# SAMSUNG SUPER PLASMA IONIZER Air Purifying and Bacteria Eradication

# Indoor Air Quality

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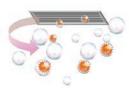
# Aire Doctor Series - Super Plasma Ion (SPi)



SPi keep your passengers safe and healthy by ensuring that clean air is provided when they are inside the elevator. SPi generates Hydrogen atom (H+) and Oxygen ion (O<sub>2</sub>-) which reacts together to form Hydroperoxyl radicals which the positively charged biological contaminants then reacts with three hydrogen elements of its protein structure before forming water vapor. Also, the Hydrogen atom (H) will combine with OH-radical to form a water vapor and neutralize harmful OH-radical.

SPi has been tested and proven by many academic institutions in Korea, Japan and the United Kingdom (UK) to remove up to 99.99% biological contaminants such as Bacteria, Influenza and SARS Virus, Fungi, molds. As a lift application, SPi eliminates harmful allergens (such as dust mites, dusts, and pets' hair) which may cause rhinitis, asthma or other allergic symptoms. It also removes cigarette and food odor effectively in lift car.

Certified by world renowned research centers: Elimination of H1N1, H5N1, SARS



#### **Advantages**

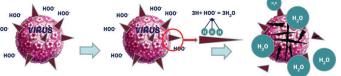
- ★ eliminate airborne virus
- \star eliminate allergens
- ★ neutralize harmful OH-radicals
- ★ no need to replace filters
- ★ quiet and silent

- ★ can operate continuously
- ★ super engery saver
- ★ certified effectiveness
- ★ emit harmless HOO-
- \star effective against smoke or odor



# How does SPi eliminate harmful air contaminants?

The SPi generates active hydrogen(H) and the oxygen ions(O2-) which forms hydroperoxy radical (HOO-). Then it surrounds the positively charged biological contaminants and reacts with three hydrogen elements of its protein structure, forming water vapor. Also, the active hydrogen combines with OH-radical to form a water vapor, neutralizing harmful OH-radical. The process of eliminating the harmful substances is completely harmless to human body and SPI improves the air quality.



# **Awards & Recognition**



AHR EXPO and its co-sponsors, ASHRE and AHRI, have selected S-Plasma ion Technology as the Winner in the IAQ (Indoor Air Quality) category of the Innovation Awards. A panel of judges, made up of ASHRAE members selected for their exceptional knowledge of the industry and its products, reviewed and evaluated all submissions. Product entries were judged for innovation, application, value to user, and market impact.

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## How Safe is SPi to Human body?

#### \* Free from harmful positive ion

Positive ions cause discomfort and symptoms such as headaches and nausea and make breathing more difficult. SPI rarely generates harmful positive ions, which make you free from the potentially harmful positive ions

# O<sub>3</sub>

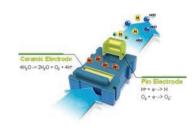
# \*Free from ozone

Samsung's ozone regulation is much stricter than that of many organizations around the world. Samsung controls the ozone emission level less than 10ppb. You will be from the ozone smell.



#### \*Free from toxic

Seoul Toxicology Laboratory has tested the SPI technology to prove its safety to human body. There were no signs of toxic symptoms observed at the animal test and no side effects of the ionizer, particularly on respiratory organs



## **Specifications**

Model	SAE-100BH, SAE-100HS	
Color	White, Silver	
Method	HOO- (Hydroperoxy radicals) 氫過氧自由基	
Voltage	220V 60Hz	
Applicable Area(ft)	200*	
Dimensions (mm)	75mm(w)x39mm(h)x95mm(d)	
Deodorizing (ppb)	10 (less than)	
Replacement Filter	No Filter	
Display	OPERATING KEY / GRAPHIC / NIGHT Light	
Power Consumption	High 20W, Med 12W, Low 10W	

\*depends on wind velocity

# Certifications

SUBSTANCE	EFFECTIVENESS	CERTIFIED BY
Influenza virus type A 甲型流感病毒	99.7% Elimination 99.6% Elimination	Kitasato Environmental Science Center 日本北里環境科學中心 Yonsei University
		南韓延世大學
Avian Influenza (H5N1) 禽流感	99.99% Elimination	Retroscreen 英國 Retroscreen 病毒學公司
Influenza A Virus Subtype (H1N1) 豬流感	99.99% Elimination	Veterinary Medicine at Chungname National University 韓國忠南大學
Corona virus (Strain of SARS-Corona Virus) 冠狀病毒 (沙士-冠狀病毒)	99.6% Elimination	Kitasato Medical Center 日本北里醫學中心
Penicilium 青霉菌	98.4% Elimination	Kitasato Environmental Science Center 日本北里環境科學中心
Asperillus 黑麯霉	96.4% Elimination	
Cladosporium 枝孢屬真菌	98.9% Elimination	
Staphylococcus aureus 金黄葡萄球菌	99.99% Elimination	
Micrococcus 小球菌	99.86% Elimination	
MRSA (Methicillin-resistant Staphylococcus aureus) 抗藥性金黃葡萄球菌(耐抗生素院內感染病原)	99.99% Elimination	
Mold (Staphylococcus aureus / E.coil) 霉菌 (金黄葡萄球菌/大腸桿菌)	99.99% Elimination	Korea Consuming Science Research Center 韓國消費科者研究中心
Allergen (Dust Mite, Cat/ Dog Allergen) 過敏原(塵蟎/貓犬敏感原)	Effectiveness certified Effectiveness certified	Acquired British Allergy Foundation (U.K) Seal 獲得英國BAF認證 RTI3) Test (U.S.A.) 三角研究園學院測試(美國)
Natural Bacteria 天然細菌	Over 90% Elimination	Shanghai Academy of Preventive Medicine 上海預防醫學科學院
Animal toxicity test 動物毒性測試	Non-toxic	Seoul Toxicology Laboratory 首爾毒性研究所
Active hydrogen atom 活性氫原子	Active hydrogen formation verified	Hiroshima University (日本)廣島大學
OH-radical 氫氧自由基	Active oxygen neutralized	
Indoor Natural Bacteria 室內空氣中自然菌	93.54% Elimination	Guangzhou Center for Disease Control and Prevention 廣州省疾病預防控制中心
Natural Bacteria in Laboratory 實驗室空氣中的自然菌	99.96% Elimination	Guangzhou Center for Disease Control and Prevention 廣州省疾病預防控制中心

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