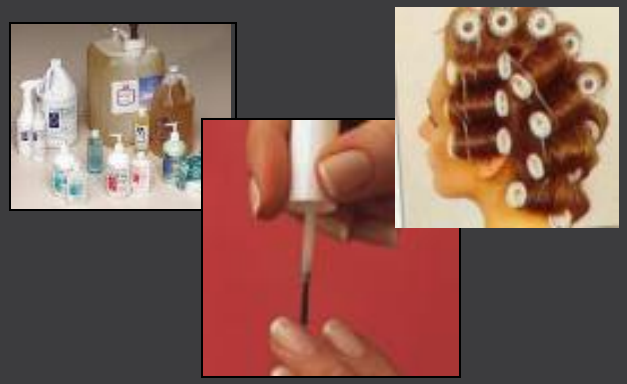
# 3 Major Indoor Pollutants Need to Sanitize

Okamizu™
innovation for health, trust one name

## Volatile Organic Compound

**(E.g.: Paint, Furniture, Nicotine/Aerolein, Household Cleaner)**

- Xylene
- Kerosene
- Toluene
- Ethyl Acetate

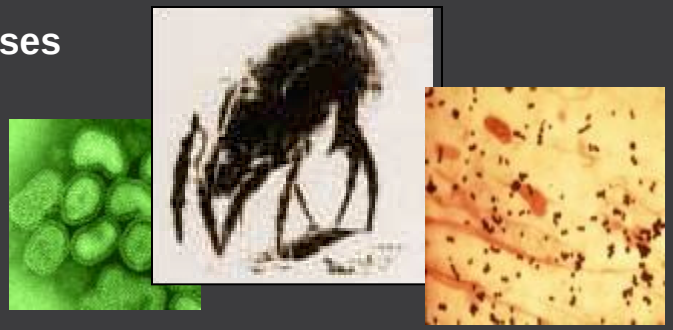


## Odors

- Pet Odors
- Household Odors
- Automobile Odors
- Cigarette Odors

## Biological Contaminants

- Bacteria & Viruses
- Mold/Fungi
- Dust Mite



## Others

- Combustion Products
  Source: Pest Control
- Pesticide
  Source: Petrol

# Comparison with other Technologies

# Freshener

| How its works | It release fragrance to cover up the odor temporarily |
|---|---|
| Benefit | Give a nice smell to a car |
| Set Back | 1.May Contain carcinogenic material<br>•Petroleum distillates<br>•Dichlorobenzene<br>•Aerosol propellant |
| | 2.May Contain Alcohol products<br>•Acetaldehyde<br>•Benzyl Alcohol<br>(upper respiratory tract irritation, headaches, nausea and vomiting, a depressed central nervous system and a drop in blood pressure |
| Maintenance cost | Need to replace often .<br>Averagely RM 150 per year. |

# Health Effects of Air Freshener

**Air Fresheners and Asthma**
A University of Washington survey on chemical hypersensitivity polled people about their reactions to air fresheners.
Around a third of responded with asthma

*"Air fresheners can cause problems for people with asthma.*
*20 million Americans are asthmatic, with asthma or lung diseases like emphysema and chronic bronchitis"*
*Dr. Norman Edelman, chief medical officer, American Lung Association*.

# Ionizer

| How it works | Generate negative ions to attract the positive particles and bring down to the floor or to the wall and & produce mild activated oxygen |
|---|---|
| Strength | Very effective towards clustering Dust & Particles in the Air. |
| Set Back | Not so effective towards<br>•Bacteria & Viruses<br>•Mold & fungus<br>•Odor<br>•Volatile organic Chemicals |
| | 2. The Dust & Particle will be accumulated overtime if not vacuum away. |
| Maintenance | Need to be cleaned often to maintain the effectiveness due to Ionizer itself will trapping dust and particles |

# Hepa Filter

| How it works | Absorb in the dirty air around and filters it |
|---|---|
| Strength | Very Effective towards trapping Dust and Particles |
| Bacteria & viruses | It can trap but it does not kill. |
| Set Back | Not effectives towards<br>Mold & Fungus<br>VOC(Volatile Organic Chemicals)<br>Odors |
| Area | Small coverage area<br>It need air to pass through, thus during the filtering process, human might breath in the particles and bacteria especially if stand in front of the filter. |
| Maintenance cost | High |

# UV Technology

| How it works | Use UV short wave length to generate activated oxygen |
|---|---|
| Strength | Effectively eliminate bacteria & viruses |
| Set Back | Less effective towards Dust & Particles<br>Product effectiveness diminish overtime |
| (Area) | Small Coverage Area.<br>Due to using short wave length to produce ozone(long wave length is harmful to the skin) |
| Maintenance | Very High .Due to UV bulb have a limited life span |
| | |

# Okamizu Process

| How it works | It produce highly activated oxygen and it blow to every corner to destroy & decompose the toxic agent. |
|---|---|
| Strength | Effective to eliminate<br>Bacteria & viruses<br>Mold & fungus<br>VOC<br>Odor |
| Bacteria & Viruses | Destroys |
| Area | Big coverage area.<br>It blows out and it does not need air to pass through |
| Maintenance | Easy to maintain . |
| Set Back | 1.less effective towards Dust & Particles |
| | 2. Must use in a suitable concentration. |