

With dense population, the Beijing-Tianjin-Hebei region of China is one of the regions most severely stricken by atmospheric pollution in the world. Research shows that the annual average concentration of airborne bacteria in this region is 1,380-3,020 CFU/m<sup>3</sup>. The concentration of gram-positive (G<sup>+</sup>) bacteria (80%-85%) is significantly higher than that of G<sup>-</sup> bacteria (15%-20%) and a total of 47 genera of bacteria are found. The number of airborne fungi in Beijing is 89-2,270 CFU/m<sup>3</sup> and a total of nine genera of fungi are detected. Bacterial aerosols in the air are mostly distributed in particles bigger than 2 μm (82.2%). Fungal aerosols are mainly found in 1-6 μm particles, accounting for 71.6%, and are the most densely distributed in 2-3.5 μm particles. The regular changes in distribution region, time, and particle size of microbial aerosol in the air may provide an important research basis for the further study on the correlation between the quantity and genera of microorganisms in haze and human infectious disease.

