Panasonic







Concentration













Disclaimer

- 1.Please note that products incorporating nanoe™X and nanoe™ technology are not to be used for medical treatment.
- 2.nanoe™X and nanoe™ are not intended to prevent infectious diseases. The technology has been found to be effective in suppressing a variety of harmful airborne and adhering substances, including viruses (e.g., H1N1), bacteria (e.g., E. coli), mold fungi, and allergens. However, nanoe™X and nanoe™ do not create an aseptic environment, nor do they guarantee prevention of infection.
- 3.Data regarding the effectiveness of nanoe™X and nanoe™ have been obtained through experiments under special conditions using devices that generate electrostatic atomized water, and have not been tested on commercial products with the devices incorporated in them.
- 4.The deodorization effect varies according to the environment (e.g., temperature and humidity), operation time, odor, and fabric type. It does not eliminate the toxic substances in cigarettes (e.g., carbon monoxide). Odors that are continuously generated (e.g., building material and pet odors) are not completely eliminated. Results may vary based on usage and seasonal/environmental variables (e.g., temperature and humidity). nanoe™X and nanoe™ inhibit activity or growth of viruses, but do not prevent infection.



- Actual colors may vary slightly from shown. - Specifications are subject to change without prior notice.

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WATER

1.2 kg(L)/person-day*2

FOOD

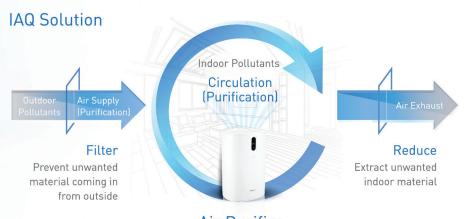
1.3 kg/person-day*3



- *1. "Air and Humans From a Physiological Viewpoint" (1999) by UCHIYAMA Iwao (National Institute of Public Health of Japan)
- *2. "Heat Stroke Environmental Health Manual (2009)" from the Ministry of the Environment, Government of Japan
- *3. "Basic Data Sheet of Agriculture, Forestry, and Fisheries, Statistics Regarding The Food Self-Sufficiency Rate" from Ministry of Agriculture, Forestry and Fisheries of Japan

What is Indoor Air Quality?

Indoor air quality (IAQ) indicates the quality of air in buildings such as homes, offices, public facilities, and schools. The quality of this air is vital to us leading healthy and comfortable lives.



Air Purifier

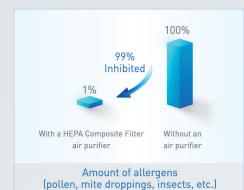
Suppression of Bacteria

Healthy and comfortable air current Suppression of bacteria and unpleasant odors

 $\frac{0}{2}$

HEPA Composite Filter

- Comprises three innovative technologies:
 Super alleru-buster, Green Tea Catechin, and Anti-bacteria Enzyme
- Inhibits viruses, bacteria, and 17 kinds of allergen by up to 99% *1
- Effectively removes up to 99.99% of PM0.003 particles *2



PM stands for Particulate Matter. PM2.5 refers to the tiny particles with diameter 2.5 micrometer or less in the air. PM0.003 is about 800 times smaller than PM2.5. They are tiny enough to travel deeply into respiratory tract, reaching the lung and cause health impacts. Panasonic air purifier equipped with HEPA Composite Filter can eliminate these particles efficiently to protect your health.

PM0.003



- *1 Super alleru-buster (Report no. 2127)
 - Test Laboratory: Osaka Municipal Technical Research Institute of Japan. Test Methodology: Measure reduction level of tick allergens by Enzyme-linked Immuno Sorbent Assay. Inhibit Method: Contact with Super alleru-buster. Test Subject: Allergens captured by filter (tick, pollen, etc.). Test Results: 99% or more is inhibited.
- Catechin (Report no. 15-0115)
- Test Laboratory: Kitasato Research Centre of Environmental Sciences. Test Methodology: Inhibit rate of virus using the Plaque method. Inhibit Method: Contact with Green Tea Catechin. Test Subject: Virus captured by filter. Test Results: 99% or more is inhibited.
- Anti-bacteria Enzyme (Report no. 207060074-002)
- Test Laboratory: Japan Food Research Laboratory. Test Methodology: Testing of the filter's anti-mold function using the Harrow method

*2 • PM0.003 particle (UN2-200911-T5599900-136) Test Laboratory: IUTA. Test Subject: NaCl aerosol. Test Results: 3 nm particle removal efficiency >99.99%

De-formaldehyde Technology





With the additive substance, the formaldehyde is removed by means of chemical decomposition.



The porous activated carbon efficiently traps the formaldehyde contaminants.



The additive strengthens the trapping stability of the activated carbon against the contaminants.



What is nanoe™X?

Panasonic's Unique Technology

nanoe[™] comprises fine (5–20 nm), weakly acidic water particles that are reactive and hold an electric charge.nanoe[™] also possesses anti-virus/ bacteria, deodorization, and skin hydration properties.

* 1 nm (nanometer) = one billionth of meter



nano-technology + electric







nanoe™ 10x Faster

- 10x faster air purification speed
- · Greater efficiency for inhibiting viruses and bacteria
- · Increases deodorization strength



nanoe™X and nanoe™ Characteristics

Longer Life

Coated in water, nanoeTMX and nanoeTM have six times longer life spans than ordinary air ion technology.



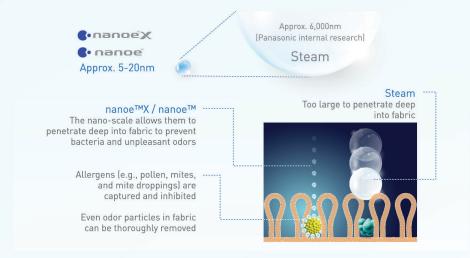
nanoe™X nanoe™

After 100 seconds



Microscope Scale

One-billionth the volume of a steam particle.



Safety of nanoe™X and nanoe™ has been verified

Purpose	Test Name	Test Institute	
Effect on Chromosomes	Chromosome abnormality test using cultured cells	Japan Bioassay Research Center (#1)	
Effect on Respiratory System	Repeated administration toxicity test	Life Science Research Laboratory [#2]	
Toxicological and Carcinogenic Impact	Chronic toxicity and carcinogenicity combined test	Food and Drug Safety Center, Hatano Research Institute (#1)	
Effect on DNA	Comet assay	Food and Drug Safety Center, Hatano Research Institute (#1)	

- #1 The Japan Bioassay Research Center and the Food and Drug Safety Center, Hatano Research Institute are compliant with GLP [Good Laboratory Practice] [*1]
- #2 Life Science Laboratories, Ltd. Is a registered institute of the Network of Organizations Investigating Accident Causes (*2) (*1) GLP is a practice intended to promote the quality and validity of test data used for determining the safety of chemicals and chemical products. Test facilities are assessed for compliance with GLP to ensure the reliability of their test data.
 (*2) The Network of Organizations Investigating Accident Causes is a network administered by National Institute of Technology and Evaluation under the Ministry of Economy, Trade and Industry.



Merits of nanoe™X - 3 main Features



Anti-virus/bacteria

Inhibits viruses (99.9%) and bacteria (99.99%)

[Testing method] Exposed to a nanoe™ device at 15cm





Adhered viruses

Influenza virus H1N1 subtype



Novel Coronavirus (COVID-19)

[Testing organization] TEXCELL (France)

distance in 45L enclosed box for 2 hours

[Test substance] novel coronavirus (SARS-CoV-2)

[Test results] Over 99.99% of activity is inhibited



[Testing method] Measured the number of viruses adhered to a cloth in an approximately 1m3 airtight test

[Inhibition method] nanoe™ released

[Test substance] Adhered virus

[Test results] Inhibited by at least 99.9% in 2 hours (21 0084 1)



E. Coli (0157)

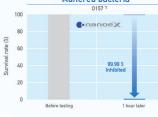
(1140-01 A1)

[Testing organization] Japan Food Research Laboratories [Testing method] Measured the number of bacteria adhered to a cloth in an approximately 45L airtight test

[Inhibition method] nanoe™ released

[Test substance] Adhered bacteria

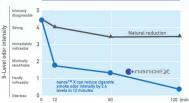
[Test results] Inhibited by at least 99.99% in 1 hour [208120880_001]



Deodorization

Reduces strong cigarette smoke odor to hardly noticeable in only 1 hour

Cigarette smoke odor 11



Deeply penetrates into cloth fabrics for inhibiting odor

Cigarette Smoke Odor

[Testing organization] Panasonic Product Analysis Center [Testing method] Verified using the six-level odor intensity scale method in an approximately 23m3 test room

[Deodorization method] nanoe™ released

[Test substance] Surface-attached cigarette smoke odor [Test results] Odor intensity reduced by 2.4 levels in 12 mins. [4AA33-160615-N04]



Skin and Hair Hydration

Helps keep the moisture back to the skin



After 28 days

Cracks occur in the skin and keratin peels off

Without nanoe™X

Moisture escapes from the

After 15 minutes

dry and dull



After 28 days

Skin is hydrated, keeping it fresh and moisturized



- 1. [Testing organization] Panasonic Product Analysis Center [Testing method] Rest period: 90 minutes, nanoe™ exposure time: 60 minutes, retention: 60 minutes. 8 women aged 30-49 with dry to normal skin [Test results] Change in skin moisture content equivalent to a 20% point increase from 30% to 50% in environmental humidity (USG-KT-14K-012-TM)
- 2.[Testing organization] FCG Research Institute, Inc. [Testing method and test results] Of 20 women 40 ± 2 years old, 10 women used a nanoe™ generating device at home for 28 days, while the other 10 women used a device with no nanoe™ generating device for 28 days at home [19104]



leading to frizzy hair. Difficulty moisture balance, making for shiny reflecting light, gloss is reduced, hair that reflects light and allows and texture is grainy. fingers to be run through it smoothly.

[Testing organization] Panasonic Product Analysis Center [Testing method and test results] Approximately 46m3 sized test room, room temperature 25 °C, humidity 40%. Bundles (6 bundles) of hair were suspended 2m from a nanoe™ generating device, with repeated operation of the nanoe™ generating device: 8 hours on and 16 hours off [Method] nanoe™ released [Test substance] Hair (USD-KS-15S-009-TM) Individual results may vary based on usage and seasonal/environmental variables (e.g., temperature and humidity)

PM2.5/Odor Indicator

The PM2.5 and odor indicator lets you to see the air quality easily and in real-time

















Appliable Area: 52 m²

Dimensions: H 560 x W 362 x D 280 mm | Weight: 8 kg

Air Purification

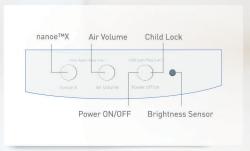
nanoe™X HEPA Composite Filter Super Nano-technology Deodorizing Filter De-Formaldehyde Function

Other Features

PM2.5 / Odor Sensor Brightness Sensor Child Lock

Indicator

LCD Indication Panel PM2.5 Concentration Digital Indicator Odor Level Indicator Filter Replacement Indicator



	Air Purification		
Setting	High	Mid	Low
Power Consumption [W]	36	10.5	6.5
Air Volume [m³/min.]	7	3.1	1.1
Noise [dB(A)]	48	32	18

The calculation of applicable area is based on the standard JEM1467, as stipulated by the Japan Electrical Manufacturers Association. The applicable area is defined as the area filled with dirty air, 30 mins under 1 air change per hour of natural ventilation, as specified under the Building Sanitation Law.