

Assessment of air-borne microbial pollution around Municipal Solid Waste (MSW) management facilities.

F. No. Tech/125/BAM/ZOB/ 2013-14, Project I(6)



Objectives:

Assess the possible emission of viable bacterial and fungal aerosols from the MSW management facilities in selected cities/towns in southern zone.

Elucidate correlation if any between bio aerosol emissions and waste management practices.

To assess the presence of opportunistic pathogens in airborne microbial emissions from MSW.



Bio-aerosol Monitoring



Various types of Yeasts, Moulds and Fungi captured from bio-aerosol emissions from MSW

Bio-aerosol monitoring at Mandur landfill site using microbial air sampler

Viabile microbial air sampler



Viabile microbial air sampler
based on solid impaction
technology (SamplAir PRO, AES,
France)
Kestrel Pocket weather tracker



Progress..

- Procured PCR thermal cycler (Veriti 99, Life Technologies) for 16s rRNA sequencing and molecular characterization of airborne microbial strains.
- Airborne microbial emission monitored at Bangalore, Shimoga and Cochin.
- Proposed to carry out monitoring at Mysore, Hyderabad, Kozhikode, Chennai, Goa, Mangalore, Madurai, etc.



Multiple drug resistant MRSA (Methicillin resistant *Staphylococcus aureus*)

Pseudomonas aeruginosa

