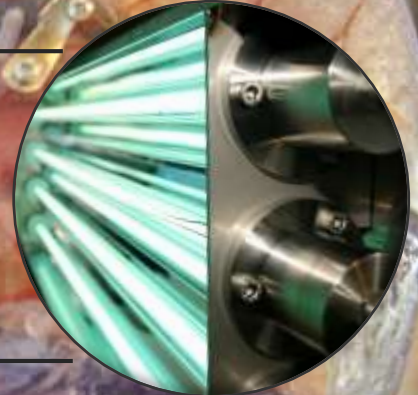




**:: LABORATORY
:: MEDICINE
:: TECHNOLOGY**



**hygiene
and
sterility
without
chemistry**

CHEMICAL FREE HYGIENE

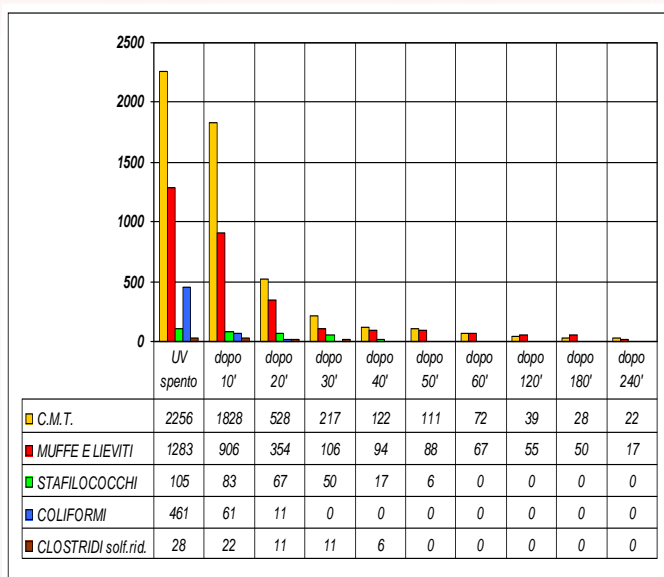
Take advantage of uv-fresh disinfection systems to protect your applications, products, sterile benches and tools against fungi, bacteria, spores and other microorganisms.

Reach with our products maximum protection, safety and cost efficiency.

With uv fresh® devices you achieve up to 99.99% strength germ reduction.

- :: Fast response speed**
- :: Chemical-free; no environmental impact**
- :: Overdose impossible**
- :: No impairment of the irradiated product**
- :: Dry process**
- :: HACCP compliant**
- :: Cost effective investment and operating costs**
- :: Low costs**
- :: Easy to retrofit**

External Studies for Effectiveness



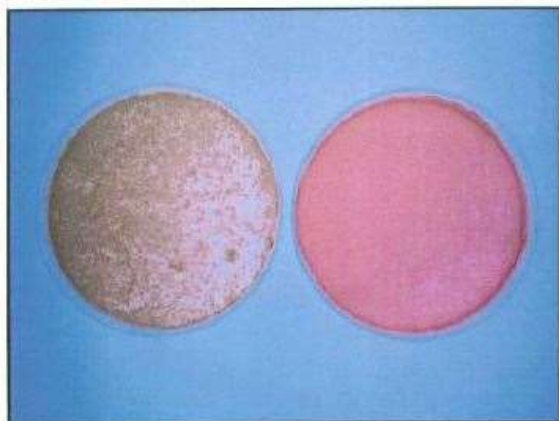
Reduction of germ load (Above picture)
Coli Germs, Staphylococcus and
Clostridium (from left to right) at
10 min irradiation time

Investigations of University of Siena

Department of Physiopathologie. Epidemiologisches Molekula Labor

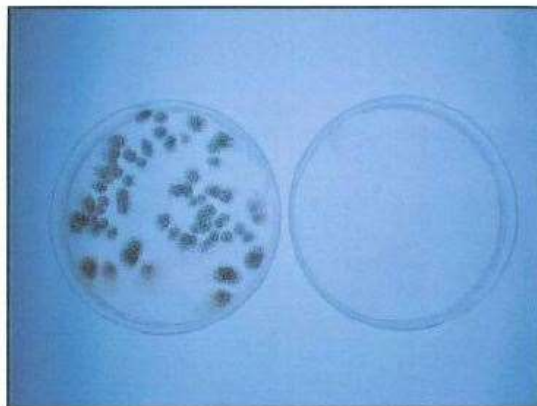
Leiter: Prof. Emanuela Montomoli

Staphylococcus aureus



Staphylococcus aureus su Mannitol salt agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

Aspergillus niger



Aspergillus niger su Sabouraud dextrose Agar, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

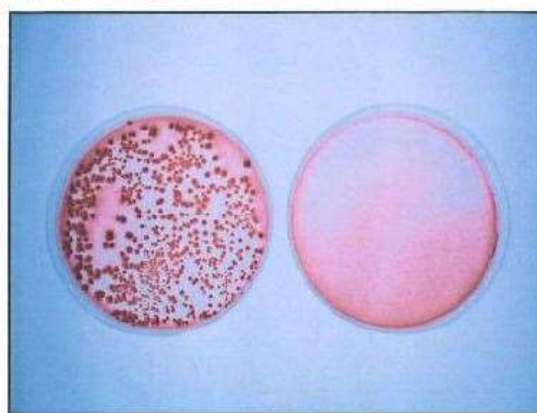
Tested under following equipment and tools:

- UV-FAN M2/95P
- „Microftow „aspirator
- Laminar Flow hood with HEPA- Filter 810/4
- Refrigerator 2°- 8° C
- precision balance
- thermostated chamber
- „Steriling“ Autoclave

Commodities and element used:

- Culture medium, Sabouraud-Dextrose-Agar Oxoid
- Culture medium, Teller Count Agar Oxoid
- Rodac Platte 55 mm diameter
- Various glassware

Escherichia coli



Escherichia coli su MacConkey Agar n.3, a sinistra la piastra non irradiata, a destra la piastra irradiata con UVC

Reduction of *Psicrofila Bacterium* at 22° C

LAMP TYPE	UFC/ m ³	UFC/ m ³	REDUCTION %
	AIR ENTRANCE	AIR EXIT	
(A) UV - FAN M2/95P	91	<1	>99,99
(B) UV - FAN M2/95P	119	1	>99,00

The complete evaluation results on request.

Professional UV-C Air Filtration Unit for Medium-sized and Larger Rooms

Chemical and ozone-free air purification and simultaneous odor reduction. The built-in UVC lamps emit radiation with a wavelength of 254 nm. This short-wavelength UVC radiation has an intense, destructive effect on all microorganisms. Depending on exposure time, airborne germs are reduced by up to 99%. This chemical-free process is ideal for application in medical facilities, as no toxic byproducts are produced and overdose of UVC radiation is not possible.

The UV fan is additionally fitted with a TIOX filter (TiO₂ photocatalyzer) for the purpose of odor reduction. Even odors given off by people or other organisms are reduced.



Applications:

- Common rooms
- Waiting rooms
- Doctor's offices
- Laboratories
- Sales Rooms
- All other inner rooms



Characteristics:

- Controllable UV-C lamp output
- Powder-coated aluminum housing
- Various sizes available
- Mobile base optional
- All components tested UV-C durable
- Easy to install
- Runs through standard 230V wall outlet
- Deliverable with many custom options
- CE-Markings (LVD, EMC, MD, RoHS)



UV-BOX SERIES

Professional UV Table Device for Disinfection and Storage of Laboratory Materials, Tools and Equipment

Chemical and Ozone-free Storage and Germ Removal for Small Instruments, Tools, Object and Equipment

The UV-BOX-E2/40H is a handy table device which brings added value through compact construction and simple operation.

The UVC-opaque polycarbonate pane in the roof panel of the UV-BOX guarantees reliable shielding from the UVC rays generated. The locking mechanism automatically deactivates the UVC lamp when the roof panel is opened, and activates it again when the panel is closed.

An overdose is impossible, and the device generates no waste or by products which must be cleaned up.

Applications:

- Medicine
- Storage
- Kitchen
- Laboratory
- Sales Rooms
- Animal Breeding and Plant Cultivation

Characteristics:

- Roof panel disables light automatically
- Large viewing window
- All parts tested UV-C durable
- Housing made from powder-coated aluminum
- Holding surface grille made from stainless steel
- Easy to install
- Runs through standard 230V wall outlet
- Safety category IP 55, class II
- CE Markings (LVD, EMC, MD, RoHS)



UV-BOX-E2/40H



UV-BOX-CR

UV-CABINET SERIES

Professional UV-C Decontamination Cabinet for the Disinfection and Storage of Laboratory Materials, Tools and Instruments

For Storage and Decontamination of Instruments, Tools, Equipment and other Work Materials

Alle UV-CABINET Systeme verfügen über eine UVC-undurchlässige Polycarbonatscheibe in den Türen.

All UV-Cabinet systems feature UVC-opaque polycarbonate panes in the doors. A locking mechanism automatically deactivates the UVC lamp when the door is opened, and activates it again when the door is closed.

An overdose is impossible, and the device generates no waste or byproducts which must be cleaned up. Application is chemical and ozone-free.

The device is deliverable in a variety of sizes and layouts.



Applications:

- Medicine
- Storage
- Kitchen
- Laboratory
- Sales Rooms
- Animal Breeding and Plant Cultivation

Characteristics:

- Singel- Doubledoor or wallmounted available
- Large viewing windows in the doors
- Doors disable light automatically
- Selectable exposure times with timer
- All parts tested UV-C durable
- Housing made from stainless steel AISI 304
- Holding surface grille made from stainless steel
- UVLON shatter protection (optional)
- Easy to install
- Runs through standard 230V wall outlet
- Safety category IP 55, class II
- CE-Markings (LVD, EMC, MD, RoHS)



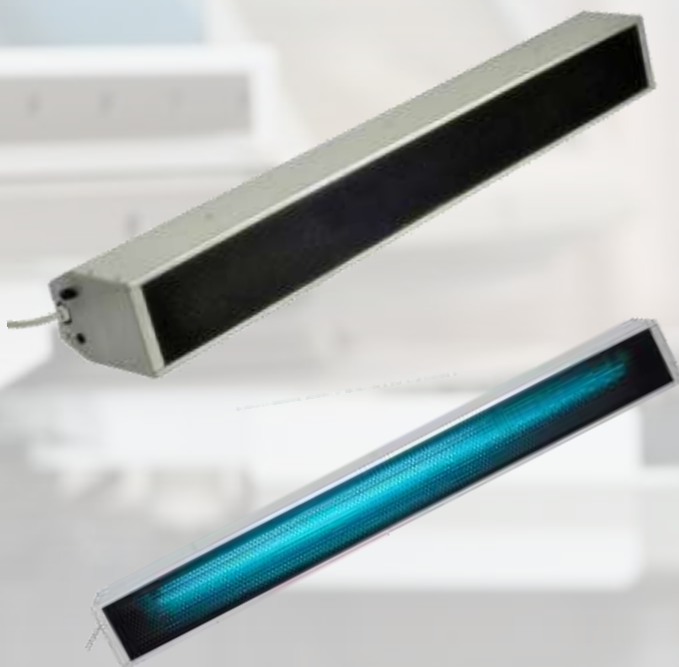
UV-FLOW

UV-C Air Cleaning System for Vertical or Horizontal Installation

Chemical and ozone-free air purification

This air cleaning system is used in offices, common rooms, and medical facilities where elevated germ levels can be reached through constant traffic of employees or patients. The system is installed in inner rooms at a height of at least 2.2 meters. It is designed to bring the complete germ profile of a room (to include bacteria, spores, fungus and viruses) to very low levels, and to continually prevent any increase in germ levels due to human activity.

By virtue of an artful design through which all irradiation is directed upwards, there are no health risks for people in the vicinity of the system. Natural air convection ensures that contaminated air is continuously brought into the irradiation zone and thereby disinfected.

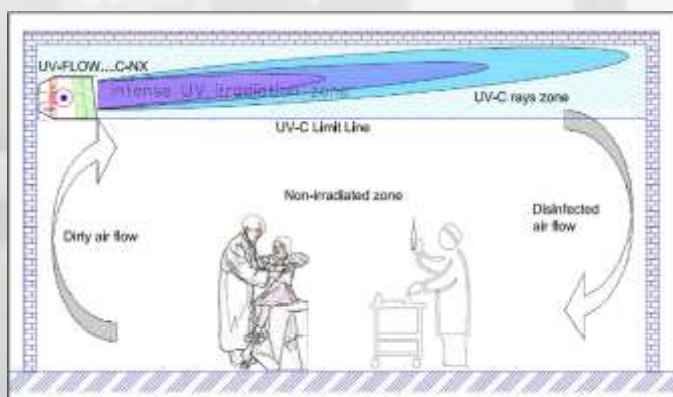
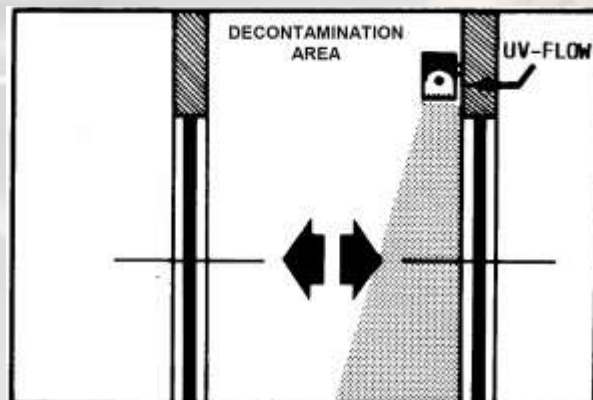


Applications:

- Production rooms
- Storage rooms
- Common rooms
- Waiting rooms
- Laboratories
- Sales Rooms
- All other inner rooms

Characteristics:

- Controllable UV-C lamp output
- Stainless steel housing
- Deflection grille with irradiation control
- Various sizes available
- All components tested UV-C durable
- Easy to install
- Runs through 230V outlet
- Integrated electronic ballast
- Safety category IP 55, class II
- Deliverable with many custom options
- CE-Markings (LVD, EMC, MD, RoHS)



UV-REFLEX-SC/B-NX

UV-C Decontamination for Refrigeration Units

Special unit for disinfection of air inside of refrigeration units. Low-germ air within refrigeration units produces excellent conditions for storage of meat products, sausages, all sorts of cheeses, and many other refrigerated products.

The ripening, appearance and quality of, for example, meat products, is improved considerably, and the storage life improved.



Possible Uses:

- Refrigeration cells
- Refrigeration rooms
- Storage rooms
- Laboratories

Options and Layout Variants:

- [EL] Alarm signal on lamp failure
- [P] UVLON synthetic sleeve A005649 as shatter guard
- [PV] Model with IP 67 standard plug

Characteristics:

- Selectable UV-C output
- Stainless steel housing
- Side-mounted lamp grille
- Various sized available
- All components tested UV-C durable
- Easy to install
- Integrated electronic ballast
- Runs through 230V outlet
- Safety category IP 55, class II
- Available with many options
- CE-Markings (LVD, EMC, MD, RoHS)

UV-TEAM SERIES

UV-C Decontamination Module for Food or Pharmaceutical Packaging Lines

Wherever sensitive products such as food or pharmaceutical product are packaged, the highest standards of purity and sterility must be kept.

Through adequate UV irradiation, it is possible to make microbiological contamination of the production area unthinkable at every point in the production process. This results in considerably improved product quality and longer shelf-life.

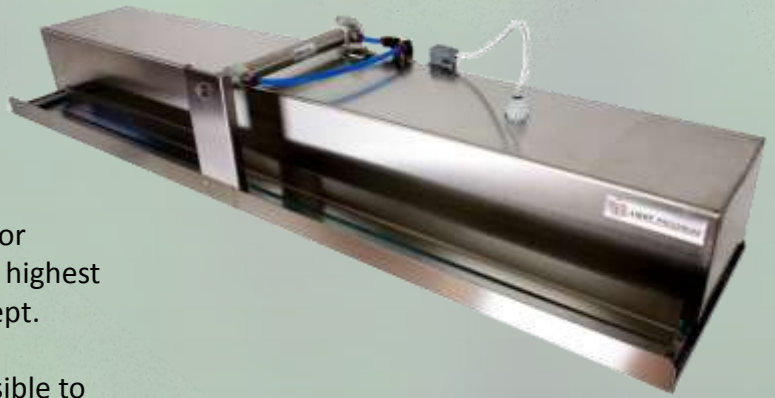
The UV irradiation has a strongly germicidal effect on both air and surfaces. Target surfaces are effectively fully decontaminated by direct UV-C irradiation.

Applications:

- Product lines in packaging and production
- Sorting areas
- Conveyor lines
- Work and sorting belts
- Foil and board decontamination
- Laboratory tables
- Other work spaces

Characteristics:

- Selectable UV-C output
- Modules with up to 10 UV lamps
- Various lengths available
- Stainless steel housing AISI 304
- Optional UVLON shatter protection (lamp)
- Optional UVLON shatter protection (frame)
- Material tested UV-C durable
- Easy to install
- Integrated electronic ballast
- Runs through 230V outlet
- External control box with various monitoring tools
- Safety category IP 65, class II
- Shutter system (optional)
- CE-Markings (LVD, EMC, MD, RoHS)



UV-STICK NX

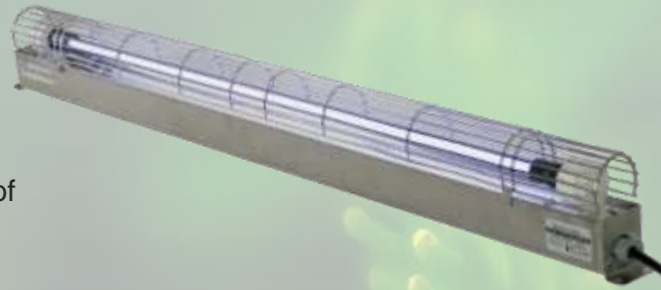
UV-C Direct Irradiation Device for Storage and Production Facilities

Chemical and Ozone-free Germ Removal

This robust unit works well for the disinfection of air and surfaces in storage and production facilities.

Due to the small dimensions of the UV-STICK, this unit is also used in a variety of roles in restricted spaces, transport tunnels and containers.

The UV-STICK is well suited for the significant reduction of air and surface contamination through the use of direct irradiation.



Possible Applications:

- Production Facilities
- Storage Areas
- Laboratories
- Work Surfaces
- Restricted Spaces
- Patient rooms

Characteristics:

- Selectable UV-C output
- Stainless steel housing
- Protective gate around bulb (optional)
- Various sizes available
- All parts tested UV-C durable
- Easy to install
- Integrated electronic ballast
- Runs through standard 230V wall outlet
- Safety category IP 55 Class II
- Deliverable with many custom options
- CE-Markings (LVD, EMC, MD, RoHS)

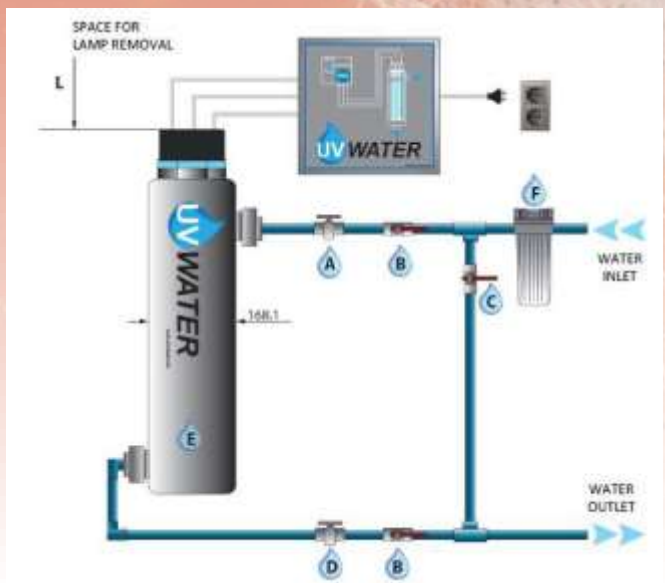


UV-WATER

UV-C Device for water disinfection

Professional Chemical and Ozone-free disinfection

This robust unit is used for hot or cold water disinfection. The water is disinfected when flow passes the built-in UV lamp with no impact to odour and pH-value



Applications:

- drinking water disinfection
- Production Facilities
- Stand-alone units (Icemachines, etc.)
- After sterilization for osmosis
- Laboratories, dentists, etc.

Characteristics:

- 5 models available (3.000 l/h bis 24.000 l/h)
- Stainless steel housing AISI 304
- Material tested UVC durable
- Easy to install
- External control box with various monitoring tools
- Integrated electronic ballast
- Runs through 230V outlet
- Safety category IP 55, class
- CE-Markings (LVD, EMC, MD, RoHS)



competence in uv

Certificates and results for UV-FAN device:

- CE: European Community Directives (CEE)
IRPA: International Radiation Protection Agency (FRANCE)
ASHRAE: American Society of Heating, Refrigerating and Air-Conditioning Engineers (USA)
IUVA: International Ultraviolet Agency (USA)
UNI EN ISO: National norm (UNI) European norm (EN)
International norm (ISO)

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Fraunhofer Institut
Verfahrenstechnik
und Verpackung



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