

AVASPO

New Concept of Air Sterilization System

- Air Sterilization/Virus & Bacteria
- Removing VOCs, Formaldehyde and Particulate matters, etc.
- Deodorization

www.avaspo.com

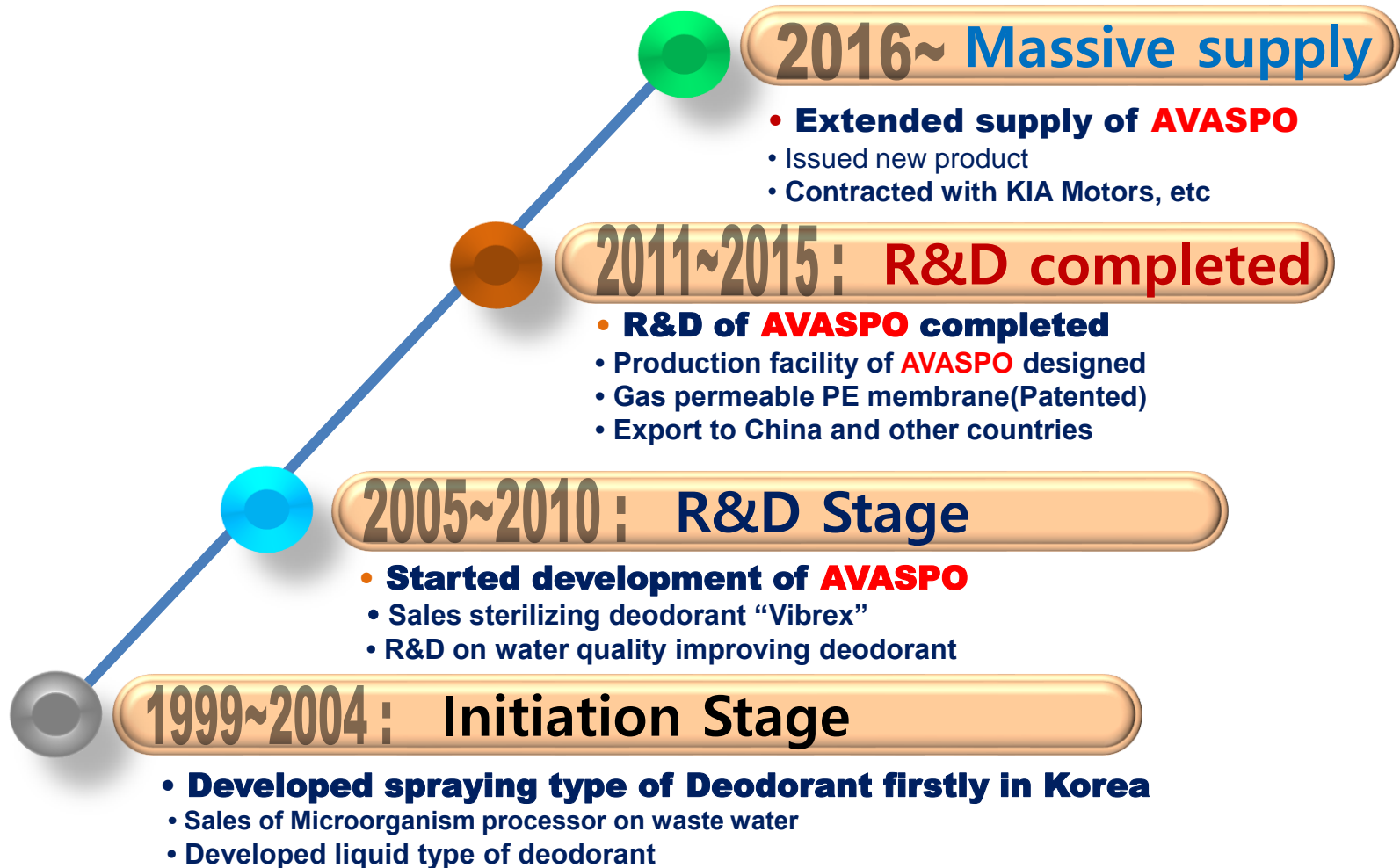


Bio Technology
GREEN WORLD INC.



R&D History of GREEN WORLD INC.

- Green World Inc has developed world-widely unique and wonderful know-how **AVASPO** by +20 years of intensive research and test, providing the total solution to air sterilization, deodorization and industrial pollution problem.





Air Sterilization Test of **AVASPO** against **H3N2**

The development of right vaccine for COVID-19 seems so far and difficult until now, although all the medical teams and Bio experts in the world are making efforts to overcome COVID-19. However, surprisingly enough, we at Green World Inc., have successfully developed wonderful Virus sterilizing material - **AVASPO** and asked a credible evaluation Institute to test for the elimination of COVID-19, however, COVID-19 virus was not available for our test. In alternative, the air sterilization test with A type of Influenza(H3N2) in the air that is classified as same RNA family with Corona 19 was possible and done.

Recently, we have received an unbelievable test report from the test Lab, which is showing that **AVASPO** perfectly eliminated 99.95% of H3N2 A type of Influenza VIRUS(Hong Kong Influenza) which are sprayed in the air.





Air Sterilization Test of **AVASPO** against **H3N2**

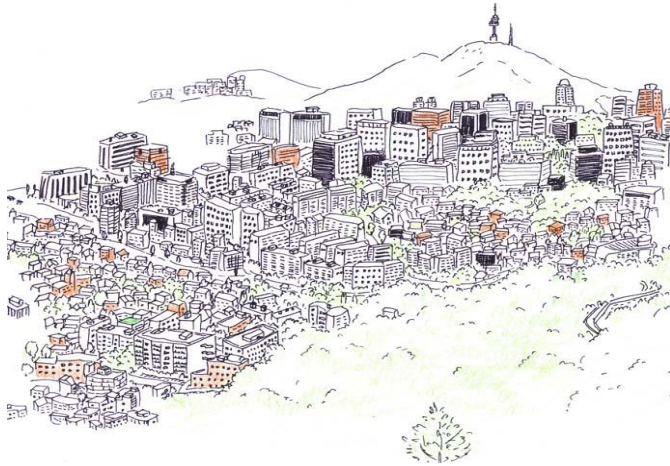
Also, **AVASPO** was proved to be absolutely safe to human-being including all of livings by Oral Toxic Test and Respiratory Toxic Test due to 100% natural materials.

It is obvious that **AVASPO** with multi effects of air sterilization, anti-virus & Bacteria and removing noxious substances, mal-odor as well as VOCs, will be the unique and perfect solution after Covid-19 stage.

And **AVASPO** is the best choice for living disinfection because it works perfect everywhere, even in mega space or in huge buildings.



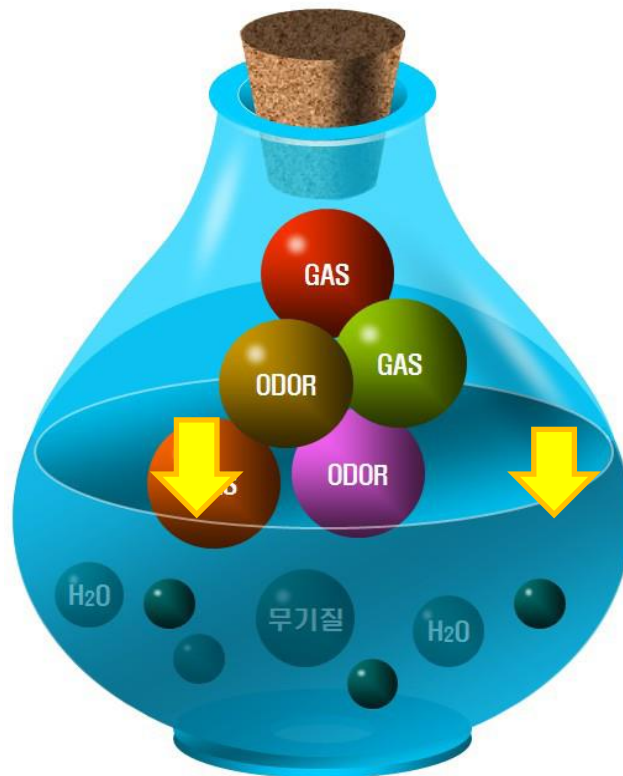
AVASPO, as a fruit of our know-how, is newly developed liquid type of natural **sterilizer of virus in the air** as well as perfect **deodorant**, which contains specific extracts from various plants and trees through several peculiar stages of systematic purification, maturing and highly concentrating process.

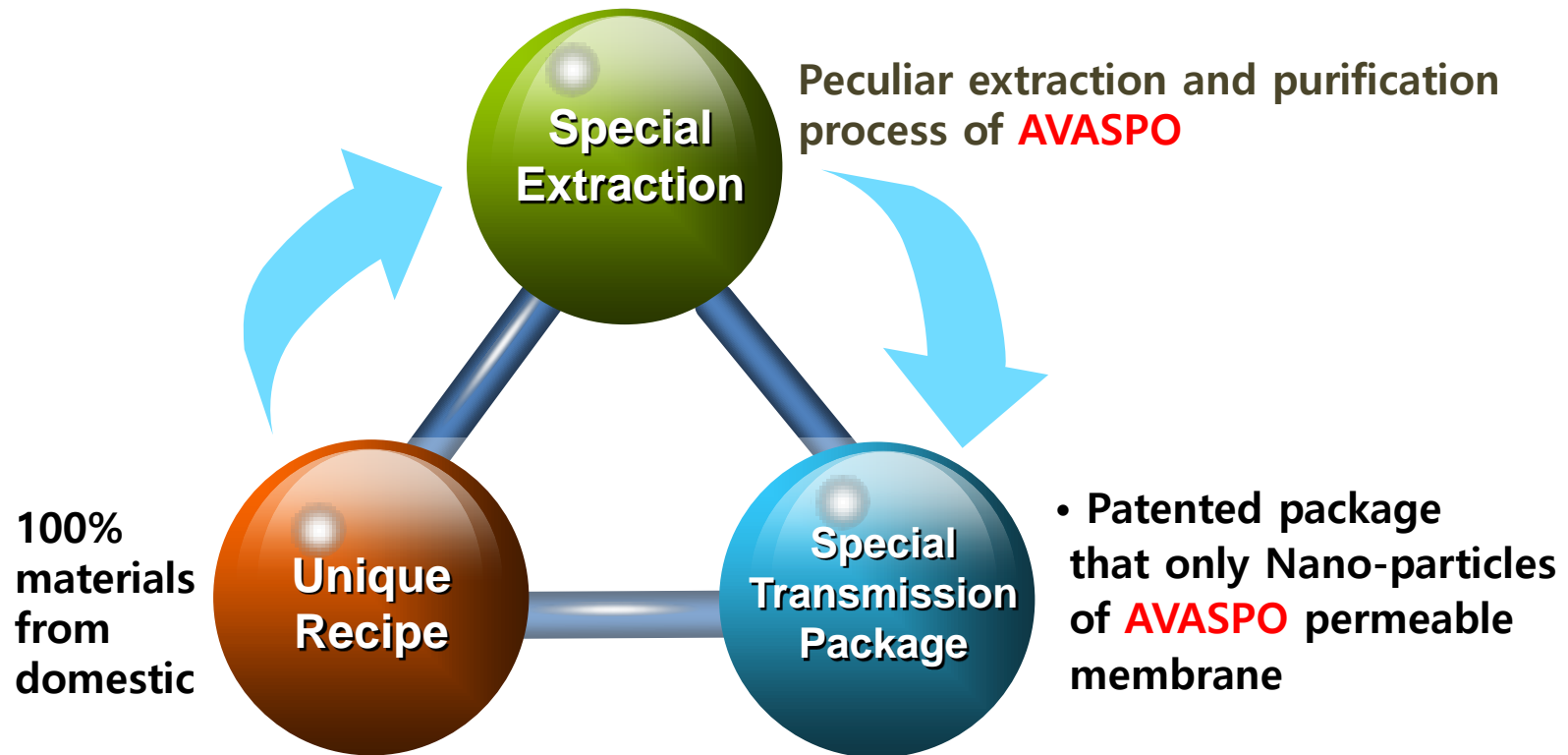


Highly concentrated **AVASPO** is packed in patented gas permeable membrane and explosively shoots numerous Nano-particles of **AVASPO** into the air and immediately eliminates lots of Viruses including Bacteria, all of bad smells as well as noxious gases of VOCs and heavy smog produced by light oxidization.

Basically, AVASPO is designed to chemically react both with polarized and non-polarized molecular of mal-odors and noxious materials. Deodorizing mechanism of AVASPO goes through very complex method of physical and chemical reaction. Physical reaction mainly absorbs and combines molecular of mal-odors firstly and chemical reaction is done after physical reaction is finished.

Forcedly or naturally vaporized Nano-particles of AVASPO to VOCs gas, Light oxidized smog and mal-odors, catches the noxious gas particles /molecular, and physically absorb or grab the particles of Viruses, mal-odors, VOCs and noxious gases to change them to highly polymerized compound and slowly fall down, being neutralized to basic compound and moisture.

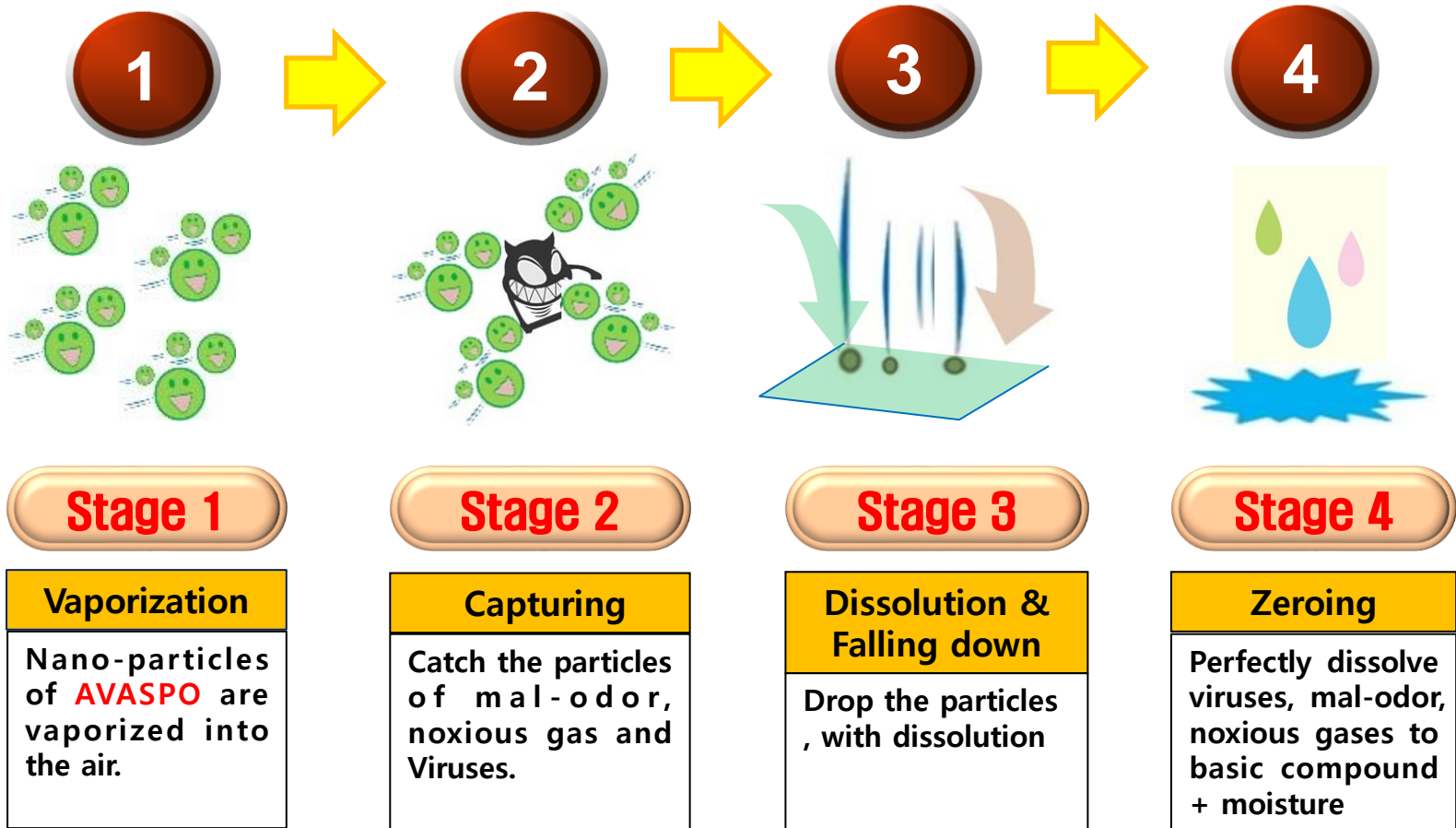




- Developed world-widely unique knowhow by 20 years of intensive research and test, providing the solution to industrial pollution problem.

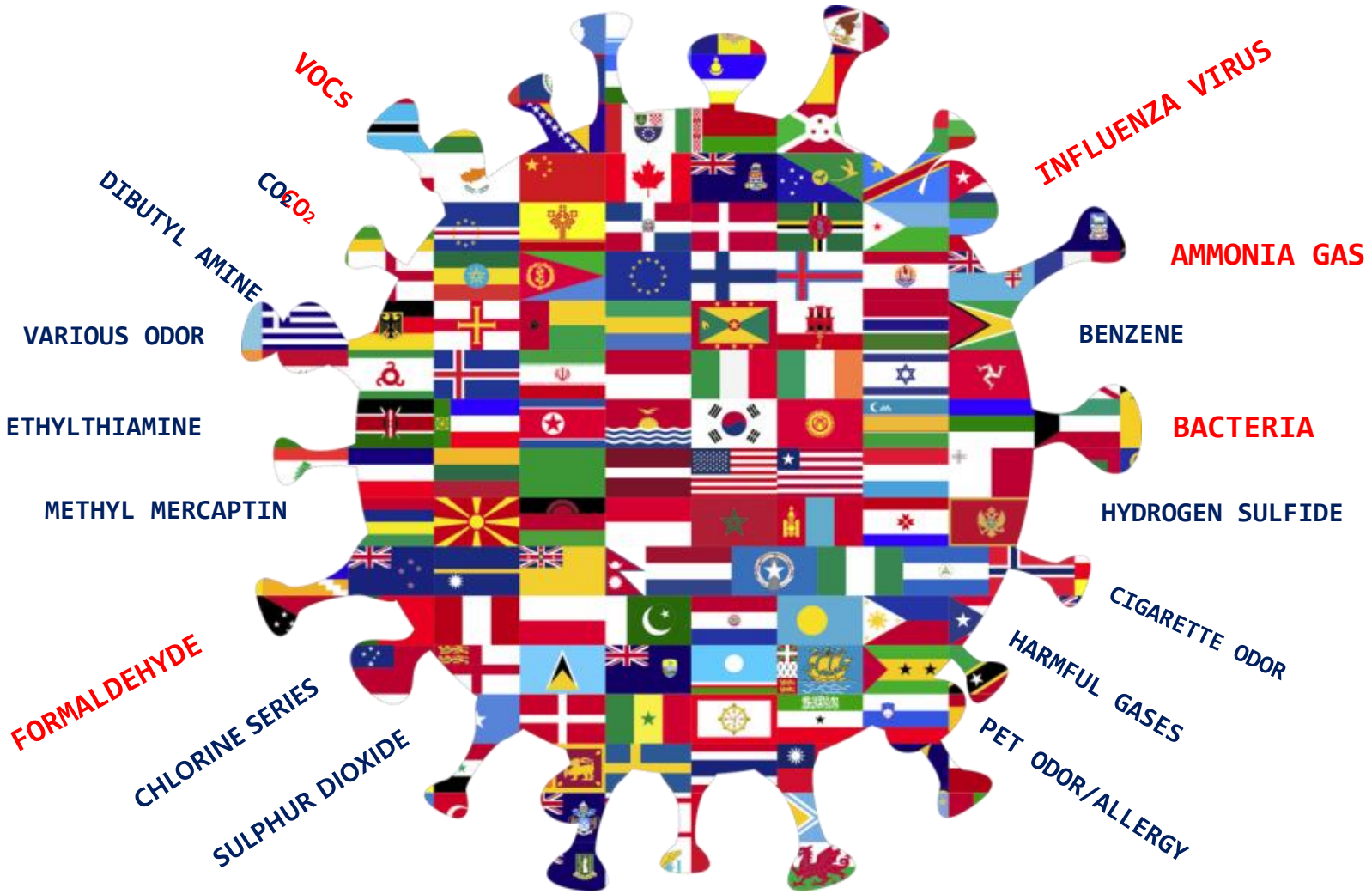
Established in 1999 !!!

AVASPO rapidly dissolves or neutralizes noxious materials and gas through below mentioned 4 stages of working.



*Eliminates

INFLUENZA VIRUS, BACTERIA, VOCs, HARMFUL GASES, ODORS, FORMALDEHYDE. CO₂. etc...



Why it should be **AVASPO** ?

1. **Minimum Investment**

Big size machine or large facility is not necessary and just one dispenser with pipe system enough.

2. **Perfect Effect**

Completely removes prevailing Virus, Bacteria, VOCs, Mal-Odor, etc. and currently unsolved air pollution and sanitation problem can be cleared.

3. **100% natural material**

Never harmful to human-being due to **100% natural plants extracts**.

4. **Mega Space**

Recommended to swift and abundant air flow of present huge building, showing Excellent effects of removing mal-odor and particulate matter, etc.

5. **Dissolves Carbon Oxide**

Perfectly dissolves Carbon Oxide which is a content of particulate matter, minimizing it's harmfulness.

6. **Insect Repellent**

Expels insects or bugs because those dislike the smell of AVASPO.



Human-being feels to work or live in the forest.

Industrial Fields

Semi-Conduct manufacturer · Pharmaceutical Factory · Chemical Factory · Casting Foundry · Waste Incineration Place · Plastic Factory · Printing Factory · Construction Site · Electric Product Manufacturer · Textile & Leather Factory · Sewage Disposal Plant · Hog Breeding Farm, Poultry Farm, etc.

Public Facilities

Airport Facility · Subway Train and Stations · Railway Train and Stations · Government and Public Offices · Senior Welfare Care Center · Recuperation Hospital · Hospital/Clinics · Schools/University · Museum · Kindergarten · Exhibition Hall · Aircrafts · Cruise/Vessels, etc

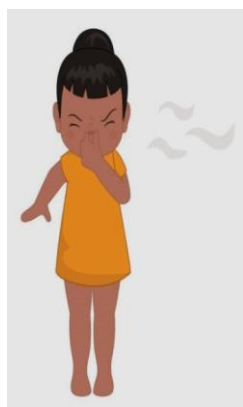
Commercial Zones

PC Room · Karaoke · Billiards Room · Restaurants · Night Club · Group Dining Room · Hotels · Underground Shops · Religion Facility/Church · Pet Clinic/Per Shop · Department Store · Shopping Mall · Fitness Center, etc

Residence Zones

Apartment · Office-tel · Commercial and Living Complex · Library · Automobiles, etc

Foot odor



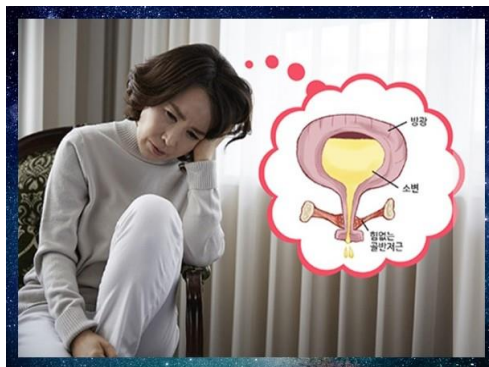
Shoes...



Smoking



Odor of body



Leather Products



Cooking Gas & Odor



Children`s Room



Dress Room



Senior citizen`s Room



▶ Railroad Company



▶ Construction



▶ Pharmaceutical



▶ Seoul Metro Subway



▶ Airport



▶ Construction



▶ Pharmaceutical



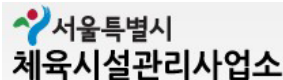
▶ Hotel



▶ Semiconductor



▶ Sports facilities



▶ Chemical Factory



▶ Elderly welfare center



▶ Food Distribution Corp.



▶ Semiconductor



▶ Restaurant



▶ Cosmetic



▶ Electricity



▶ Chemical Factory



▶ Textile Factory

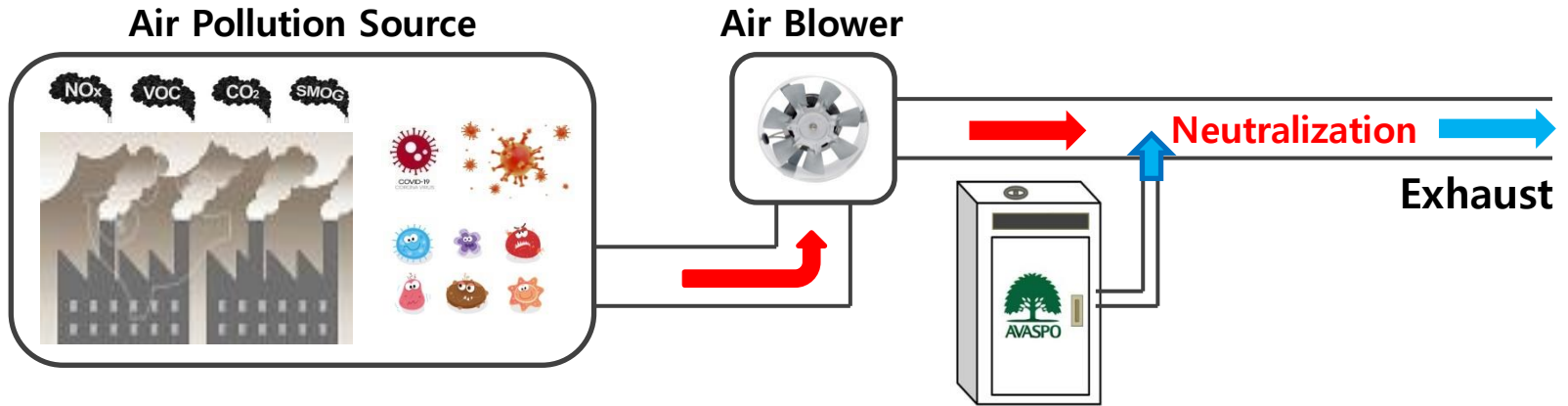


▶ Automotive



Etc...

Connection to Outside air



Connection to Air Conditioning System



Connection to Multi-Use Facility



- ▶ Indoor Parking Lot
- ▶ Indoor Gym
- ▶ Library
- ▶ Museum
- ▶ Exhibition hall
- ▶ Apartment
- ▶ Underground Shopping Center, etc

GW7080 (Industrial)



GREEN AIR INDUSTRIAL

Voltage	Non-powered(released by air volume of duct)
Discharging air volume	Applicable to more than 300 cubic meters
Used dosage of deodorant	Use 4-40 pcs adjustable according to the amount of odor
Measurement	W 1015cm × D 305cm × H 1000cm
Weight	62kg
Product Features	<ul style="list-style-type: none"> • Green Air Industrial Deodorizer is a revolutionary deodorization system that can drastically reduce energy consumption as well as the cost reduction of construction and maintenance by dismissing the old odor countermeasures. • Sewage treatment plant, Excreta treatment plant, General chemical plant, Foundry plant, Poultry plant, Pig farm, Painting plant, Printing plant, Hospital, Hotel, Theater, etc.

GW7070 (Industrial)



GREEN AIR PORTABLE

Voltage	220V / 60Hz
Acreage covered	Space less than 150 square meters
Used dosage of deodorant	Less than 4 pcs
Product Dimension	W 521cm × D 311cm × H 464cm
Weight	15kg
Product Features	<ul style="list-style-type: none"> • Green Air Portable Deodorizer is an innovative deodorization system that can drastically reduce energy consumption as well as the cost reduction of construction and maintenance by dismissing the old odor countermeasures. • Green Air Portable system is recommended for deodorization of all kinds of odors. The particles of AVASPO are vaporized from deodorizing device not only to neutralize odors in the atmosphere, but also fundamentally remove all odors remaining attached to the surface of all equipment such as ducts, chimneys, ceilings, walls, floors, equipment, furniture, etc.



Products of AVASPO Green Air System

PAC150EA (Home · Commercial Zone : Indoor) Within 45 square meters

AVASPO Air Sterilizer



GW 3710



GW 3720



GW 3730



GW 3740



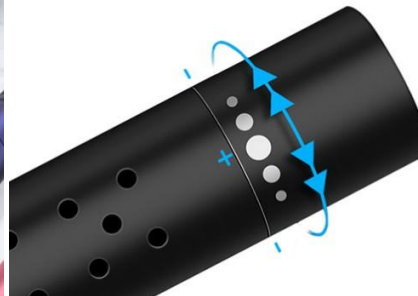
GW 3750



GW 3760



GW 3770(Vehicle Vent Clip Air Purifier)





Report of Tests

No	Test Contents	Before	After	%
1	China A type of Influenza (H3N2) MDCK	3.51x10 ⁶	2.06x10 ³	99.95(2h)
2	China Toxic Respiration Test(LC50) 14days	20	20	0(14days)
3	China Oral Toxic Test(LD50) - Input 5,000mg/kg	20	20	0(14days)
4	Korea Oral Toxic Test(LD50) - Input 2,000mg/kg	20	20	0(14days)
5	Korea Formaldehyde Test	50ppm	<1	95(2h)
6	China Disinfection Test Escherichia coli - ATCC 25922	4.5x10 ⁴	<10	99.97(2h)
7	China Disinfection Test Staphylococcus aureus - ATCC 6538	1.0x10 ⁴	<10	99.90(2h)
8	China Disinfection Test Candida albicans - ATCC 10231	46x10 ⁴	<10	99.97(2h)
9	Korea Disinfection Test Escherichia coli - ATCC 8739	5.4x10 ⁵	<10	99.90(1m)
10	Korea Disinfection Test Staphylococcus aureus - ATCC 6538	4.0x10 ⁵	<10	99.90(1m)



Report of Tests

No	Test Contents	Before	After	%
11	China Elimination Test of Formaldehyde(Indoor)	1.02	0.20	80.40(24h)
12	China Elimination Test of H ₂ S - GB11742-89	2.94	0.28	90.5(24h)
13	Korea Test of Hydrogen Sulfide	50	3	94(2h)
14	Korea Test of Ammonia Gas	50	8	84(2h)
15	China Elimination Test of C ₈ H ₁₀ – QB/T2761-2006	2.48	0.431	82.6(24h)
16	China Elimination Test of C ₃ H ₉ N – GB21551.4-2010	3.70	0.345	90.7(2h)
17	China Elimination Test of CH ₄ S - GB21551.4-2010	7.66	0.663	91.3(2h)

cf : www.avaspo.com → Data Library → Certification Data

AVASPO를 이용한 곰팡이 억제 자가실험

본 실험은 천연 식물성유료 제조된 AVASPO(피톤치드)를 이용하여 곰팡이 발육억제 상태를 실험한 것이다. 다양한 식물성유료에서 탈취 작용과 살균 작용이 강한 식물성유료를 선택하여, 추출된 정유를 적정 비율로 혼합하여 발효성 있게 제조하였다. 이렇게 제조된 AVASPO를 특수 투과막 기화장치 비닐팩에 담아 발효 할 수 있게 만들었다. 곰팡이가 서식 할수 있는 환경에 AVASPO를 이용 미립자 기체로 자연방출시켜 AVASPO 입자로 하여금 곰팡이 발육억제 상태를 실험한 결과다.

실험 요약

실험 일자 : 2010년 3월 17일 ~ 2010년 4월 5일 (20일간)

실험 조건 : 실내온도 20~21도

- 실험 방법 :
1. 프라스틱 용기에 따뜻한 흰밥을 넣고 실온에서 식힌다.
 2. 프라스틱 뚜껑에 상기와 같이 제조된 AVASPO 멤브레인을 붙인다.
 3. 흰밥을 식힌다음 용기뚜껑을 닫고 곰팡이 발육 상태를 관찰 하였다.



2010.03.17 프라스틱 용기에 흰밥을 넣고 한쪽만 AVASPO 멤브레인을 부착후 실험시작



2010.3.21 (4일후 부터 AVASPO가 투입 안된곳에서 붉은 곰팡이 발육시작됨)



2010.3.22 21:01분 좀더크게 성장 (초기발생 13시간후)



2010.3.24 00:09분 (실험시작 7일후)
2010.3.22일 보다 2배로 커짐



2010.3.25 13:08분 (실험시작 8일후)
1. AVASPO가 투입된 곳에서도 곰팡이가 발육 시작
2. AVASPO가 투입안된 곳에서는 붉은색, 푸른색, 검정색 곰팡이가 활육되기 시작함



2010.3.26 12:48분 (실험시작 9일후)



2010.3.31 15:43분 (실험시작 14일후)
AVASPO가 투입된것과 안된곳에 곰팡이 비교안될 정도로 곰팡이 성장 발육 차이가 나타남 발육 성장이 확실한 차이가 나타남.



2010.4.2 18:05분 (실험시작 16일후)



2010.4.5 14:48분 (실험시작 19일후)

The first and unique systematic solution to Air Sterilization even for **Mega Space**

Air Sterilization
Degassing of VOCs
Deodorization

Thank you!

www.avaspo.com



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GREEN WORLD INC.