

# WMC SemBio

The world's first! Leading the future of animal husbandry with a dual virus prevention solution.

Total AI/FMD Protection

“The world's only innovative solution that sterilizes, defends, and protects highly pathogenic avian influenza (AI) and foot-and-mouth disease (FMD) viruses in a three-dimensional manner through the synergy of powerful air sterilization systems and immune-enhancing feed additives.”

## WMC Sembio's Global Market Entry Strategy

This proposal outlines a strategic roadmap for WMC Sembio to enter and secure a significant share in the global livestock market with its innovative FDA-certified natural mineral feed and premium eggs.



### Innovative Technology

FDA-certified natural mineral feed with 4 domestic patents



### Strategic Market Entry

Prioritized targets: North America, Europe, and Japan



### Proven Efficacy

Superior antimicrobial properties and comprehensive health benefits



### Customer-Centric Value

Tailored benefits for farmers, distributors, and end consumers

### WMC SemBio Max

#### SemBio Mineral Ingredient

- ✓ Natural SEM mineral raw materials
- ✓ U.S. FDA certification
- ✓ Zero verified mortality rate (based on 10,000 animal samples)
- ✓ Great protection against Avian Influenza (AI) and Foot-and-Mouth Disease
- ✓ Natural preservative, keeping freshness for twice as long
- ✓ Perfect solution for national policies, increases farmer profits, and improves the livestock environment
- ✓ Reduces E. coli (84%), Staphylococcus (70%) and Salmonella (90%)
- ✓ Four domestic patents (Korea)
- ✓ Excellent antibacterial, sterilizing and immune-boosting capabilities
- ✓ Adsorb and decompose heavy metals



## "Golden Egg"

WMC SemBio

Premium "Mineral Health Eggs" - Just one of WMC Sembio's innovative products

### Global Market Drivers

- ✓ Antibiotic reduction requirements
- ✓ Increased demand for natural ingredients
- ✓ Growing consumer preference for animal welfare

# WMC Sembio's Core Competitive Advantages



## Intellectual Property

### Domestic Patents

4

Granted patents for natural mineral technology

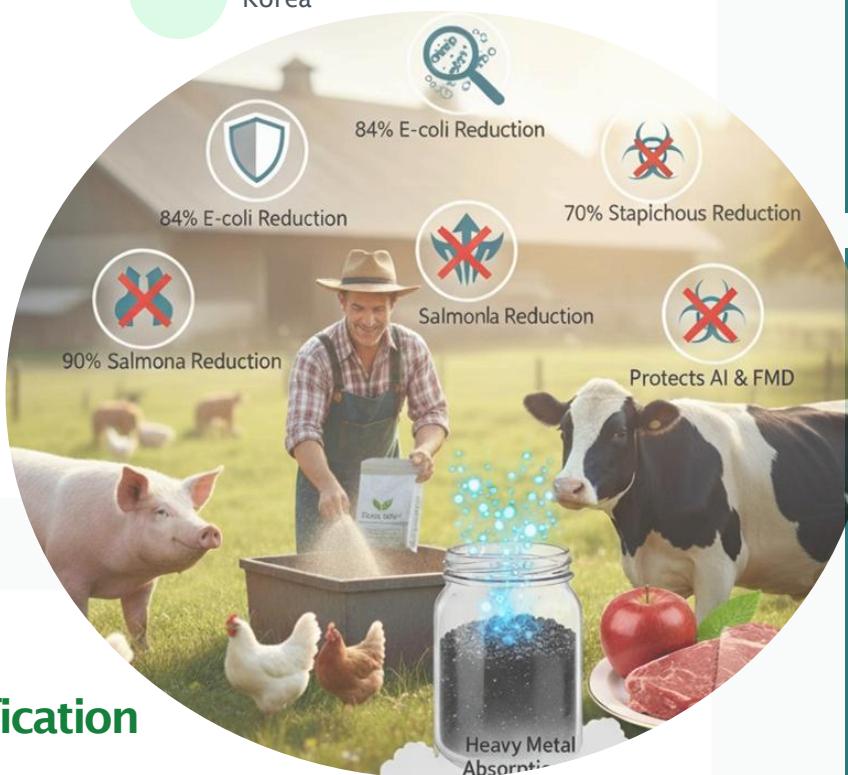
특허 제 10-0897488호



### Domestic Trademark

1

Registered trademark in Korea



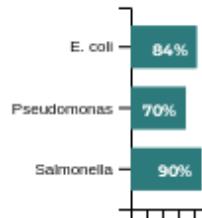
## FDA Certification

- US FDA certified natural mineral new material feed
- Strict compliance with international safety standards
- Critical competitive advantage in US market



## Antimicrobial Efficacy

- E. coli reduction by 84%
- Pseudomonas reduction by 70%
- Salmonella reduction by 90%



## Product Advantages



### Performance Enhancement

- Egg production rate increased by 3-5%
- Production period extended by 3- 6 months



### Immune System Support

- Lifespan extended from 80 weeks to 100-120 weeks
- Reduced disease incidence and mortality



### Natural Mineral Technology

- Superior bioavailability compared to inorganic minerals
- Higher absorption rate in livestock



### Global Regulatory Support

- Ongoing international trademark and patent applications.
- Supporting global market expansion

# Product Value Proposition

WMC Sembio's products offer compelling value through two main pillars:



## Differentiated Efficacy of Natural Mineral Feed

### Superior Bioavailability

2-3x higher bioavailability and absorption rate compared to inorganic minerals

### Antimicrobial Properties

Reduces pathogenic bacteria by 70-90% in the intestinal tract

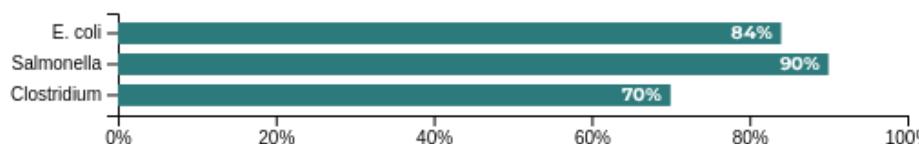
### Enhanced Production

Increases egg production by 3-5% and extends laying period by 3-6 months

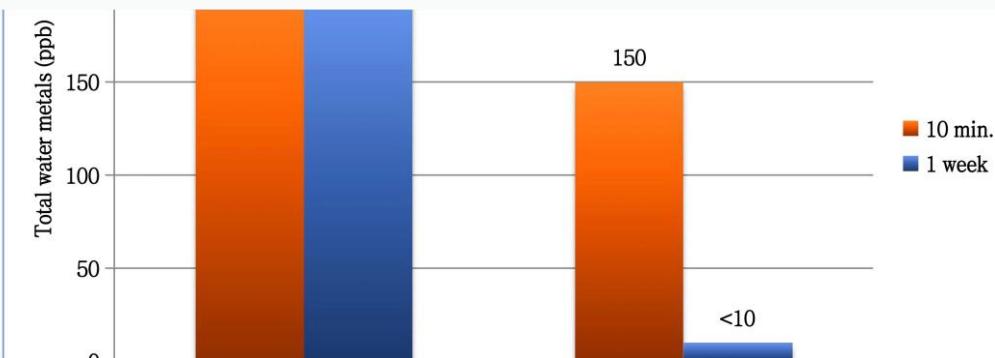
### Environmental Benefits

Reduces ammonia emissions by 7-15%, contributing to sustainable farming

### Bacterial Reduction Efficiency



## Trust Assurance through FDA Certification



### Safety Verification

FDA certification provides rigorous safety testing and GRAS status

### Global Market Access

FDA certification facilitates market entry in North America and Europe

### Strategic Advantage

Positions WMC Sembio as a trusted global partner for livestock nutrition

### Innovation Leadership

4 domestic patents and ongoing international registrations

# WMC SemBio Max

Enhanced Livestock Health

- Patented natural SEM mineral
- U.S. FDA certified
- Zero verified mortality
- Great protection against Avian Influenza (AI) and Foot-mouth Disease
- A natural preservative, keeping freshness for twice as long
- Perfect solution for national policies, increases farmer profits, improves the livestock environment



[혁신적인 축산 방역 솔루션: AI 및 구제역 완전 봉쇄]

# WMC SemBio Max

Cutting edge Eco-Friendly Mineral Ingredient

Innovative Livestock Epidemic Prevention Solutions:  
AI and Foot-and-Mouth Disease Complete Lockdown

Sembio Feed Additives

AI/FMD Protection  
Air Sterilizer



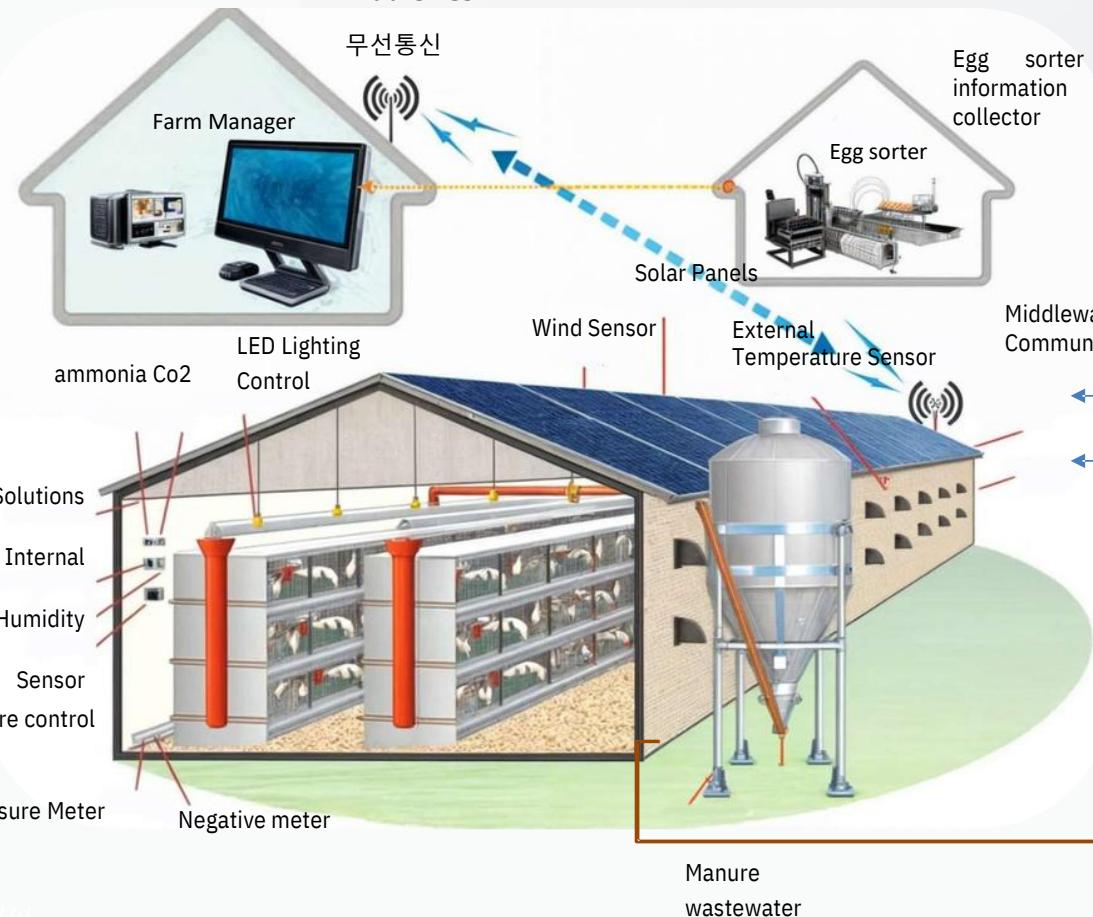
Product	SemBio Max
Product Type	Feed Additive Mineral Ingredient
FDA	Registered (USA)
Mineral Type	SEM Mineral raw materials
Benefits	Antibacterial, Sterilizing Immune-Boosting, Reduce Disease
Unit Cost (1kg)	\$4.00 USD : \$4,000 (1000Kg)
FOB point	Korea
Shipping	Best way
Packing Info	20Kg (1 bag): 50 bags/1 pallet =1 ton
20 feet container	17 pallets (17 tons)
M.O.Q	34 tons (4~6 months use)
Lead Time	(10~14 days)
Supply Requirement (per month)	<ul style="list-style-type: none"><li>• 1 chick =144g,</li><li>• 10K chicks=144kg ,</li><li>• 800K chicks=11,520kg (11.5 tons)</li><li>• 1M Chicks =14.4 tons</li></ul>
Min Requirement Supply Time	12 weeks

WMC Sembio Max

Partnering for a sustainable and prosperous future in the global livestock industry.

# AI/FMD Protection

**AI/FMD Protection**  
air sterilization and disinfection  
Smart Factory Solutions



Category	Functions
❖ Safety	US FDA-Certified. Eco-Friendly Solution.
❖ Gut Health	Patented Gut Health Tech. Boosts Nutrient Absorption.
❖ Growth	Dramatically Improves Feed Efficiency. Maximizes Growth Potential.
❖ Immunity	Zero Mortality with Stronger Immunity.
❖ Antibiotic Alternative-Free	Replaces Antibiotics, Provides Antioxidants.
❖ Disease Prevention	Comprehensive AI/FMD Protection.
❖ Egg Quality	Double Egg Freshness & Quality Improvement
❖ Harmful Bacteria	Eliminates up to 90% of Harmful Bacteria.
❖ Sterilization	Powerful Sterilizing & Antibacterial Action.
❖ Environment	Decomposes Heavy Metals for a Clean Environment.
❖ Profitability	Maximizes Farm Profits. Complies with Gov't Regulations.



# [WMC Sembio: AI & FMD Protection Solution]

**WMC Sembio's advanced air disinfection/sterilization capabilities and innovative FDA-approved natural feed additive (SemBio) provide the world's first solution to prevent, protect, and treat avian flu/FMD (foot-and-mouth disease), and present an integrated strategy and proposal to attract successful domestic and foreign investment as a leading company in the global market**



## Excellent antibacterial ability

84% reduction in *E. coli*, 70% reduction in *staphylococcus*, 90% reduction in *Salmonella*



## Increases immunity

Enhance the immune response of livestock, significantly reduce disease incidence and mortality



## Extended Lifespan

Extend livestock life to 100~120 weeks of age, increase productivity



## Competitive Advantage

- ✓ **5 domestic patents** - Natural mineral new material and feed additive manufacturing method
- ✓ **FDA Certified** - Safety and efficacy verification through US FDA certification
- ✓ **Safety and efficacy verification through US FDA certification** WA 인증 가능  
- Antibiotic-Free (Residue Worry Free) certified
- ✓ **Domestic Trademark** - 1 completed, each country/region application in progress

## Additional features

- 👉 **Natural preservatives** - Inhibits spoilage of livestock products, maintaining freshness more than twice
- 👉 **Disease defense** - AI (avian influenza) and foot-and-mouth disease protection effects

## Innovative Livestock Epidemic Prevention Solutions: AI and Foot-and-Mouth Disease Complete Lockdown

# Patents & Certificates

WMC Sembio의 글로벌 시장 진출을 위한 핵심 특허/인증서 정보

## WMC SemBio Max

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WMC Sembio 세계시장 전략 (Confidential & Internal Use only)

## 특허 및 인증서

### 특허증



특허 제 10-0897488호  
적색 세일 험유 가축사료 조성물

특허 제 10-1600340호  
적색세일 분말을 함유하는  
세정용 화장품 조성물

특허 제 10-1600329호  
적색세일 분말 및 희토류 원소  
화합물을 함유하는 가축사료 조성물

상표등록 제 40-1152049호

### 미국식품의약청(FDA) 시험 인증서



유해 중금속 테스트  
Heavy Metal test



유해 미생물 테스트  
Microbiology Scan Test



일반 성분분석 테스트  
Mineral Scan Test



경구투여독성테스트  
Acute Oral Toxicity Test



피부자극성테스트  
Primary Skin Irritation Test



세포독성테스트  
Cytotoxicity Test

## 미네랄 건강란의 시험성적서

건강란 시험성적서

한국식품연구원 Korea Food Research Institute		시험 성적 서식(Certificate)	
시험 명		인증시험(ISO/IEC 17025 : 2005)	
제작자		한국식품연구원(한국식품연구원)	
제작일자		2010. 11. 10. ~ 2011. 04. 19.까지	
판정일자		2010. 11. 10. ~ 2010. 12. 09.까지	
분야	항목	인증시험 항목	
		인증항목	인증일자
화학 분야	C1001	국내외 등록	2010. 11. 10.
	C1002	국내외 등록	2010. 11. 10.
	C1003	국내외 등록	2010. 11. 10.
	C1004	국내외 등록	2010. 11. 10.
	C1005	국내외 등록	2010. 11. 10.
	C1006	국내외 등록	2010. 11. 10.
	C1007	국내외 등록	2010. 11. 10.
	C1008	국내외 등록	2010. 11. 10.
	C1009	국내외 등록	2010. 11. 10.
	C1010	국내외 등록	2010. 11. 10.
생물 분야	C2001	국내외 등록	2010. 11. 10.
	C2002	국내외 등록	2010. 11. 10.
	C2003	국내외 등록	2010. 11. 10.
	C2004	국내외 등록	2010. 11. 10.
	C2005	국내외 등록	2010. 11. 10.
	C2006	국내외 등록	2010. 11. 10.
	C2007	국내외 등록	2010. 11. 10.
	C2008	국내외 등록	2010. 11. 10.
	C2009	국내외 등록	2010. 11. 10.
	C2010	국내외 등록	2010. 11. 10.
환경 분야	C3001	국내외 등록	2010. 11. 10.
	C3002	국내외 등록	2010. 11. 10.
	C3003	국내외 등록	2010. 11. 10.
	C3004	국내외 등록	2010. 11. 10.
	C3005	국내외 등록	2010. 11. 10.
	C3006	국내외 등록	2010. 11. 10.
	C3007	국내외 등록	2010. 11. 10.
	C3008	국내외 등록	2010. 11. 10.
	C3009	국내외 등록	2010. 11. 10.
	C3010	국내외 등록	2010. 11. 10.
합계		100.0	
※ 본 표는 본원에서 자체적으로 실시한 시험 및 외부 시험기관으로부터 인증을 받은 항목을 기록한 표이다.			
※ 본 표는 본원에서 자체적으로 실시한 시험 및 외부 시험기관으로부터 인증을 받은 항목을 기록한 표이다.			

충남대 건강란 시험성적서

WMC Sembio 세계시장 전략 (Confidential & Internal Use only)

## 비밀. 면역력을 강화

## 바이러스를 사멸하라!

바이러스에 대하여 닭이 건강하도록 면역력을 키워 건강한 계란을 낳도록 관리

시 험 성 적 서			
주식회사 바이오드		성적서번호	B-2021-1
우) 54596 전라북도 익산시 고봉로 79		페이지(1)/(총 2)	
(TEL : 063-850-0685, FAX : 063-850-0686)			
1. 의뢰자 정보			
기 관 명		대 표 자	
주 소			
접수일자	2021년 8월 23일	시험완료일자	2021년 10월 30일
2. 시 험 명 : SEM-1, SEM-2, SEM-3, LST			
3. 시험결과			
시험항목	시료구분	판정	시험방법
염바이러스시험 (Influenza virus)	S-1	토고임증	ASTM E1052-11
	S-2	토고임증	
	S-3	토고임증	
	LST	토고임증	
1) 시험조건			
<ul style="list-style-type: none"> <li>- 시험법 : 능동죽산검역본부 고시 제2018-16호의 【소독제 흐렉시험 지침】</li> <li>- 품종 : Avian Influenza/A/MS96/96号</li> </ul>			
4. 용 도 : 회사 자체 품질관리 및 보고서 제출			
불임 : 시험결과서			
비고 : 1) 이 성적서는 의뢰자가 제시한 서로 및 시료함으로 시험한 결과로서 원체 자료에 대한 유통을 보증하지 않습니다. 2) 이 성적서는 흐렉. 선진. 광고 및 소송 등으로 사용할 수 없으며, 품종. 이름의 사용을 금합니다. 3) 이 성적서는 원본(재발행 포함)은 유효하며, 사본 및 전자 번역본/파일본은 결과의 정확性를 보증합니다.			
2021년 11월 17일			
주식회사 바이오드 대표이사			

6. 종합결론: S -1, S -2, S -3, LST의 Avian influenza virus 대한 항바이러스  
스 효능시험 결과, LST의 원액, 10배, 100배 희석액에서 바이러스 사  
멸효능을 보였다.

# SENTIGEN-300 for AI/FMD Air Disinfector

## Disinfect viruses and Sterilize the air in your room.

- ◆ World's Ultra Powerful 5-stage Disinfectant
- ◆ 800 Million Bipolar Ions Emission Per Second
- ◆ Eco-friendly and Ozone Free
- ◆ 8 in 1 Smart Air Quality Monitoring System
- ◆ Advanced Defense Against COVID-19 and Flu

**NOVIRUSAIR MAWI-300-E Ultra Disinfector** is an air purification sterilization solution that is convenient, reliable and easy-to-use. It quickly disinfects and sterilizes air at home or office.

**NOVIRUSAIR MAWI-300-E Ultra Disinfector** is fast-working, environment-friendly and does not emit ozone. It uses advanced bio-plasma technology to remove airborne pollutants, eradicates viruses and bacteria, absorbs smoke, odors and volatile organic compounds, decomposes harmful substances such as formaldehyde and benzene by 99%, and drastically improves indoor air quality.

**NOVIRUSAIR MAWI-300-E Ultra Disinfector** is FDA registered and listed as infection control medical device (CLASS 2).

Aero-dynamic Sterilization <sup>TM</sup> Technology

LNT Ozone Free <sup>TM</sup> Technology

800 Million Bipolar Ions <sup>TM</sup> Technology

Nano UV-C LED Sterilization <sup>TM</sup> Technology

High Functional 8 in 1 Air Quality Sensor

(CO2+Temperature+Humidity+TVOC+HCHO+PM1.0/PM2.5/PM10+AQI)

Patented Technology (Korea Patent No. 10-2537336)

Wi-Fi/Bluetooth Connectivity for Real Time  
(Smartphone Air Monitoring App)



See what you are breathing  
Life-Saving Solution

## Features

### MEDICAL & INDUSTRIAL-GRADE SANITIZATION

800M Bipolar Ions <sup>TM</sup> Technology combined with Aero-dynamic Air Sterilization and UV-C Nano LED Technology will eradicate viruses, bacteria as well as smoke, cigarette fumes, wildfire smoke, cooking odor, food smells, pet odor, chemical odor, harmful gas and pollution odors like formaldehyde, benzene, xylene, VOCs by 99.97%. NOVIRUSAIR is equipped also with antiviral copper filter to block the entry of viruses and bacteria.

### SUPERIOR AIR DISINFECTION AND PURIFICATION

Ultra powerful 5-step disinfection system will make your air cleaner and fresher. You can enjoy pristine forest air in your room, living room, basement, kitchen, office, hotel, hospital, school and more. NOVIRUSAIR helps you sleep better by capturing airborne pollutants which irritate your sinuses, nasal passages and lungs.

### 8 in 1 SMART AIR QUALITY DETECTION SYSTEM

Query air quality data at any time using mobile APP. Monitor PM2.5, T&H, CO2, TVOC and etc.

### 5 KTL (Korea Testing Lab) TESTS

Passed bacteria eradication, virus eradication, ozone safety, noise, and odor removal tests.

## Benefits

### World's First Ultra Powerful 5-step Air Sterilization System

Emits 800M positive and negative ions per second and eradicates bacteria, viruses, VOC, odor. Passed 5 KTL (Korea Testing Lab) tests. (surface/air virus eradication, ozone safety, noise, odor removal)

### OZONE-FREE (LNT Ozone Zero <sup>TM</sup> Technology)

Emits only up to 0.0023ppm of ozone per hour (only 1/21 of 0.05ppm per hour suggested by WHO).

### MOLECULAR LEVEL CONTROL

Removes air pollutants such as VOCs, gaseous chemicals, fine dust and odors at the particle level.

### SMARTPHONE AIR QUALITY DETECTION via BUILT-IN WIFI

Tracks even the slightest changes in air quality within seconds. Immediately alerts when the air is not safe - Smart air quality monitoring to create safe environments.

### Class 2 Medical Device Approved by FDA

Registered and listed on FDA as class 2 medical device.

# Sentigen 300



- Eradicates Human Corona Virus and other viruses
- 360° Air Intake and Ion Dispersion
- Emits over 800 million ions per second
- 5-stage ultra-powerful disinfection process
- UV-C LED Kills Covid-19 virus in 2 seconds.
- Anti-virus copper filter kills Covid-19 virus in 5 minutes
- Wall Hanging & Standing Design
- Passed 5 KTL (Korea Testing Lab) Tests
- Patented technology (patent number10-2537336)
- Smartphone Air Quality Monitoring System

## Life-Saving Solution AIR DISINFECTOR

Model	MAWI-300-E		
Effective Area	49.6~ 85 m <sup>2</sup>		
Specification	Rated Power Size(W X H) Weight Power (adapter) Cable Filter Noise Wireless CO2 Detection Range CO2 Detection Accuracy	30W 40x40x10.5 cm 1.75kg (excl. adapter) AC 100V-220V 50/60Hz DC 5V/3A 1.5M / USB-C, Cable 2 years 34dB (Normal)-40 dB (Storm) Wireless Connectivity + Smartphone App 400-5000PPM $\pm(50\text{PPM} + 5\% \text{*reading value})$	
	PM1.0/PM2.5/PM10 Detection Range PM1.0/PM2.5/PM10 Accuracy TVOC Detection Range HCHO Detection Range Temp Detection Range Temp Accuracy Humidity Detection Range Humidity Accuracy	0 - 1000 $\mu\text{g}/\text{m}^3$ $\pm10\mu\text{g}/\text{m}^3$ ( 0 - 100 $\mu\text{g}/\text{m}^3$ ) 0 - 9.999mg/m <sup>3</sup> 0 - 1.999mg/m <sup>3</sup> -20 - 50°C $\pm1^\circ\text{C}$ 0% - 99%RH $\pm5\%RH$	
Design	Display Color Material Control Button	LED (Blue) White/Silver PC / ABS N/A	
Disinfection & Filter	CU Filter (Built-in Filter x 4)	Anti-viral Copper Filter Plasma UVC (LED) UVC+Nano Photo Catalyst	Cold Plasma Ions + OH Radical UVC LED -275 nm (Peak) OH Radical
Packaging	Manual x1	Adapter + USB-C Cable x1	Remote Control (Optional)
Product Info	Category Manufacturer Country Certification Availability	Plasma Air Sterilizer Lenatech Made in Korea KC, CE, RoHS, FDA Q1/2025	
	AS	TBD	