

Efficacy of indoor aeroallergen reduction by Fresh Air Generator G-Life, A Preliminary Report

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Abstract: Avoidance and minimizing of allergic substances is the important principles to control and cure all allergic diseases. The principles of clean room air production by the Fresh Air Generator G-Life are the processes of the ambient air filtrations, deodorization and finally disinfection by the Ultraviolet light. Clean air is then blown into the room to replace the contaminated room air. To prove the efficacy of this patented Thai innovation, the aero allergenic substances such as plant pollens, mold spores, bacteria was detected and counted using the Burkard Personal Volumetric Air Sampler and the Burkard Air Sampler for Agar Plate. Other important air quality is also recorded. The Fresh Air Generator G-Life – room air treatment can reduce the number of the detected aeroallergens by 60 percent after 24 hours. The oxygen content in the room can be controlled at the fresh air level. The relative humidity and room temperature are not affected. This method of room air treatment is proved as an effective and useful procedure for minimizing the indoor aeroallergens and other pollution.

Research Result

Air quality inside the room after implementation of G-Life

| | Indoor | | | Outdoor | | |
|---------------------|--------|------|------------------|---------|-----|------------------|
| | T | RH% | % O ₂ | T | RH% | % O ₂ |
| Room 1 | | | | | | |
| - Before use | 26.3 | 65 | 22.7 | 26.3 | 65 | 22.7 |
| - 24 Hrs. after use | 29.8 | 73 | 22.5 | 29.2 | 71 | 22.7 |
| - 48 Hrs. after use | 27.4 | 78 | 22.6 | 27.2 | 83 | 22.8 |
| Room 2 | | | | | | |
| - Before use | 28.4 | 74 | 22.8 | 27.1 | 82 | 23.2 |
| - 24 Hrs. after use | 27.6 | 62.5 | 22.6 | 27.1 | 87 | 22.9 |
| - 48 Hrs. after use | 27.7 | 76 | 22.8 | 26.8 | 83 | 22.9 |
| - 72 Hrs. after use | 28.4 | 74 | 22.8 | 27.1 | 82 | 23.2 |

The amount of allergens in the air of the room using G-Life

Test by Burkard Personal Volumetric Air Sampler (for 20 liters of air)

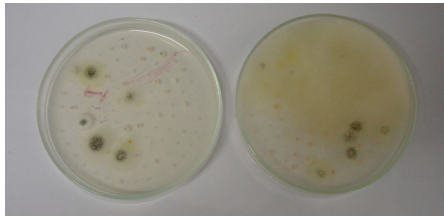
| | Plant pollen | | Decrease (%) | Fungal spores | | Decrease (%) |
|----------------------|--------------|---------|--------------|---------------|---------|--------------|
| | Indoor | Outdoor | | Indoor | Outdoor | |
| Room 1 | | | | | | |
| 1. Before use | | | | | | |
| 2. 24 Hrs. after use | 27 | 25 | | 54 | 29 | |
| 3. 48 Hrs. after use | 19 | 47 | 59.5 | 33 | 45 | 26.7 |
| 4. 72 Hrs. after use | 19 | 65 | 70.7 | 9 | 33 | 72.7 |
| | 15 | 29 | 48.3 | 6 | 14 | 57.1 |

**The amount of allergens in the air of the room using G-Life
Test by Burkard Personal Volumetric Air Sampler
Fungal spores**

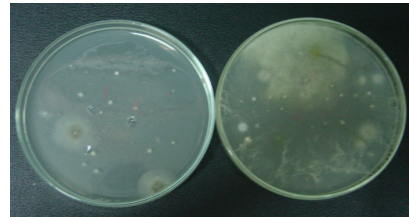
Room 1

Before use

24 Hrs. after use



Indoor Outdoor

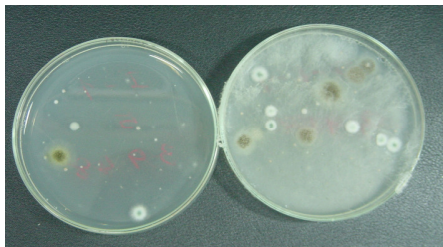


Indoor Outdoor

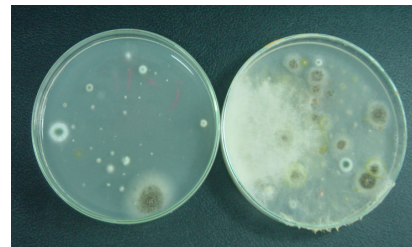
Room 12

Before use

24 Hrs. after use



Indoor Outdoor



Indoor Outdoor

**The results of preliminary experiments
Performance of G-Life Fresh Air Generator**

| The amount of allergens | Decrease (%) |
|--------------------------------------|---------------------|
| Plant pollen in the air of the room | 79.3 |
| Fungal spores in the air of the room | 61.0 |