Biogiene-Air Test Data

PROBIOTIC AEROSOL HYGIENE SYSTEM

Bacterial communities on restroom floors, urinals and toilets are known to produce foul-odour compounds, such as volatile fatty acids (VFAs). Spraying with Biogiene-Air lowered the levels of the VFAs propionic acid, butyric acid and valeric acid within 30 minutes, and at the same time produced acetic acid. Biogiene-Air thus removes the source of the foul odours within 30 minutes, leaving behind a fresher smell.

One can of Biogiene-Air (243 ml) contains **150 trillion viable cells of a Probiotic Blend**, including endospore-forming bacterium. Being an endospore-producer, the bacterium is resistant to harsh conditions and has the ability to populate restrooms within 30 minutes.

The bacterium in Biogiene-Air **feeds on no less than 35 different sugars**. Spraying of Biogiene-Air onto restroom floors, urinals and toilets resulted in up to 100,000-fold killing of the following bacteria (many of which are considered pathogens) within 30 minutes: *Bacillus cereus, Lactobacillus spp., Escherichia coli, Staphylococcus aureus, Prevotella spp., Bifidobacterium spp. Bacteroides spp., Enterococcus faecalis, Enterococcus faecium, Clostridium butyricum, Propionibactreium acidipropionici, Campylobacter jejuni, Acetobacter aceti and Salmonella spp.* This resulted in drastic changes of the bacterial communities on floors, urinals and toilets.

Lowering of bacterial cell numbers and shifts in bacterial communities is a clear indication that the bacterium in Biogiene-Air drastically reduces the development of and even eradicates the odour causing bacteria in restrooms.

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The strains concerned are naturally occurring and are not genetically modified. They have been used as probiotics in other applications for a number of years and safety has been confirmed by:

- Cytotoxicity tests on Vero cells showing the strains to be non-toxigenic.
- Lack of significant reduction in mobility during sperm mobility tests.
- Lack of haemolysis.
- Antibiotic susceptibility testing showing minimum inhibitory concentrations (MICs) to be below relevant cut-off values or within acceptable variation.

Hence these strains meet the requirements of the Qualified Presumption of Safety (QPS) approach and can be considered safe for consumers and the environment.

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