

# The Gazette

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## THE RISK OF BIOAEROSOL IN HUMAN ACTIVITIES

Bioaerosols (aerosols in short) are particles released from terrestrial and marine ecosystems into the atmosphere. They consist of both living and non-living components, such as fungi, bacteria and viruses. Typical sources of bioaerosols are soil, water, and sewage.



Bioaerosols can transmit microbial pathogens, endotoxins, fungi to which humans are sensitive and pose indoor and outdoors public health issue:

- In **PANDEMIC DISEASES**.
- In **PHARMA PLANT** where medicines can be contaminated during production.
- In **HOSPITAL** and **HEALTHCARE FACILITIES** can cause nosocomial disease, infections, asthma, and allergies in indoor air, such as operating rooms.
- In **FOOD, AGRO AND DAIRY INDUSTRY**, where the manufacture of products like cheese, yoghurt is susceptible of being affected by bacteriophages viruses that can infect the lactic acid bacteria necessary for the fermentation process.
- In **LIVESTOCK PRODUCTION** (like swine, poultry, etc,) where bacterial and viral respiratory diseases can be a consistent economic cost.
- In **HVAC** (Heating Ventilation Air Conditioning) system of building where a dirty channels surface can produce large people contamination.
- In **WATER AND WASTE** treatment plants can contaminate operators and houses closed to the plant.

Infectious microorganisms released by infected agents can be detected directly in captured bioaerosols by **MOLECULAR METHODS**, without the need for complicated and time consuming bacteriological/viral analysis of all the infected population.

The TRIO.BAS family of air samplers covers all the bioaerosol problems to detect and quantify bacteria, fungi, viruses by agar plates or liquid analytical systems.

A large publication about bioaerosol monitoring is present in the **[www.triobas.com](http://www.triobas.com)** website.