

TECHNOLOGY READINESS LEVEL:

A PROTOTYPE HAS BEEN DEVELOPED AND TESTED IN THE LABORATORY WITH EXOGENOUS ANIMAL AND HUMAN SAMPLES

US PATENTS PENDING:

12/981,956 12/891,977

13/423,008 13/423,050

13/423,073 61/673,373

TECHNOLOGY SUMMARY

Currently, when a patient arrives at the hospital or doctor's office feeling ill, they are first examined by the doctor, sent to a blood lab where vials of blood are taken, and then sent home to wait for results. This approach often means patients must wait days or weeks, to get results. During that waiting period, they are not receiving treatment, which can be a critical factor for cancer, heart attack, or stroke patients.

Sandia researchers have developed a break-through technology which can test and diagnose up to 64 assays on a single disc within 15 minutes of sample collection. It requires significantly less blood (less than a pin-prick) than the current laboratory blood draw. This machine can revolutionize the way we will get



test results from doctors offices and hospitals alike. Besides the inherent portability of the testing device, the assay discs can be manufactured for pennies, making this an affordable option for both small and large practices with the potential to drive down the cost of testing, visits, and to shorten time-to-treatment.. This technology as has broad application beyond medical diagnostics; it can be broadly applied across food safety, over bio-terrorism detection, and commercial drug testing markets.



POTENTIAL APPLICATIONS

- Point-of-Care Diagnostics (human and animal)
- Food & Environmental Monitoring
- Bio defense

POTENTIAL TESTING

- Multiplexed Immunoassays
- Nucleic Acid Hybridization Assays
- Differential Blood Cell Analysis

TECHNOLOGICAL BENEFITS

- Extremely fast—sample to results within 15 minutes
- Ease of use—no sample prep required
- Portable—easily taken into the field
- Cost effective—disks cost less than 10 cents to manufacture
- Multiplexing—up to 64 assays on a single disc

TYPES OF SAMPLES PROCESSED

- Bodily fluids—whole blood serum, saliva, urine
- Environmental fluids—water
- Food—soup, water, milk, etc.

TECHNOLOGY INQUIRY?

For more information or licensing opportunities contact us at

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or visit

<https://ip.sandia.gov>