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Performance of Personal Electrostatic Bioaerosol Sampler (PEBS) when Collecting Airborne Microorganisms

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Abstract

We recently developed a new personal electrostatic bioaerosol sampler (PEBS) for determining exposures to airborne microorganisms. PEBS was shown to collect airborne non-biological particles with efficiencies approaching 80% while producing very low ozone concentrations. In this work, we analyzed the performance of this sampler when collecting airborne *Bacillus atrophaeus* bacterial cells and *Penicillium chrysogenum* fungal spores as a function of sampling flow rates (e.g., 10 and 20 L/min) and sampling time (e.g., 10, 60, and 240 min). The collected samples were analyzed