

SPINDX™ LAB ON A DISK

US Patents: 9,186,668; 8,945,914; 9,244,065; 8,962,346 (Additional patents pending)

Technology Readiness Level: 6

A prototype has been developed and tested in the laboratory with exogenous animal and human samples

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 device can revolutionize the way we get test results from doctor's 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 also has applications beyond medical diagnostics and can be used in food safety testing, bio-terrorism detection, or for drug testing.



TECHNICAL BENEFITS

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

INDUSTRIES & APPLICATIONS

- Point-of-Care Diagnostics (human & animal)
- Food & Environmental Monitoring
- Biodefense
- Multiplexed Immunoassays
- Nucleic Acid Amplification-based Assays
- Differential Blood Cell Analysis