

Your Guide to patient-centric monitoring

How to Use Blood Microsampling Technology in the Field and in the Lab



1st Edition







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“VAMS technology allows convenient at-home monitoring and is minimally invasive. It also offers efficiencies in the clinical setting, as providers will have blood results in hand before meeting with the patient”

-Dr. Christophe Stove, Ghent University

patient monitoring in the modern age

Technology is taking much of the guesswork out of medicine. Innovations in patient monitoring allow doctors and other healthcare professionals to track patients' conditions over time, sometimes without requiring in-person visits. Anyone interested in the biggest questions around human health and flourishing - how we live, how we care for each other, and how these systems can be improved - should be acutely aware of new progress in patient monitoring as healthcare grows increasingly decentralized, democratized, and intelligent.



The New Age of Blood Collection

Mitra® devices, powered by Volumetric Absorptive Microsampling (VAMS™) technology, facilitate more convenient and accurate remote sampling. [Watch Video](#)



How to Use a Mitra Home Collection Kit

See how easy it is to take a blood sample from home, with the Mitra® Blood Collection Kit. [Watch Video](#)

the power of remote microsampling

In the new landscape of patient monitoring, remote sampling is a crucial piece of the puzzle. Thanks to advances in technology, it is now possible to get a tremendous amount of information from a very small amount of blood. Microsampling technology allows this to be done in a way that is smart, simple, economical, and location-independent.



Reasons to consider VAMS™ Remote Sampling

Precision As the leading volumetrically accurate dried blood collection method, VAMS™ eliminates uncertainty. Samples collected with Mitra devices have been shown to generate results comparable to the plasma gold standard.



Convenience Mitra® devices, based on VAMS technology, facilitate blood collection anywhere, at any time, by almost anyone, with minimal training. Mitra workflows make the blood collection process easier, in and out of the lab.



Access Remote sampling provides better access to rural areas and low-resourced regions, leveling the field of care. It makes life easier for pediatric and elderly patients, and those with chronic conditions.



Automation Mitra devices are the first dried blood collection solution that really scales using robotics common to most labs. Our extraction automation solutions allow labs to process hundreds or thousands of samples per day.



The Future VAMS technology is enabling innovations in precision medicine, and predictive care. It's an essential tool in building the healthcare innovations that will redefine medicine and change the way we work and live.

get to know the Mitra micro-sampling device

Mitra® devices, powered by VAMS™ technology, revolutionize specimen collection by combining the best of wet sampling, microsampling, and dried blood spotting in a state-of-the-art collection device that can be used from home. Labs investigating in Volumetric Absorptive Microsampling (VAMS) have repeatedly demonstrated they can bridge results to standard reference ranges based on plasma.



Simple Collection Procedure



Prick A few drops of blood from a lancet is all that's needed



Collect 1st Sample Mitra is available in either 10 or 20 microliter volumes (RSD < 4%)



Collect 2nd Sample Mitra tips absorb blood samples in just seconds



Close and Package Place and seal the device into its shipping bag



Ship via Post No biohazard, and dried blood stability means no cold chain shipping nor courier costs

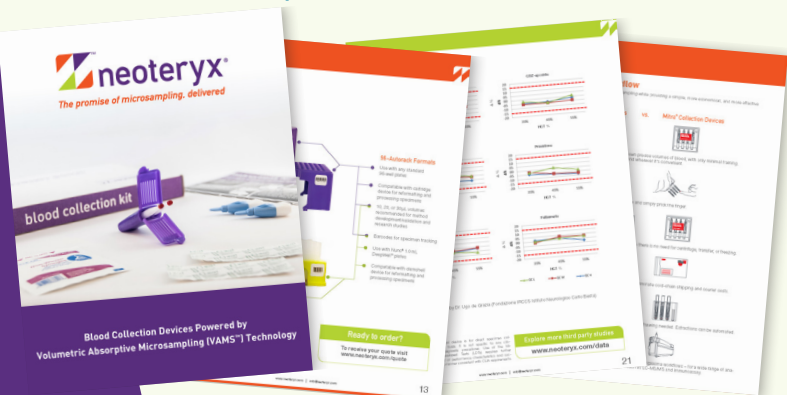
"We can now sit at home and do a sample using the device, send it off, and get an accurate result without having to leave the comfort of our own home - It's a lot less stressful, plus we don't need to take a whole day out just to go for a blood test or clinic visit, which makes school attendance better."

-Caroline Knapp, mother of a young kidney transplant patient

Download The Mitra Product Brochure

Get to know the full product line, its industry applications, and unique benefits. How does VAMS™ technology compare to other Microsampling products?

[Open Brochure](#)



Diabetes

Ghent University Hospital (Belgium)

At-home monitoring of HbA1c with Mitra microsamples demonstrated almost perfect agreement to samples collected from venous blood.

[Read The Story Here](#)

Epilepsy

MVZ Labor Krone (Germany)

The VAMS collection method cuts shipping and storage costs, while improving lives with remote sampling.

[Read The Story Here](#)

Transplantation

Medical University of Vienna (Austria)

How do you monitor therapeutic drug levels while hiking Mt. Kilimanjaro?

[Read The Story Here](#)

Transplantation

Nottingham University Hospital (UK)

Neoteryx products spearhead a home health initiative for pediatric patients collecting blood samples remotely in the UK.

[Read The Story Here](#)

application of microsampling in patient monitoring

Rheumatology

Exagen Diagnostics (USA)

By offering an alternative to venipuncture blood draws, Exagen makes their AVISE Touch™ solution more patient-centric.

[Read The Story Here](#)

Addiction Recovery

Alcala Labs (USA)

Mitra is chosen for CleanAssure™ a clinical convenience collection kit used to monitor addicts through the recovery process.

[Read The Story Here](#)

developing a microsampling method



Anti-epileptics

Extraction methods examined

A bioanalysis review of how four independent labs developed a VAMS method

[Open Document](#)

Immunosuppressants

A variety of labs and organizations have validated the application of microsampling in monitoring immunosuppressants. What were their findings, and notes for future usages?

[Access Study 1](#)

[Access Study 2](#)

[Access Study 3](#)

[Access Study 4](#)

[Access Study 5](#)



Cardiac Drugs

Mitra was compared against dried blood spot cards and offered a more efficient method with fewer rejected samples. See how VAMS overcomes haematocrit issues.

[Access Study](#)



IGF-1

Encouraging indications for the convenience and cost effectiveness of using VAMS technology over venipuncture in monitoring Acromegaly disease.

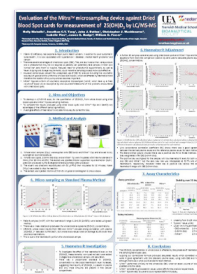
[Access Study](#)

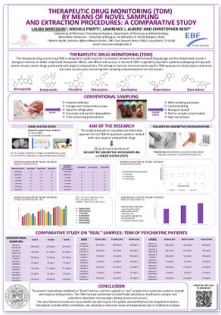


Vitamin D3

Relevant research on the importance of using VAMS to monitor Vitamin D3 deficiencies and impact on bone disorders, cancers, and mental health problems.

[Access Study](#)





Anti-psychotics

Mitra microvolumes achieved golden standard features for drug determination when monitoring psychiatric patients treated with atypical antipsychotics.

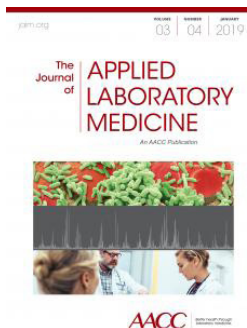
[Access Study](#)



Hydroxychloroquine

An LC–MS/MS workflow for analysis of VAMS samples was developed and validated for the monitoring of HCQ in rheumatoid arthritis patients.

[Access Study](#)



Methotrexate

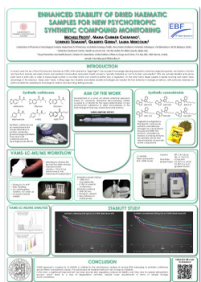
Patients being treated with MTX could soon be free of clinic visits. Findings by Applied Laboratory Medicine recently correlated Mitra capillary blood samples to venous blood draw results.

[Access Study](#)

Psychoactive Substances

In recent years the rise of NSPs has proliferated. Mitra was investigated as a point-of-care/in situ sampling solution for toxicological, forensic, and sports drug testing of NSPs.

[Access Study](#)



Analyte List / Panel

Successfully extracted from Mitra

The most current, and complete list of single analytes and panels extracted from the Mitra® micro sampler

[Open Document](#)

download these helpful guidelines!

- Tips for Extracting Dried Blood Samples
- Best Practices for Working with Whole Blood
- How to Achieve the Best Extraction Efficiencies
- Preparing Standards and QC's with Mitra Devices

how to get started with microsampling

Step 1 - Education

We are here to answer all your questions!



Access Our Resource Library

View dozens of application notes, presentations, videos, peer-reviewed journal articles, and more



Schedule a Consultation

Speak with a Microsampling Specialist and discuss specifics to your needs

Step 2 - Evaluation

Use our step-by-step protocols to perform simple proof-of-concept studies. A dedicated Microsampling Specialist will support you throughout the process.



Intro Meeting

Select evaluation devices and learn strategies for working with dried blood microsamples



Conduct Studies

Evaluate extraction efficiencies, linearity, and signal-to-noise ratios for your analyte of interest



Eval Conclusion

Review data set and plan Mitra device and study protocol needs for validation phase

Step 3 - Validation

Develop a robust bioanalytical method with the support of our R&D team.

Method Validation

Create accurate, and stable method protocols using tested guidelines

Clinical Validation

We are here to support you in developing training materials, planning logistics, and scaling up specimen processing.

**Click here to begin
your evaluation!**

Questions? Please Call or Email us at
tel: +1 (310) 787-8747
Email: info@neoteryx.com