

HONORABLE MENTION TECHNOLOGY

Numerous Targets Multiplex Assay to Simultaneously Amplify and Detect All or Most Major Biological Threat Agents

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This invention provides a complete multiplex PCR assay for simultaneously screening or detecting numerous biothreat agents. The invention comprises an amplification method, primers for signature and virulent sequences for numerous biothreat agents, the reaction mixture with concentrations and cycling conditions. Additionally, the assay uses a previously engineered DNA chimera that uniquely and simultaneously simulates nine biothreat agents. The method has been optimized for detection of most of the simulated organisms and work continues to optimize for all components. The assay is useful to detect or exclude the presence of numerous biothreat agents in a wide variety of samples. While multiplex PCR assays exist and even for the detection of biothreat samples. While multiplex PCR assays exist and even for the detection of biothreat agents, the broad range of organisms screened or detected by this method surpasses, by far, any PCR assay currently commercially available to screen for biothreat agents.

The technology delivers a time and cost saving method that eliminates the need to screen for individual biothreat agents. Target customers for this technology include companies who manufacture bio-threat agent assays for the military, homeland defense, law enforcement agencies, public health and commercial customers. Additionally, the technology can be used to simultaneously screen and identify clinical and environmental organisms.