

FLOWPAD

A GENERIC TOOLBOX FOR MICROFLUIDICS AND POINT-OF-CARE DIAGNOSIS

+ WHAT IS FLOWPAD?

Flowpad comprises:

- Disposable, credit card format microfluidic cartridges with fluidic channels designed for selected protocols. The integrated protocol can be complex by including all sample preparation steps (concentration, lysis, purification, etc.) as well as bio-analysis and detection procedures (qPCR, RPA, LAMP, etc.)
- An instrument featuring a chip holder, a functional implementation system based on the microfluidic cartridge design (valve and fluidic actuator, Peltier heater, magnet and pellet disruptor) and related software programs.

Instrument and microfluidic cartridges are custom-designed based on clinical or manufacturing requirements.

+ APPLICATIONS

- Detection of biological targets with applications in:
 - Chemical, Biological, Radiological and Nuclear (CBRN) risks
 - Point-of-care diagnosis (bacteria, viruses, etc.) for human and veterinary medicine
 - Environmental monitoring
 - Industrial process monitoring
- Companion diagnosis
- Cell encapsulation (spheroids, cells, etc.)
- Microfactory (radiotracing, cosmetics, etc.)

+ WHAT'S NEW?

- Whole process from raw biological sample to results in less than 2 hours
- Versatile, easy-to-use toolbox for microfluidic newcomers
- Compatible with multiple complex protocols (biological, chemical, etc.) and materials (silicon, glass, COC, polymers, etc.)
- Reduces development and prototyping time
- Easily scalable to low-cost, high-volume production. Leti has perfected cartridge design and small-scale production.

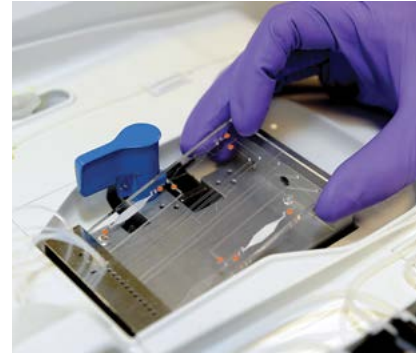
- Microfluidic cartridge
 - Easy handling for non-specialist personnel
 - Plug-and-play fluidic connections with easy, efficient flow control
 - Valves and pump integrated into cartridge

KEY FACT

5 fluidic connection patents filed

+ WHAT'S NEXT?

- Manufacturing: large-scale cartridge production (outsource partners)
- New application: microARN detection from blood



INTERESTED IN THIS TECHNOLOGY?

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