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Technology Transfer Office

Handheld Micro-Array Reader

Researchers at the University of South Florida have developed a Handheld Micro-Array Reader to allow field reading of micro-array chips. Micro-array chips are commonly used in analytical techniques on trace species in the laboratory setting. While these tests are extremely useful, the requirement of bringing samples back to the lab for analysis makes field research cumbersome.

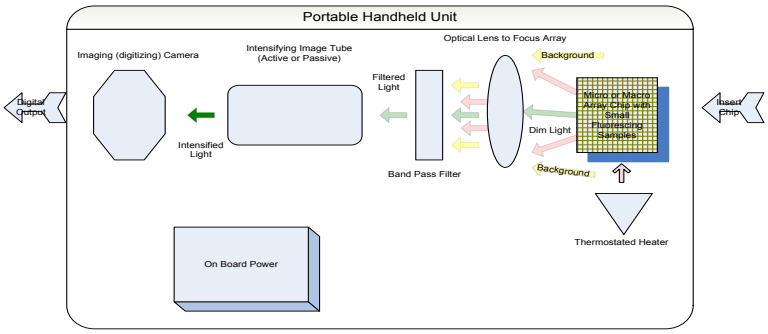
The technology introduced in the present invention allows for light detection and digital imaging of micro-and macro-array chips with trace fluorescing or luminescent samples to be performed in the field. This leading-edge technology represents a significant step that will help catalyze new markets for portable field diagnostics. In absence of the need to return to the lab for analysis, real-time characterization can be performed without having to leave the sampled environment.

The invention itself is a portable, handheld, and self powered device that is capable of light detection and digital imaging on the most minute trace samples using fluorescent techniques. Removed from the great cost, size, and inconvenience of remote laboratory equipment, the invention makes field sampling a quick and simple procedure, without the wait time of lab testing turn-around.

ADVANTAGES:

- **Invention allows field reading of micro-array chips**
- **Technology is embodied in a portable, self-powered, handheld device**
- **Allows for characterization of samples outside of laboratory setting**
- **Enables "Real Time" analysis of samples**

Read Micro-Array Chips in the Field



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