



HYGIO®



HYGIO Oy

Hygio Oy is a Finnish company, established in 2014.
We develop and deliver ozone cabinets for several professional user groups.

All Hygio products are manufactured in Finland by our parent company, Punta Oy.

We have our own after sales team to ensure fast and fluent support to our customers.

Hygio products enable easy and effective ozone cleaning for textiles, various equipment and devices, including electronic devices.



HYGIO CUSTOMERS

Healthcare and specialized medical care

Fire departments and first response

Security industry

Textile care

Care for children and elderly

Sports



HYGIO PRODUCTS



Hygio a40



Hygio a40 Medi



HYGIO OZONE CABINET NEUTRALIZES ODOURS AND DISINFECTS

Refreshes and disinfects supplies, equipment and textiles.

Neutralizes unpleasant odors and destroys pathogenic microbes.

Tested by VTT for microbial and PAH neutralization.

Suitable for all textiles, material and equipment, including electronic devices.

Safe and ecological: Extends lifetime of textiles and equipment.

Easy to use: Three programs. No need to disassemble items before cleaning.

Safe and secure: Cabinet door is locked during operations. Fully air-tight.

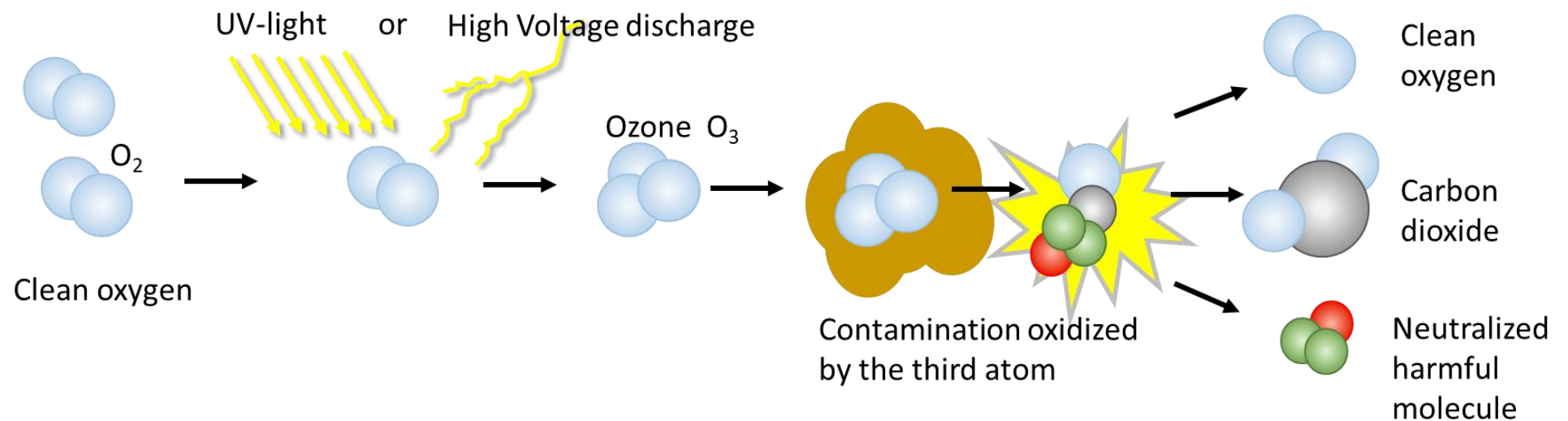
Easy to set up: Just connect electricity. No other connections.



OZONE (O₃)

Ozone molecule (O₃) consists of three oxygen atoms. It is a light blue gas that smells like air after thunderstorm.

The effect of ozone is based on its high reactivity. Ozone molecule is unstable and seeks material to which it can donate the third atom.



BENEFITS OF OZONE CLEANING

Cleaning can be done with ease frequently. This improves hygiene level significantly.

Ideal solution for cleaning and disinfecting challenging and sensitive materials that do not tolerate high temperature, water or strong chemicals.

No material restrictions. (excluding natural rubber)

No need to disassemble items into parts before cleaning

Gentle process. Extends the lifetime of textile and equipment.

Ecological. No chemicals.

Stops infections. Removes unpleasant odours.



TESTED OZONIZING PROCESS

VTT safety test report

(Ozone concentration measurements of an ozone cabinet and its surroundings, 2014)

VTT microbial tests

(Efficacy of treatments in ozone cabinet against microbes, 2014)

HUS DESIKO microbial tests

(Hus Desiko & Hygio Oy, 2017)

VTT PAH-tests

(Polycyclic aromatic hydrocarbon (PAH) tests summary report, 2017)

Topper Uniform, professional workwear material tests

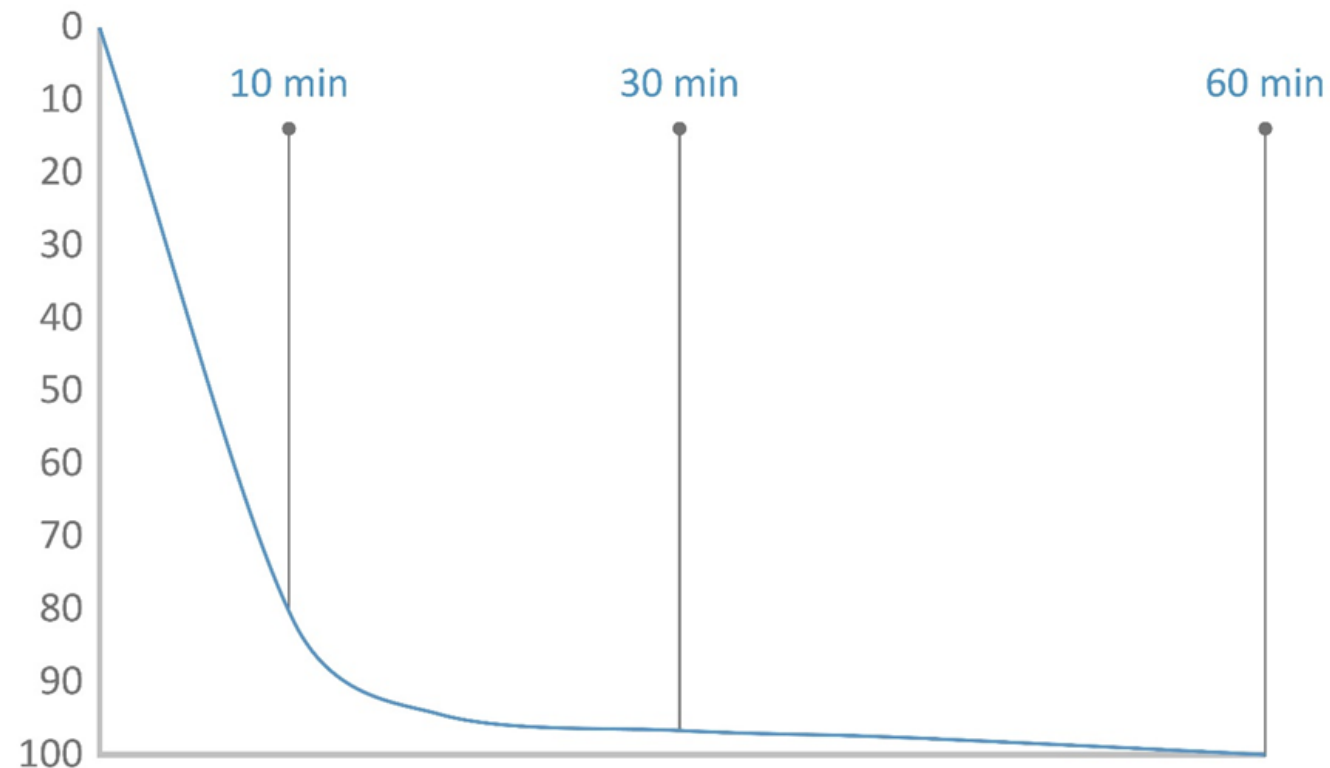
(Topper Uniform Oy & Hygio Oy, 2018)



MICROBIAL TESTS BY VTT

The tests show that Hygio a40 ozone processing removes microbes effectively from textiles, materials and equipment.

Example: Microbial reduction of E. coli bacteria is 99,999 % with the 1 h program.



MICROBIAL TESTS BY VTT

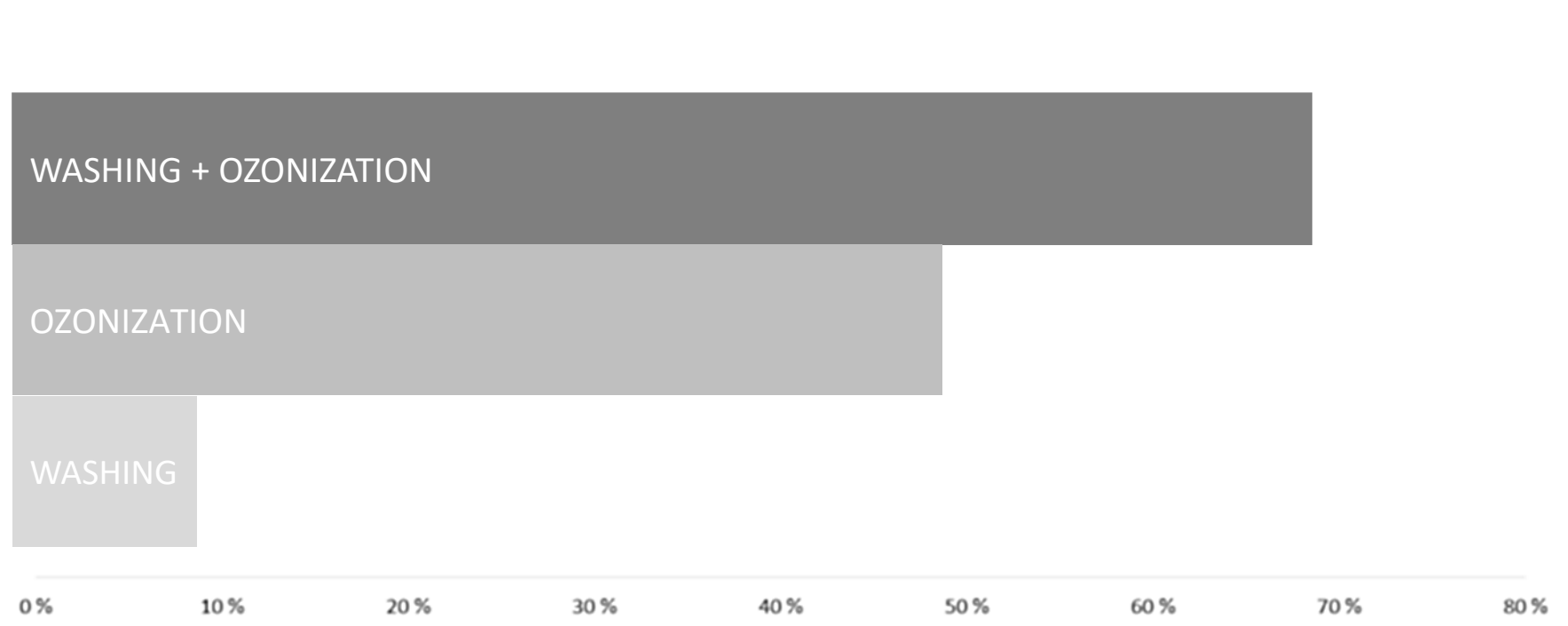
Type	Tested microbe	Microbial reduction / log cfu/pcs (1h program)	Correlates with
Sporicidal bacteria	Bacillus spores	1,4	Clostridium difficile Bacillus cereus Clostridium botulinum
Gram positives	Staphylococcus epidermidis	>5,2	MRSA, MRSP, Listeria, Streptococcus
Gram negatives	Escherichia coli	3,9	Salmonella, Norovirus, ESBL, EHEC, All other viruses
Yeasts	Candida albicans	1,6	Cryptococcus
Mold	Cladosporium sphaerospermum	1,8	Aspergillus, Fusarium

1 = reduction to 1/10
 2 = reduction to 1/100
 3 = reduction to 1/1000
 4 = reduction to 1/10 000
 5 = reduction to 1/100 000



PAH TESTS BY VTT

Ozonization removes harmful PAH compounds much more effectively than the traditional (water) washing.



HYGIO PARTNER: TOPPER UNIFORM

Topper Uniform is a specialized manufacturer of professional clothing: uniforms and other workwear, protective clothing etc.

Topper's LANSSI workwear are designed for first response crews. LANSSI workwear has been tested with HYGIO ozone cleaning process for 50 cycles to ensure they continue to fulfill the normative requirements for workwear according to EN 2071 standard.

- reflective bands
- colors
- zippers and pulls
- labels

LANSSI BY TOPPER

HYGIO[®]
TESTED



HYGIO a40

Standard equipment

- 3 wire baskets
- 3 hangers
- 3 hanger bars
- 1 bar for coat hangers
- 2 keys
- adjustable legs

Measures

- Height 1900 mm
- Width 550 mm
- Depth 650 mm

Weight 105kg

Programs

- 10 min
- 30 min
- 1 h

Interior:

- Height 1470 mm
- Width 430 mm
- Depth 595 mm

- No connection to ventilation is needed.
- An air-tight, closed process neutralizes ozone back to normal oxygen program: No smell of ozone at the place of use.



SECURITY BRANCH

Security officials, security guard personnel, border guard, military

➤ **Work safety**

Safe and easy neutralization of customer contamination from clothing and gear.

➤ **Wellbeing and gear maintenance**

Odorless clothing and gear improves wellbeing and comfort.

➤ **Personal hygiene**

Hygio can be used independently, when ever needed. This helps maintaining high level of hygiene.



SPORTS

Sports centers and teams

- **Odor removal**
Cleaning beyond normal washing, even for complicated sports gear
- **Gentle disinfection**
Disinfection without chemicals and mechanical stress extends materials and gear lifetime.
- **New service for customers**
New revenue opportunity



TEXTILE CARE

Cleaning (washing) shops, rental costume shops, theatres

- **Odor removal**
Gentle deodorization and disinfection of textiles without chemicals and water.
- **Process improvement**
Easy to use. Saves time, time and labor.
- **Economy**
Prolonged lifetime of clothing and other textiles.



HYGIO a40 MEDI

Standard equipment

- 4 wire baskets
- 3 hangers
- 4 hanger bars-
- 6 short hanger bars
- 1 bar for coat hangers
- 2 keys
- adjustable legs

Programs

- 10 min
- 2 h
- 6 h

Measures

- Height 1900 mm
- Width 550 mm
- Depth 650 mm

Weight 105kg

Interior:

- Height 1470 mm
- Width 430 mm
- Depth 595 mm

- No connection to ventilation is needed.
- An air-tight, closed process neutralizes ozone back to normal oxygen program: No smell of ozone at the place of use.



FIRE BRIGADES

Fire fighting and rescue

- **Work safety**
Greatly reduced risk from harmful PAH compounds.
- **Odor and smoke smell removal**
Odor neutralization increases comfort and reduces risk for health.
- **Economy**
Less wear - prolonged lifetime of gear. No chemicals, water or large temperature variations in cleaning process.
Contaminated gear can be returned into use.



HEALTHCARE

Healthcare, specialized medical care and care for children and elderly

- **Reduced infection risk**
Clean items and gear reduce risk for transmitted infections
- **Disinfection of electronic devices**
Suitable for cleaning electronics
- **Odor neutralization**
Unpleasant odors can be neutralized even from items that are difficult to clean



CHILD CARE

- Soft toys
- Wooden toys, puzzles
- Pens, books
- Mobile phones and tablets
- Blankets , pillows
- Electrical blankets and cushions



Children's departments and kindergartens use Hygio to clean toys and other items for cutting infections.



HYGIO®

REHABILITATION

➤ Lifting and moving equipment

➤ Wheelchair cushions covers

➤ Electric mattresses

➤ Orthoses and supports

➤ Therapy equipment

➤ Communication equipment

Hygio reinforces cleaning results obtained with other methods.



GENERAL CARE

- Work clothes, shoes
- Electronics
- Accessories
- Magnetic supports and belts
- EKG equipment, -leads
- Blood pressure- and other instruments
- Stethoscopes e.g.
- Protective covers and bags



Use Hygio to disinfect phones, tablets, keyboards and other electronic devices and other instruments.

HYGIO®

SURGERY, MEDICAL IMAGING, RADIOTHERAPY

- X-ray protective clothing and equipment
- Blood vacuum bands
- Support bandage
- Shoes
- Surgical supports
- Electronic equipment

Hygio disinfects and removes sweat + smells from x-ray protective clothing easily!



FIRST RESPONSE

- Clothes and shoes
- Electronics
- Bags and cases
- Medical equipment
- Vacuum mattresses, splint sets
- Blankets and other textiles



LANSSI BY TOPPER

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HYGIO IS EASY TO USE

Easy to set up – only electricity needed.

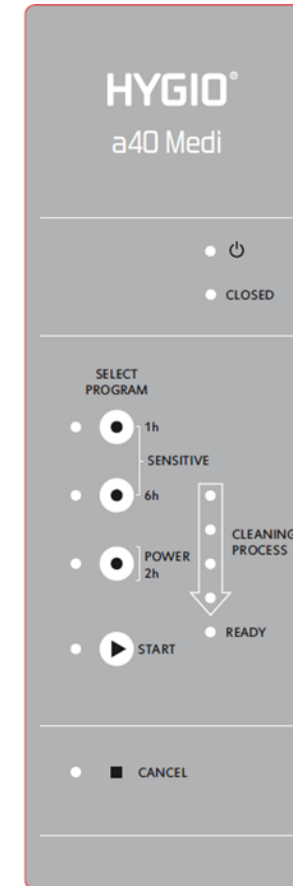
Easy to use – 3 programs , no need to disassemble cleaned items into parts.

Place items loosely. Air should flow freely.

Not suitable for natural rubber or for moist or wet items.

Safe for user. Door gets locked during the program. Fully airtight.

Use indoors in 20-35°C, in dry place.



HYGIO MAINTENANCE

Ozonizing devices require regular inspection for maintenance of both cleaning power and user safety.

Regular maintenance service.

Service register managed by Hygio Oy

Hygio offers maintenance agreements that cover all normal maintenance and inspection visits, including labour, travel, consumable parts and measurements.

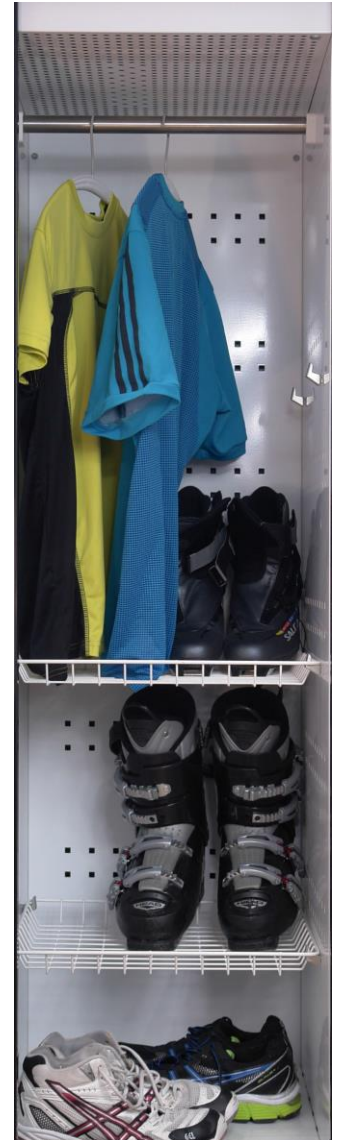
Warranty or maintenance agreement do not cover any damages caused by use of device against instructions as indicated in the user manual.



TIPS FOR USE

General guide for using Hygio:
Items should be placed so that
ozonized, circulating air can
reach all surfaces.

With hanger bars your can easily
process for example curtains.





HYGIO[®]

Easy Hygiene

