic participation barriers — added stress on individuals sensitive to traditional blood draws
- ✗ Rapid lab turnaround required to maintain sample integrity

truCOLLECT SOLUTION

Venipuncture-quality Data Anywhere

- ✓ Self-administered fingerstick — no clinic visit
- ✓ Ambient stabilization eliminates cold-chain logistics
- ✓ Fixed 50 µL volume removes pre-analytical variability
- ✓ Single-vendor workflow from sample to sequencing
- ✓ Analyte yield comparable to venipuncture

50 µL

Standardized volume reduces pre-analytical variability.

Ambient

Analyte stability through mailing and storage.

No Aliquoting

Single, barcoded tube — no transfers, automation-ready.

BUILT FOR THE NEXT FRONTIER OF GENOMICS

Applications Across Every Stage of Genomic Research



Pediatric and Hereditary Testing

Low-volume fingerstick collection ideal for pediatric and family-trio studies.



Pharmacogenetic and Cancer Next-Gen Sequencing

Whole blood meets the quality demands of pharmacogenomic and cancer NGS panels.



Rare Genetic Disorders

Remote collection with venipuncture-concordant results for rare disease and hereditary cancer programs.



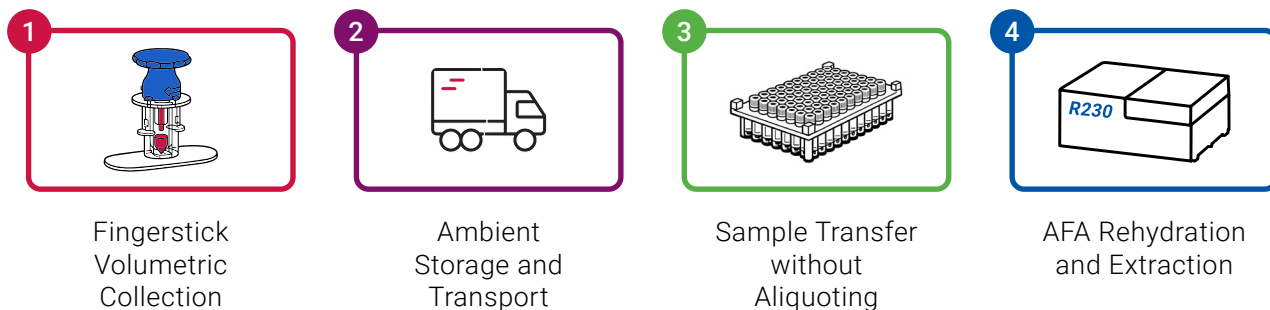
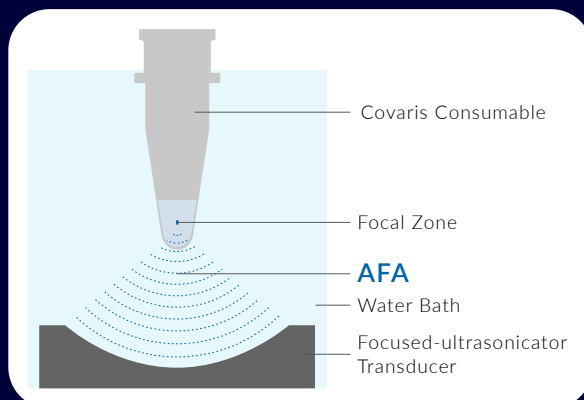
Biobanks and Population Studies

Longitudinal cohorts, neurogenetic research, epigenetic arrays at scale.

CONFIDENT SAMPLING FOR PRECISION BIOLOGY

Robust Collection. Efficient Extraction. Confident Data.

The truCOLLECT Solution combines controlled volumetric sampling, integrated proprietary stabilization chemistry, and a streamlined single-vendor workflow, preserving analyte integrity from at-home collection to DNA ready for long or short read sequencing.

**ONE UNIFIED WORKFLOW: FROM COLLECTION TO ANALYTE EXTRACTION****Adaptive Focused Acoustics® (AFA®) Powered Extraction**

Inside the lab, AFA technology rehydrates the desiccated sample and powers DNA extraction using non-contact, closed-vessel acoustic energy, the same Covaris platform trusted across NGS, FFPE extraction, and proteomic workflows.

Its precise, non-destructive processing is uniquely well suited for recovering high-quality DNA from low-volume, dry-stabilized blood samples. AFA processing preserves analyte integrity while enabling scalable recovery of venipuncture-quality material.

**CONTROLLED REHYDRATION • REPRODUCIBLE RECOVERY
AUTOMATION-READY • HIGH-YIELD EXTRACTION**

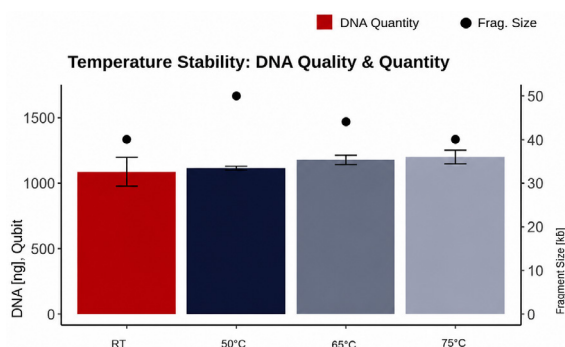
ENGINEERED FOR RESILIENCE

Stable Through Extreme Temperature. Reliable Through Real-world Transport.

The truCOLLECT Solution has a proprietary desiccation chemistry that preserves DNA integrity at room temperature for up to 6 months* and tolerates the kind of thermal stress samples encounter during collection, storage, and shipping.

SAMPLE STABILITY AT EXTREME TEMPERATURE

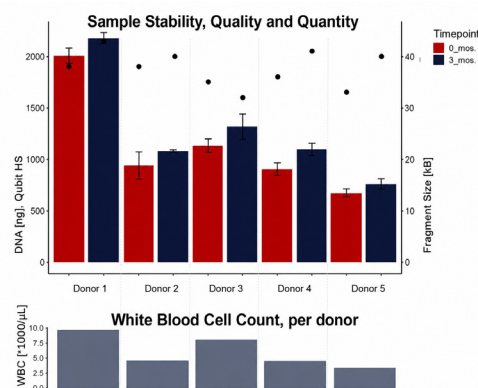
DNA Quantity and Fragment Size · 6h Exposure



DNA quantity (bars) and fragment size (dots) measured after 6 hours of exposure to room temperature, 50°C, 65°C, and 75°C. The proprietary stabilization matrix preserves nucleic acids despite thermal stress.

DNA STORAGE STABILITY

Quantity and Fragment Size · 0 vs 3 months at RT



DNA quantity and quality consistent for multiple donors after storing samples at room temperature for 3 months. DNA quantity correlates with white blood cell counts.

WHAT THIS MEANS FOR YOUR WORKFLOW

No Cold Chain Logistics

Standard mail at ambient temperature means no dry ice, no refrigerated shipping, and no specialized couriers.

Tropics and Transit Tested

Tolerates the heat spikes samples encounter in cargo holds, transport delays, and field collection.

Long-Term Banking

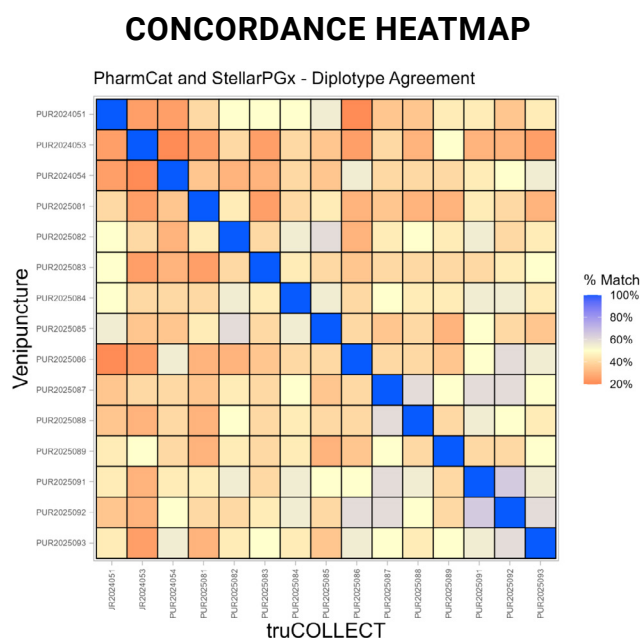
Room temperature storage over extended time enables the logistical flexibility of intermediate biobanking.

*Source: University of Florida webinar: "Fingerstick-Based DNA Collection Using truCOLLECT for Whole Genome Sequencing". Learn more by scanning the QR code on page 8. University of Florida PharmCAT, pediatric and neurogenetic, n=94.

REAL-WORLD RESEARCH - STUDY 1

Equivalent or Better Than Venipuncture, as Proven in a Pediatric and Neurogenetic Study.

An independent study by the Universities of Florida and Puerto Rico collected paired venous and fingerstick samples across decentralized sites in Puerto Rico, comparing the truCOLLECT Solution against venipuncture for whole-genome sequencing and pharmacogenomics analysis using PharmCAT and StellarPGx.



CONCORDANCE

100%

vs. venipuncture (PharmCAT, StellarPGx)

NGS COVERAGE

>25×

GC content 32–68%sysNDD candidate loci

COHORT RECOVERY

94/94

Samples stored at RT between 2 and 6 months* – all recovered.

STUDY DESIGN

Paired Venipuncture and Fingerstick Samples

- Pediatric participants and family across decentralized Puerto Rican collection sites
- Venous samples handled with cold chain logistics (frozen, dry-ice shipping)
- truCOLLECT samples stored up to 6 months before shipment to lab by standard mail
- Both methods processed through identical NGS library prep

KEY FINDINGS

Equivalent or Better Data Quality

- Yield, fragment size, percent reads equivalent to or better than venipuncture
- 100% match of pharmacogenomic profiles (PharmCAT, StellarPGx)
- Concordance of SNPs are >98.5 % and of INDELs >97 % which is well in the expected range.

*Source: University of Florida webinar: "Fingerstick-Based DNA Collection Using truCOLLECT for Whole Genome Sequencing". Learn more by scanning the QR code on page 8. University of Florida PharmCAT, pediatric and neurogenetic, n=94.

REAL-WORLD RESEARCH - STUDY 2

From Whole Blood to Sequence-ready DNA

Proven in next-generation sequencing workflows. Collaboration with Ambry Genetics confirms high-quality, high-yield DNA, extraction efficiency, and sequencing performance equivalent to venipuncture whole blood.

35–40 kb

FRAGMENT SIZE

1.7–1.9

A 260/280 PURITY

25%REDUCTION IN
EXTRACTION TIME**1.4 µg**AVERAGE YIELD
DNA FROM 50 µL

AMBRY GENETICS · CANCER NGS PANEL

99.9%

concordance vs. clinical EDTA blood

0%

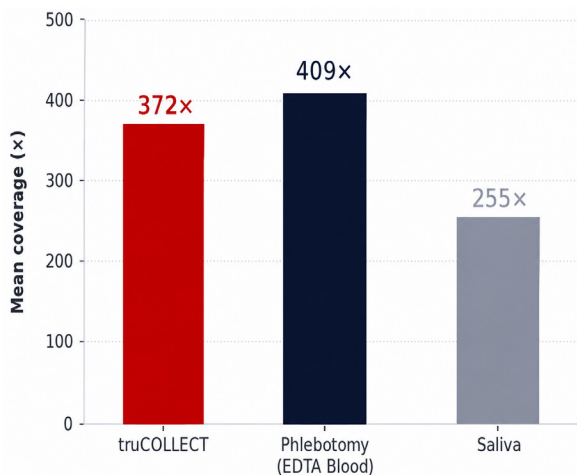
NGS failures (vs. 28% saliva)

100%

library prep success (n=24)

NGS COVERAGE COMPARISON

Mean Read Depth



The truCOLLECT Solution delivers coverage depth within 9% of clinical EDTA blood and 46% greater depth than saliva samples, enabling reliable variant calling without recollection.

ORTHOGONAL ASSAY

100% Concordance Across Clinical Assays

SANGERATM · BRCA2 · MUTYH ·
CEBPA · PMS2**5/5**

Calls

MLPACHEK2 · EPCAM · NF1 ·
MSH2/MSH6 · PALB2 · GATA2**6/6**

Calls

TARGETED ARRAYALK · TMEM127 · BAP1 · POT1 ·
RUNX1 · SDHA**8/8**

Calls

truCOLLECT-derived DNA confirmed every clinically reported variant across Sanger, MLPA, and targeted-array workflows, demonstrating interchangeable with phlebotomy in routine clinical pipelines.

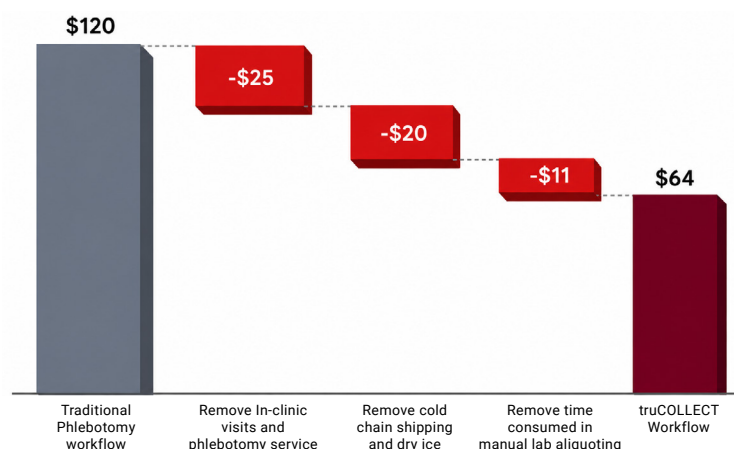
OUTPERFORMING TRADITIONAL REMOTE SAMPLING

Better data. Lower cost. Greater reach.

The truCOLLECT Solution delivers venipuncture-quality analytes through a streamlined collection and ambient shipping workflow, combining the convenience of saliva and DBS samples with the data quality of clinical phlebotomy.

Performance Dimension	truCOLLECT Solution Whole Blood	Phlebotomy Whole Blood	Saliva	Dried Blood Spots
For Participant				
User-friendly collection	Strong	Limited	Strong	Moderate
Geographic reach and scale	Strong	Limited	Strong	Moderate
For Analyte Quality				
Sample format	Strong	Strong	Moderate	Moderate
Sample yield and quality	Strong	Strong	Moderate	Limited
Pre-analytical variability	Minimal	Moderate	Moderate	Moderate
For Lab Workflow				
Workflow robustness	Strong	Strong	Moderate	Moderate
Automation readiness	Strong	Moderate	Moderate	Limited
Logistics and storage	Strong	Limited	Moderate	Strong
Sample stability	Strong	Limited	Moderate	Moderate

ECONOMIC IMPACT ON LABS



The truCOLLECT Solution removes costly workflow steps of in-clinic visits, cold-chain shipping and manual aliquoting, compared to traditional phlebotomy.

POTENTIAL COST SAVINGS

Up to 40%

\$23–\$56 saved per sample,
\$0.2–0.6M impact on a
10K-sample study, without
compromising on results

EXTRACTION TIME

≤2 hours

25% time reduction

GET STARTED TODAY

From Collection to Extraction: One Integrated Workflow



STEP 1 · COLLECT
truCOLLECT Whole Blood
Collection Kit



STEP 2 · EXTRACT
truCOLLECT
DNA Extraction Kit

TAKE THE NEXT STEP

Get started with truCOLLECT Solution today

Request a sample kit:
covaris.com/trucollect

Talk to a specialist:
info@covaris.com

**Watch customer-
led webinar**



**Download Ambry
collab tech note**



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