SMARTCHEK[™] Biochip Based Multiplex PCR Detection Kits for POC Testing

The whole process (prep and analysis) in 30 minutes!

There are several factors that hinder expansion of molecular diagnostic methods to point-of-care testing applications, such as inevitable extraction and purification process, relatively long lead times for a test, complicated test protocols, restrictions on the sample storage and so on. Genesystem has been endeavoring to invent a smart way to overcome such hurdles and now it is proud to launch the SmartCHEK[™] line of test formats which is based on Genesystem's biochip fabrication technology for use with the GENECHECKER platform. It contains every component for tests like extraction kits, lyophilized master mix, primer sets readily filled in the test chip and pipetting tools, for immediate test at site.

In the current multiplex PCR method, competition of primers is a tricky issue which affects the sensitivity and specificity of the detection. The new invention of Genesystem, SmartCHEK[™] format is offering completely new way of multiplex PCR by automatically distributing prepared test sample to multiple chambers where independent primers are contained.



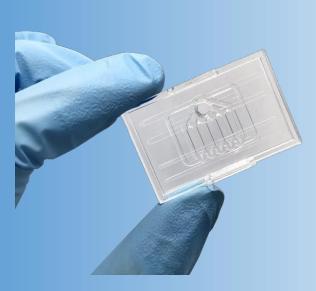
Using direct PCR method and biochip based ultra-fast PCR analysis, the whole process can be finished in 30 minutes

Master mix is lyophilized and primers are contained in the test chip in dry-format (No need for cold storage)

Components are in one package including prep tools, disposable micropipette, lyophilized master mix and test chip containing primer set

> Excellent for use in pathogen tests for Food, Cannabis and many others

Kits Available for: Salmonella, Listeria, E-Coli O157

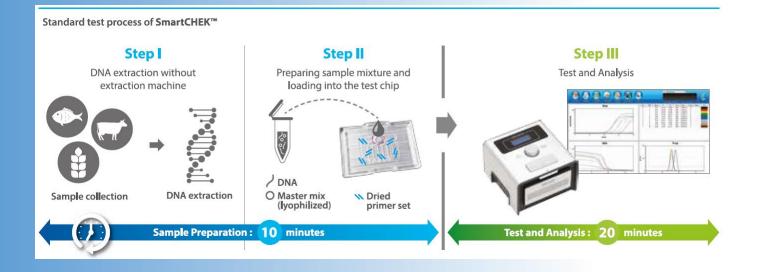




1. POC test kit package

- 2. Disposable micropipette for dual volume(10µl and 50µl) dispensing
- 3.Sample mashing tool
- 4. Micropipette tips
- 5. Direct lysis buffer solution
- 6.Dilution buffer
- 7.Lyophilized master mix
- 8. Test chip containing primer sets
- 9.Button for pipetting 10µl volume
- 10, 11Buttons for pipetting $50 \mu l$ volume

Standard Workflow of Point-of-care Testing System



Kits will be available starting Spring—Summer 2018!

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