Panasonic



nanoe[™] X air purification technology

Introducing an advanced cooling and heating system with built-in air purification technology for a cleaner, fresher and more comfortable indoor environment.



Experience a fresher and more comfortable indoor environment



and made from durable titanium





Inhibits 5 types of pollutants*

Mold

Hazardous

Skin & hair

Moisturizes

*nanoe[™] X reduces the concentration of select pollutants, mold, allergens, pollen, PM2.5, and odors and the growth of certain viruses and bacteria, but does not prevent them.

Allergens

What is **• nance**? nano-technology + electric =

nanoe[™] X is nano-sized electrostatic atomized water particles that are rich in OH radicals.



Bacteria

& viruses

nanoe[™] X is the next generation of nanoe[™] technology and is generated from moisture in the air that contains highly reactive components known as hydroxyl (OH) radicals, which are effective at suppressing pollutants and odors.

4.8 trillion OH radicals / sec

Water Particle OH radicals (Highly reactive components)

components (Water ion)

Approx . 5 - 20nm

How **C**• nance works?

Deodorizes Odors



nanoe™ X reaches odor in fabric

Inhibits Airborne and Adhered Pollutants



nanoe™ X reaches pollutants in fabrics



OH radicals break down odor-causing substances

OH radicals take hydrogen away

from pollutants





OH radicals transform hydrogen to inhibit the activity of pollutants

Helps maintain skin moisture

Pollen



Using existing moisture already in the air, nance™ X hydrates the sebum (produced by sebaceous glands to lubricate the skin) on the skin to help prevent loss of moisture.

*Test Laboratory: FCG Research Institute Inc. Report no. 19104

Corneum is maintained and smooth

[28 days later] Leads to smoothe well hydrated skin.*

nanoe[™] X inhibits both airborne and adhered pollutants and odors in the home

Helps create an environment that's clean and safe for babies



The carpets where babies spend much of their time conceal a great deal of mold, bacteria, viruses and allergens deep in their fibers. nanoe[™] X inhibits these pollutants, helping to make carpets cleaner and safer for babies.

Keeps the living room fresh and inviting



The smell of unpleasant odors tends to permeate furniture and curtains over time. nanoe[™] X inhibits odors, leaving the air in your living room fresh and inviting.

Inhibits harmful substances in PM2.5 brought in from outside



Harmful substances in PM2.5 and pollen that are thought to cause asthma, bronchitis and other health issues tend to cling to your clothing and hair when you come in from outside. nanoe[™] X breaks down and inhibit these substances.

Makes homes more comfortable for families with pets



Mites and dander from pets are a major cause of allergies in the home. nanoe[™] X not only effectively inhibits these allergens but also eliminate many odors that permeate mattresses, blankets and more.



Protects your valued clothing and other stored items



Air tends to become stale and humid inside closets, encouraging the growth of mold. nanoe[™] X inhibits the growth of mold to help protect your clothing and other stored items.



Moisturizes skin and hair for a little extra self-care



nanoe[™] X helps keep your hair and skin moisturized while you sleep or spend time with your family. nanoe[™] X hydrates the sebum on the skin to prevent the loss of moisture.







VERIFIED ZERO OZONE DOES NOT EMIT MORE THAN 0.005PM AS TESTED PER UL 867 Ozone concentration during the nanoe[™] X generating mode has been verified by California Air Resources Board (CARB) and INTERTEK respectively per authorized testing standards.

- Standard value of California Air Resources Board (CARB): 0.05ppm or lower
- Standard value of INTERTEK "Verified Zero Ozone": 0.005ppm or lower

Panasonic's Advanced Air Purification System

Panasonic's nanoe[™] Technology is a revolutionary air purification system that helps keep your living space fresh and clean for you and your family.

The effects of nanoe[™] Technology are recognized by experts in each field

Recommended for use in facilities such as medical institutions where greater cleanliness is required



nanoe

TECHNOLOGY

Professor Masafumi Mukamoto Osaka Prefecture University

Veterinary Infectious Disease Studies

Various types of molds enter houses along with people and air. Even if preventive action is taken in our everyday lives, it is often very difficult to inhibit the growth of mold, especially in humid environments. With nanoe[™] X, we have experimental results*1 that show we can inhibit the growth of the types of mold commonly found in various places in the house. As nanoe[™] X is also capable of inhibiting invisible bacteria and viruses that exist in our living environment. I recommend that equipment incorporating nanoe[™] X technology be placed in buildings where cleanliness is required, such as in schools, childcare facilities and medical institutions.** Hope for the creation of more comfortable spaces for those who have problems with asthma or atopic dermatitis



Professor Masahiro Sakaguchi

Azabu University School of Veterinary Medicine Department of Veterinary Medicine

We have experimental results that show nanoe[™] X is capable of inhibiting allergens, such as pollen and dust mites. It is important to take precautions against the allergens that we inadvertently inhale in our daily lives.

As nanoe[™] X is effective in inhibiting invisible allergens, we can expect it will create a cleaner environment.**

*1 Experimental results show that nance" X is effective in inhibiting the growth of the following types of mold commonly found in homes: Cladosporium, Aspergillus, Penicillium, Alternaria, Fusarium, Eurotium, Mucor, and Stachybotrys. ** The above indications and statements are made in reference to available information.

The Effectiveness of nanoe[™] X Technology



nanoe[™] X can reduce cigarette smoke odor intensity by 2.4 levels in 12 minutes.





Adhered bacteria



Airborne mold⁷



Pet odor²

nanoe[™] X reduced pet odor intensity by 1.5 levels in 1 hour

Airborne viruses



Adhered viruses



Adhered mold⁸



*nanoe[™] X reduces the concentration of select pollutants, mold, allergens, pollen, PM2.5, and odors and the growth of certain viruses and bacteria, but does not prevent them.

¹-Ogaretic smole doto- [Test og] Prassnic Product Analysis Center [Test method] Verified using the six-level dotr intensity scale method in an approximately 20th² sized test norm [Deodorization method] nance² released [Test substance] Surface-attached pet dotr [Test result] Odur intensity reduced by 1.2 levels in 1 hour (44433-160315-A04)
²-Obt codor-[Test og] Prassnic Product Analysis Center [Test method] Verified using the six-level dotr intensity scale method in an approximately 20th² sized test norm [Deodorization method] nance² released [Test substance] Surface-attached pet dotr [Test result] Odur intensity reduced by 1.2 levels in 1 hour (44433-160315-A04)
³-Arborne bacteria (Staphylococcus aureus)- [Test og], Nasato Research Center for Environmental Science [Test method] The number of bacteria is measured after direct eposure in an approximately 25m³ sized airtight test norm [Inhibition method] nance² released [Test substance]. Aitome bacteria [Test result] inhibited by at least 97.7% in 6 hours (24, 0301_1)
⁴-Arborne vinus (bacteriophage **o**_X(174)- [Test org], Nasato Research Laboratories [Test method] The number of tocteria after direct eposure in an approximately 25m³ sized airtight test norm [Inhibition method] nance² released [Test substance]. Aitome vinus [Test result] inhibited by at least 97.7% in 6 hours (24, 0301_1)
⁴-Arbored bacteria (10157)- [Test org], Japan Food Research Laboratories [Test method] Measured the number of toacteria adhreed to a cloth in an approximately 25m³ sized airtight test norm [Inhibition method] nance² released [Test substance]. Aithore ducteria [Test result] inhibited by at least 99.99% in 1 hour (2081208800_001)
⁴-Arbored vinus [Influenza vinus H1N] subtype> [Test org], Japan Food Research Laboratories [Test Method] Measured the number of word altered in an approximately 25m³ sized test noom [Inhibition method] nance² released [Test substance]. Aithore

Research into nanoe[™] air improvement The nanoe[™] technology has

Public transport



JR Kyushu Cruise trains: Adopted for the Seven Stars in Kyushu



Keihan Main Line: Adopted for admission-paid special railcars



KEIO Keio Line: Adopted for new railcar models



12:00

JR East Yamanote line: Adopted for E235 series models



Panasonic is committed to the improvement of air quality with

technology began more than 20 years ago. spread to various fields in Japan.



n nanoe™ Technology.

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CERTIFIED INSTALLER



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