

NanoBreeze[®]
ROOM AIR PURIFIER



Prepared
2007

NanoTwin
TECHNOLOGIES

Who Are We?

NanoTwin Technologies is a manufacturer of portable air purifiers based on patented photocatalytic Nanotechnology sold under the NanoBreeze® brand.

The **Photocatalytic Nanotechnology** on which NanoBreeze air purifiers are based is the result of over 30 years of worldwide research and development.

Did You Know...Forbes Magazine named the NanoBreeze Room Air Purifier as one of the Top 10 Nanotech Products of 2005! The distinguished list also included:

- *Apple® Computer's "iPod Nano"*
- *Behr® brand "NanoGuard" paints*



Top Nano Products Of 2005

Josh Wolfe, Forbes/Wolfe Nanotech Report, 01.10.06, 12:30 PM ET

NEW YORK - Finally, we are living in a nanotech age. There are a lot of real products being produced with this new science of the small, and this year's annual Nanotech Product Guide is chock full of exciting and useful consumer products.

As always, we were careful to exclude products using nanotechnology as little more than marketing fluff. We focused on items where nanotechnology is significantly improving a process or product.

From apparel to armor, nanotechnology is already bearing fruit as a viable commercial science. The impact of nanotechnology is continuing to grow in small-molecule drug development at biotech companies. With the help of research universities and continued advances in science, next year's list of top nano products promises to be even harder to pick.



#10. Cleaner Air Through Science - NanoTwin Technologies, NanoBreeze Air Purifier

A patented NanoTube is the active component behind the NanoBreeze Air Purifier from Salem, N.H.-based, NanoTwin Technologies. The tube itself is large enough to handle, but it is wrapped in a fiberglass mesh coated by a layer of titanium dioxide crystals that measure 40 nanometers in size. Switched on, the NanoTube radiates UV light that charges the crystals to create powerful oxidizing agents that destroy airborne germs and pollutants circulating over the tube's surface.



NanoTwin Technologies, PO Box 87, Salem, NH 03079

The NanoBreeze Does Not Collect Airborne Contaminants... It Eliminates Them!

Benefits of Photocatalytic Nanotechnology

- Kills Germs
- Decomposes Toxic Gases Including Volatile Organic Compounds
- Removes Household Odors
- No Filters to Clean or Replace; So No Frequent Maintenance Is Required

NanoBreeze Features

- Whisper-quiet, 3-speed fan returns clean air into the room
- Rotating front grill maximizes air circulation
- Highly portable
- Tilts to direct air flow upward or downward as needed
- 5,000 hour life bulb



Why It's Better ...

NO MAINTENANCE

Since the The NanoBreeze® destroys rather than collect airborne contaminants. It has no messy, expensive filters to change or plates to clean. Expected bulb life is 5,000+ hours



SAFE TO USE

The NanoBreeze does NOT generate Ozone or hazardous UV light unlike many competitive air purifiers. The TiO₂ fiberglass covering absorbs and uses the UVA radiation produced by the fluorescent light tube.

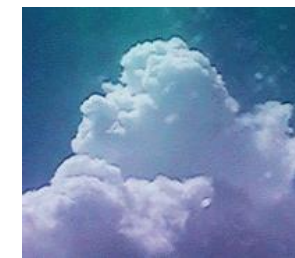
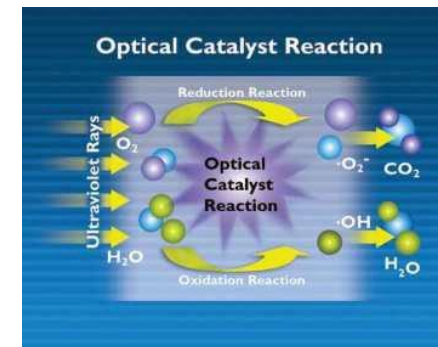
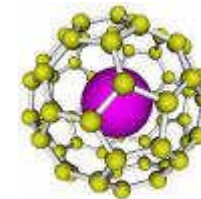
The EPA does not recommend using Ozone generators.



How It Works...

Nanotechnology is the design, manufacture or control of single molecules to perform the duties of a machine. The patented NanoTube™ is an air cleaning filter activated by light.

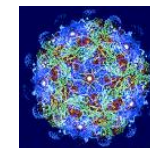
- Titanium dioxide (TiO_2) crystals, only 40 nanometers in size, form a molecular machine powered by light. TiO_2 is a semiconductor charged by ultraviolet photons.
- Charged nanoparticles produce powerful oxidizing agents called hydroxyl radicals. These free radicals destroy airborne germs and pollutants that circulate over the surface of the patented light tube inside the NanoBreeze Room Air Purifier.
- Airborne pollutants are turned into water vapor (H_2O) and carbon dioxide (CO_2) through reduction and oxidation reactions.



How It Works...

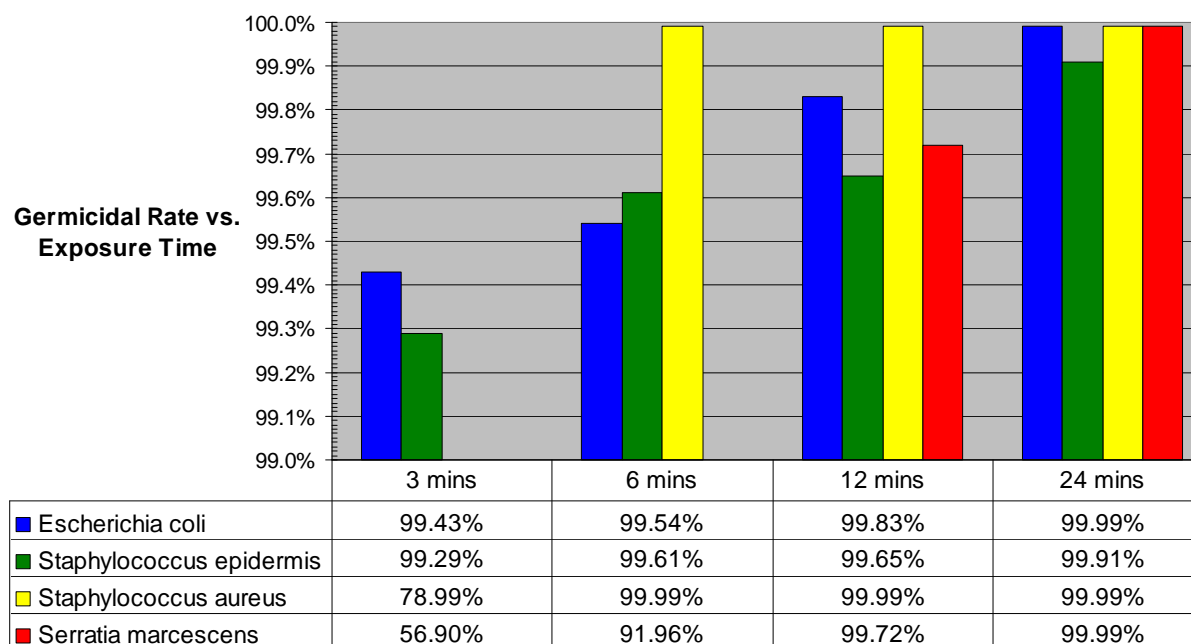
The NanoBreeze helps to eliminate:

- **Mold Spores**
- **Bacteria**
- **Pollen**
- **Toxic Gasses**
- **Viruses**



Supporting Data...

Germs – NanoBreeze destroys over 99.9% of germ colonies in just a few minutes. Tests were performed on four types of bacteria that commonly produce infection in humans.



TEST METHOD

Special membranes are coated with the NanoBreeze® photocatalyst. Bacteria laden water is applied to the membrane which incubates for 18 hrs @ 37°C. The bacteria level is measured before and during exposure to indirect UVA light that activates the photocatalyst.

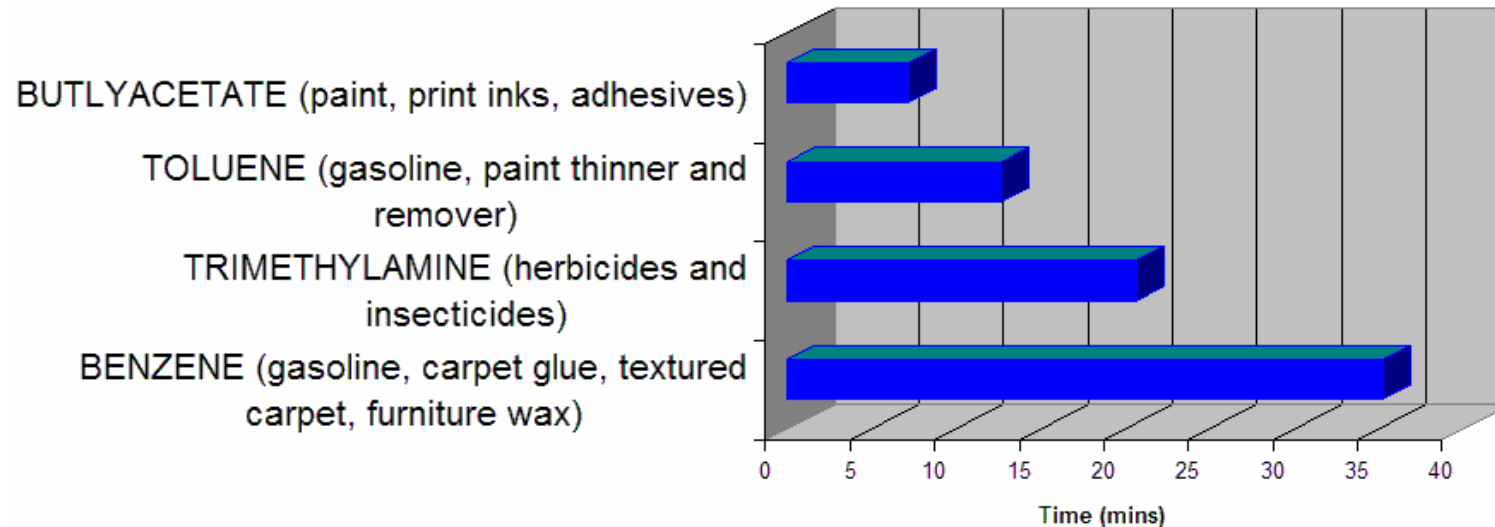
RESULTS

The NanoBreeze photocatalyst destroys over 99.9% of germ colonies in just a few minutes.

Supporting Data...

VOCs – NanoBreeze decomposes harmful vapors and gasses released during evaporation, especially from manufactured products. VOC concentration is reduced by tenfold in minutes.

Time to 90% Decomposition of Volatile Organic Compounds (VOCs)



TEST METHOD

The NanoBreeze® patented light tube is mounted inside a test chamber. Air mixed with a VOC is injected. VOC concentration is measured before and after exposure to the activated light tube.

RESULTS

The NanoBreeze reduces VOC concentrations significantly within minutes.

Indoor Environment Testing...

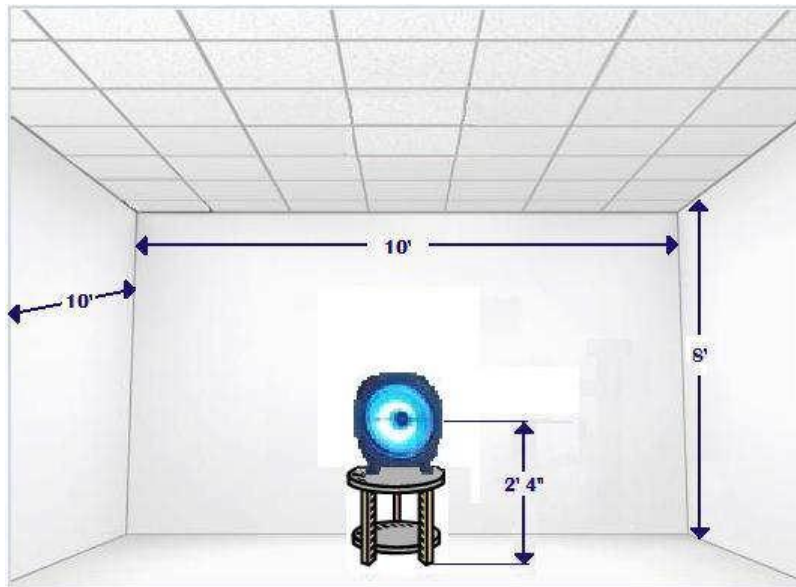


Bacteria

TEST METHOD

The NanoBreeze Room Air Purifier is mounted on a table in a center of a room. It's centerline is 2 ft 4 inches from the floor. The room volume is 800 cubic feet.

- The NanoBreeze is operated "fan only" at medium speed and front grill rotating. The NanoTube™ light tube is kept OFF. After 1 hour, a sample of room air is collected.
- The NanoTube light tube is switched ON. Samples of room air are taken 3 hours and 6 hours later.
- Bacteria from all samples of room air are cultured under identical conditions. Bacteria amounts are counted with a microscope as Colony Forming Units per sampled air volume.

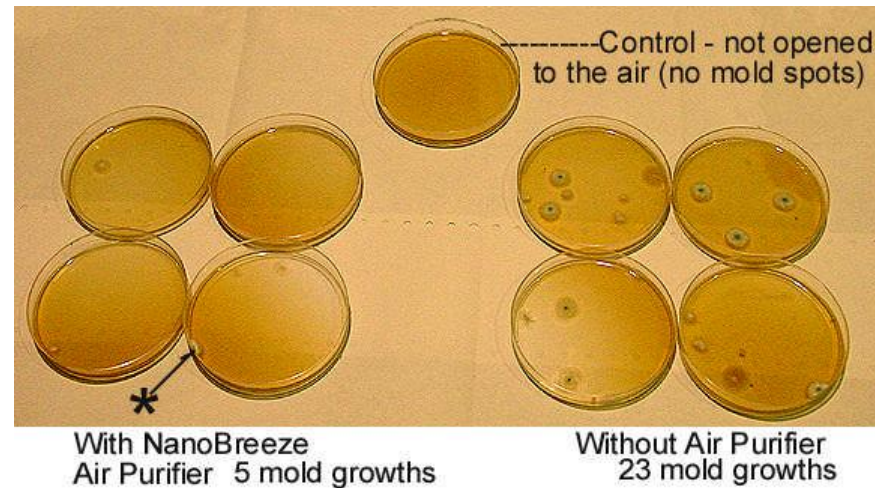


RESULTS

Treatment Time (hrs)	Bacteria Level (CFU/m ³)	Bacteria Reduction (%)
0 (fan only)	1163	0.0%
3	230	80.2%
6	122	89.5%

Indoor Environment Testing...

Mold – NanoBreeze Destroys airborne mold spores and inhibits mold growth as illustrated below.



TEST METHOD

Petri dishes were prepared with chicken broth in gelatin. The dishes were stored at room temperature.

- A control dish was immediately covered and sealed to be airtight.
- The four dishes on the right were exposed to room air for one hour then covered and sealed airtight.
- The four dishes on the left were exposed to room air with a NanoBreeze® operating at ten feet away for one hour before being covered and sealed airtight.
- After five days, the number of mold growths were counted. (*indicates a break in the seal)

RESULTS

The NanoBreeze reduces mold growth by destroying airborne mold spores.

FAQ...

Does this really use Nanotechnology or it is just part of the name?

Yes, it uses Nanotechnology. The principle behind the NanoBreeze requires the use of semiconductor crystals that are only 40 nanometers in size.

How does the NanoBreeze compare to ionic air cleaners?

Ionic air cleaners use high-voltage to charge dust particles passing through them. Dirt collects on metal plates that need to be cleaned on a weekly basis. Many popular models are not recommended by consumers' groups for failing to clean the air and releasing potentially unhealthy levels of ozone.

Is the NanoBreeze like the other Ultraviolet air purifiers?

No! Ultraviolet or UV air purifiers use "Germicidal type UVC" radiation to kill germs by destroying their DNA. UVC radiation is hazardous to all living things. The NanoBreeze uses UVA to activate the photocatalyst embedded inside the fiberglass mesh which absorbs the ultraviolet. Using photocatalytic oxidation, the NanoBreeze kills germs AND decomposes vapors or gases. Germicidal UVC air purifiers do not remove gases and, like ionizers, may produce dangerous levels of ambient ozone.

Does the NanoBreeze Air Purifier produce ozone?

The NanoBreeze Air Purifiers produce NO OZONE unlike many other air purifiers on the market. Indoor ozone is a lung irritant that can worsen asthma, deaden sense of smell, raise sensitivity to pollen and mold, and may even cause permanent lung damage.

Is there any UV caution or advisory for the NanoBreeze?

No! The soft blue glow from the NanoBreeze Air Purifiers is not harmful. NanoBreeze Air Purifiers generate NO skin or eye hazards from ultraviolet radiation (UV), unlike some air purifiers that may use Germicidal type UVC light tubes.

Does the light tube need to be replaced?

The light tube is expected to operate for one year with normal use. It is the air cleaning component of the NanoBreeze Air Purifiers. Replacement light tubes are sold separately.

Conclusion...

- Only **NanoBreeze's** patented Nanotechnology will oxidize and reduce both *airborne biologicals* and *VOC gases*!
- HEPA filter-based air purifiers capture particles rather than oxidize airborne contaminants. Changing filters is dirty and imposes a high cost of ownership. Many are noisy and do not adsorb odors and gases.
- Ionic air cleaners electrostatically charge dust particles. The particles deposit and soil room surfaces. Metal plate collectors need to be cleaned weekly. Many fail to clean the air and release unhealthy levels of ozone.
- Ultraviolet or UV air purifiers use Germicidal type UVC radiation to kill germs by destroying their DNA. UVC is hazardous to all living things. Germicidal UV air purifiers do not remove gases and can produce ozone.

Why Collect Harmful Airborne Contaminants When You Can Eliminate Them With NanoBreeze.



Everyone Loves the NanoBreeze!

Wow, the NanoBreeze really works better than my old ionic breeze air purifier!

- James, Poughkeepsie, NY

This little unit removed the mold smell from my whole basement. I bought a second for our RV.

- Sarah, Detroit, MI

We have had the unit running in our apartment NYC for several weeks. We have been involved in remodeling and have noticed a drastic decrease in congestion when we wake in the morning. I know they say this is not a dust collecting unit but it has done wonders for the way we felt when we get out of bed in the morning. GREAT PRODUCT, WE LOVE IT.

-Barry, New York, NY

I bought the NanoBreeze for my son who had been suffering from severe allergies. Since we the unit in his room he has been able to sleep through the night. It almost sounds to good to be true but it really works.

-Tiffany, West Des Moines, IA

My wife purchased the NanoBreeze to help control the damp, musty smell in our basement. We constantly were running dehumidifiers but it never seemed to help with the musty smell. Since we started running the NanoBreeze our basement smells clean and fresh. Great Product. Thumbs UP!

-Michael, White Plains, NY

The NanoBreeze reduced my asthma symptoms at home so well that my boss bought one for our office.

-Nancy, Danvers, Ma

I bought other air purifiers in the past and had to return them. The ozone odor was too strong. I am very happy with the NanoBreeze.

-Edna, Chillicothe, OH



Product Specifications

NanoBreeze® Room Air Purifier

Model:	PS-1415L
GTIN:	181469000111
Electrical Ratings:	AC 120V 0.81A 97W 60Hz
Dimensions and weight:	23 x 19 x 6 inches; 8 lbs
Room size cleaned:	Processes air in a 20 x 10 foot room ten times per hour (fan on high setting, cleaning rate 225 cfm)
Light tube rated life:	5000 hours



This model/product is Listed in Intertek's Directory of Listed Products.
Conforms to UL Std. 507

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NanoBreeze® is a registered trademark of NanoTwin Technologies, Inc.
U.S. Patents 6,336,998 and 6,135,838 and international patents apply.



Shipping and Pricing

Product Description	NanoBreeze Room Air Purifier
Product Code	PS-1415L
UPC Code (GTIN)	181469000111
Package Dimensions	23.0 (H) x 20.7 (W) x 8.5 (D) in
Package Weight	10.9 lbs
Assembled Product Dimensions	22.0 (H) x 19.0 (W) x 6.0 (D) in
Assembled Product Weight	8.0 lbs
Single Pallet Quantity	24 pcs
Pallet Dimensions	57.0 (H) x 48.0 (W) x 42.0 (D) in
Pallet Weight	290 lbs
Full Container Load (40 feet)	880 pcs
Tariff Number (HTS code)	8421.39.80
Duty Rate	0%
MAP	\$189.00
FOB Nashua, NH	\$75.00
Drop Ship Fee	\$1.50
FOB China P.R.C.	\$61.00
Payment Terms	Net 30, 2% Net 10
Domestic Lead Time (FOB Nashua, NH)	7 days
Direct Import Lead Time	100 days

Minimum Advertised Price ("MAP") Policy

Reseller maintains complete discretion as to its pricing practices. However, reseller's advertisements must comply with the following guidelines:

- Pricing in Reseller advertisements must be equal to or higher than the MAP reflected in current Price List. An advertisement where no pricing is shown is considered to be in compliance.
- Deviations of up to one dollar (\$1.00) above or below MAP are allowable to accommodate various Reseller pricing practices.

The NanoBreeze Family...

Room Air Purifier

Decomposes indoor air pollution. Can operate one full year with no need for owner maintenance. No filters to replace and no cleaning required.



Replacement NanoTubes™

Replacement tubes when needed for the Room Air Purifier and the Car Air Purifier.



Car Air Purifier

Snaps onto the front dashboard vent. Uses a 12-Volt power adapter that plugs into any vehicle cigarette lighter.



Mini Car Air Purifier

Perfect for sub-compact vehicles or narrow dashboard vents. Uses two semiconductor light sources that operate for 30,000 hours.

