

## 7<sup>th</sup> International Conference and Exhibition on

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### *Bacillus*

### *in situ*

and  
Agency for Defense Development, South Korea

Accurate and rapid analytical methods are essential for the detection and identification of biological warfare agents (BWA) as well as pathogens. Although various studies have investigated the uses of a matrix-assisted laser desorption/ionization time-of-flight (MALDI-TOF) mass spectrometry (MS) for bacterial classification, only a few studies have examined the applicability of method for the identification of BWAs. This study aimed to generate, collect and analyze *Bacillus* spore aerosol particles of 2-10  $\mu\text{m}$ , the optimal size of a BWA. In this process, we developed an apparatus to directly deposit *B. subtilis* aerosols on MALDI target plate wells for rapid MALDI-TOF analysis. *Bacillus* spore aerosol particles of 2-10  $\mu\text{m}$  were rapidly analyzed using direct MALDI-TOF without any pretreatment processes. The mass spectra of aerosolized *Bacillus* spores were

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