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**Investigation of dust loading and culturable microorganisms of HVAC systems in 24 office buildings
in Beijing**

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Abstract: To investigate the dust loading and culturable microorganisms contamination characteristics of HVAC systems in 24 office buildings, a series of field tests, which included temperature, RH, air velocity, dust loading, culturable fungi/bacteria loading, were conducted in the following: return air, fresh air, mixture air, cooling, and supply air segments. On basis of these measuring results, the culturable fungi/bacteria number per gram dust was calculated and the predominant culturable fungi/ bacteria species was identified. Statistical analysis showed that dust loading, culturable fungi/bacteria loading, culturable fungi/bacteria number per gram dust were in the range of 3.25~48.25g/cm², 32~221CFU/cm², 46~232CFU/cm², 53815~124807CFU/g_{dust}, and 63395~10383CFU/g_{dust} respectively. The maximum value for dust loading and culturable fungi /bacteria loading appeared in fresh air segments. The predominant culturable fungi were *Penicillium*, *Aspergillus*, *Cladosporium* and *Alternaria* and the predominant culturable bacteria were *Micrococcus*, *Bacillus*,

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