

Streamlined Design for Transferring Analytes



INVENTORS • David Beebe, Ben Casavant, David Guckenberger, Scott Berry

WARF: P130361US01

[View U.S. Patent No. 10,040,062 in PDF format.](#)

The Wisconsin Alumni Research Foundation (WARF) is seeking commercial partners interested in developing a microfluidic device that directly integrates with downstream analysis instruments.

OVERVIEW

Polymerase chain reaction (PCR) is used to generate copies of a particular DNA sequence. The technique is common and indispensable in many research applications. Unfortunately, methods for isolating/preparing samples of the DNA target are time consuming.

UW-Madison researchers have designed microfluidic devices that use a "SLIDE" technique to accelerate the process.

THE INVENTION

The researchers have now improved their design and developed a microfluidic device that directly integrates with tubes, strip tubes and well plates. In this way a sample can be directly transferred from the device to downstream analysis instruments.

The device comprises a strip of wells that hold various volumes of output fluid. Following sample isolation via the researchers' previously developed SLIDE technique, the strip containing the sample and output buffer is removed from the SLIDE and applied to a set of strip tubes in the same way that conventional covers would be applied.

Then, by flicking or centrifuging the tubes, the sample is transferred from the cap to the tube. At this point the sample is ready for PCR or other downstream analysis.

APPLICATIONS

- Sample preparation

THE WARF ADVANTAGE

Since its founding in 1925 as the patenting and licensing organization for the University of Wisconsin-Madison, WARF has been working with business and industry to transform university research into products that benefit society. WARF intellectual property managers and licensing staff members are leaders in the field of university-based technology transfer. They are familiar with the intricacies of patenting, have worked with researchers in relevant disciplines, understand industries and markets, and have negotiated innovative licensing strategies to meet the individual needs of business clients.



KEY BENEFITS

- Streamlines sample transfer
- No pipettes or additional equipment
- Simple and inexpensive
- Compatible with SLIDE and potentially other microfluidic designs
- May work with wide range of analytes and analyses (not just PCR)

STAGE OF DEVELOPMENT

Prototypes have been tested.

ADDITIONAL INFORMATION

Related Technologies

[WARF reference number P100050US01 describes a microfluidic device for rapid nucleic acid isolation and purification.](#)

Tech Fields

Analytical Instrumentation - Microfluidics

Micro & Nanotech - Microfluidics

Research Tools - DNA & RNA tools

CONTACT INFORMATION

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846.

