



Naiopur

UV-C Seed disinfection

Naiopur from EVERGEP

UV-C disinfection

Naiopur

- Naiopur was designed specifically for efficient and cost-effective disinfection of seeds, grains, herbs, spices, etc.
- A disinfection rate of 99.9% was confirmed by reputable German laboratories
- Main focus during the development was a robust construction with an easy handling process and high production efficiency

Area of application



Area of application

General information

- Naiopur UV-C disinfectant is very flexible in its applicability
- It is mostly used by the food and agriculture industry
- It can be used for almost all dry products
- If your product is not listed below, please contact us and we are happy to discuss specific disinfection options



Area of application

Naiopur UV-C disinfection

■ Seeds

- *Pumpkin seeds*
- *Sunflower seeds*
- *Hemp seeds*
- *Sesame seeds*
- ...



■ Nuts

- *Walnut*
- *Hazelnut*
- *Cashew nuts*
- *Peanuts*
- ...



■ Grain

- *Wheat*
- *Rye*
- *Barley*
- *Oat*
- ...



Area of application

Naiopur UV-C disinfection

■ Herbs

- *Oregano*
- *Parsley*
- *Rosemary*
- *Thyme*
- ...



■ Spices

- *Chili*
- *Cinnamon*
- *Pepper*
- *Cloves*
- ...



■ Tea

- *Dried tea leaves*
- *Green tea*
- *Black tea*
- *Oolong*
- ...



Area of application

Naiopur UV-C disinfection

■ Beans

- *Kidney beans*
- *Soybeans*
- *Coffee beans*
- *Chickpeas*
- ...



■ Dried fruits

- *Cranberry*
- *Apricots*
- *Figs*
- *Goji berries*
- ...



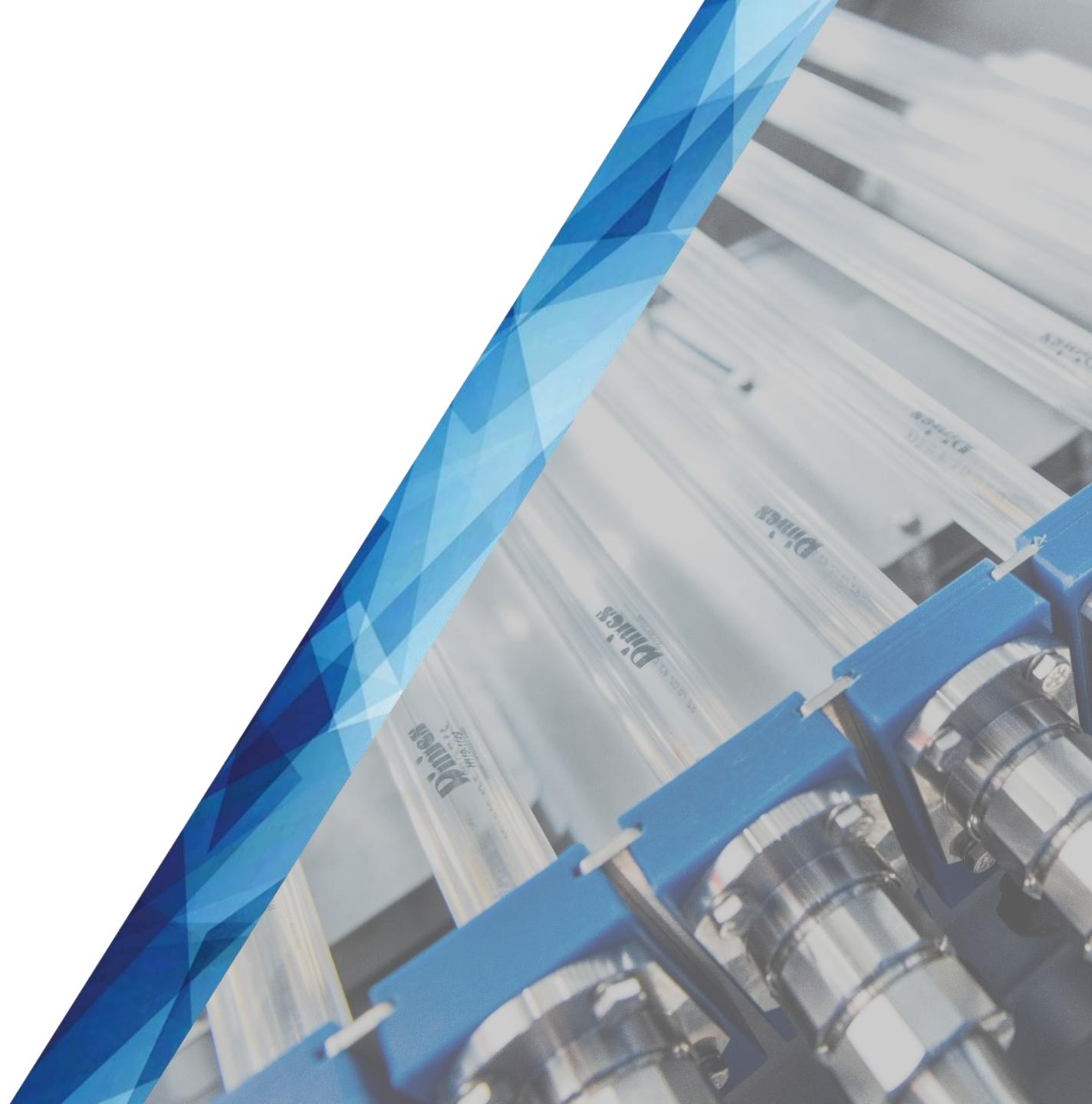
■ And much more

- *Products for natural cosmetics*
- *Raw products for muesli and muesli bars*
- ...





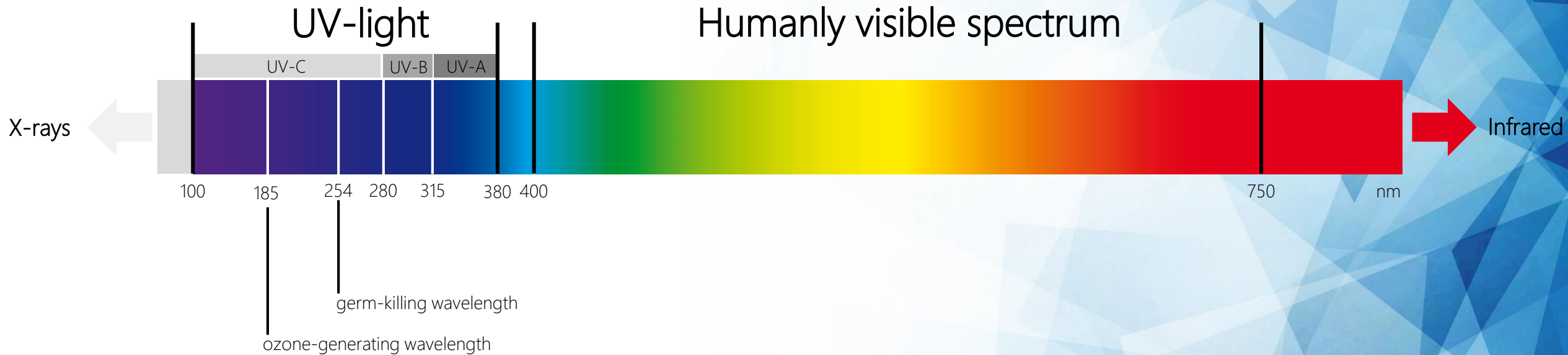
UV-C light



What is UV light?

How does it work?

UV light is invisible to the human eye, but it can be used to eliminate microorganisms



4 Factors for UV-C disinfection

What is important?



1.



2.



3.

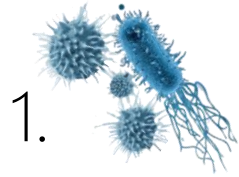


4.

-
1. Microorganisms
 2. Distance
 3. UV-C power
 4. Time

Important radiation doses

Lethal doses to kill microorganisms



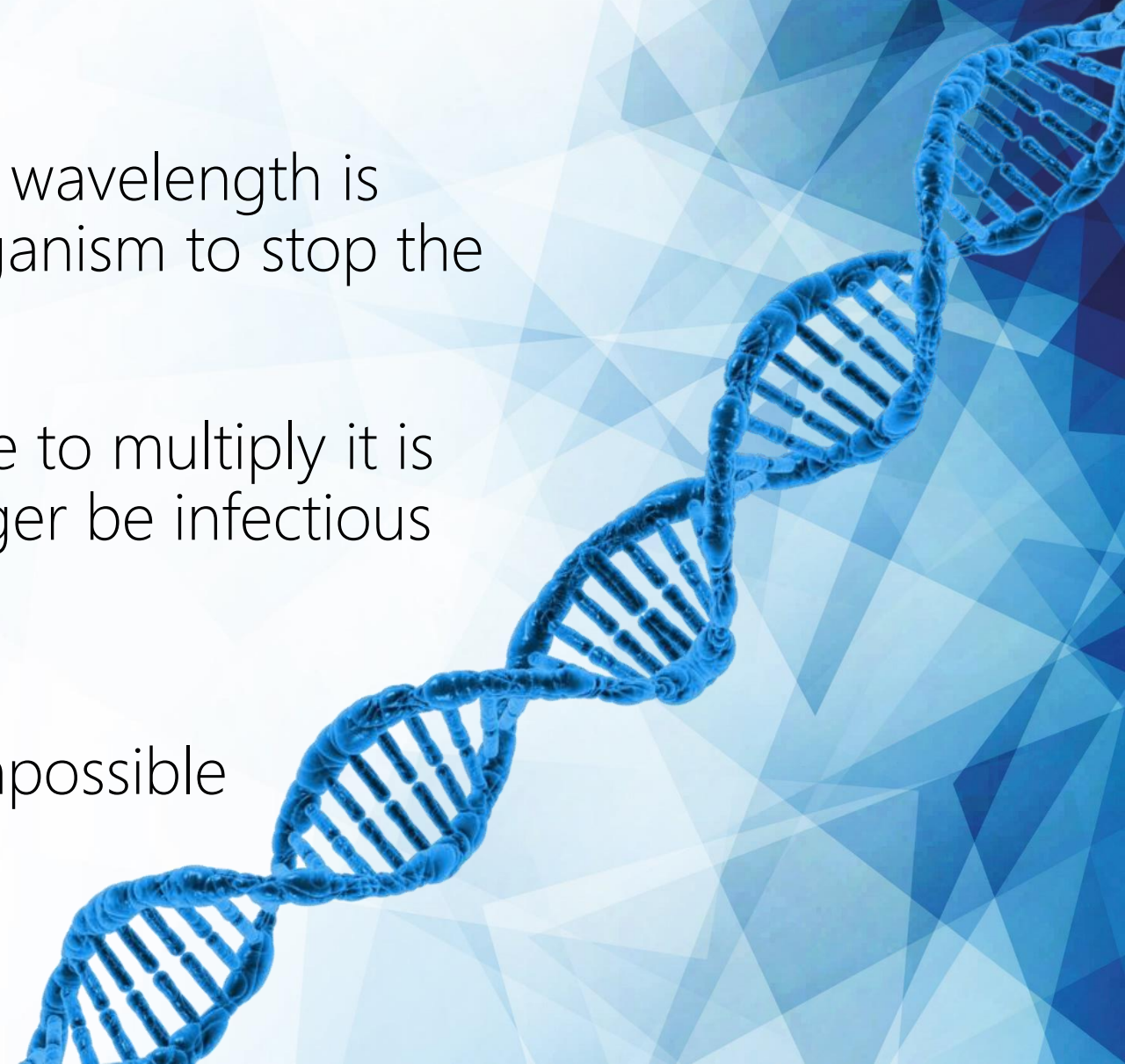
Microorganism	Distance	Radiation dose*	Time
Bacteria			
Escherichia coli	5 cm	9 mWs/cm ²	0,74 sec
Legionella pneumophila	5 cm	2,8 mWs/cm ²	0,23 sec
Mycobacterium tuberculosis	5 cm	30 mWs/cm ²	2,46 sec
Viruses			
Influenza virus	5 cm	10,2 mWs/cm ²	0,84 sec
SARS-CoV-2	5 cm	10,6 mWs/cm ²	0,80 sec
Mold spores			
Aspergillus niger	5 cm	396 mWs/cm ²	32,46 sec

*radiation dose necessary for 90% disinfection / log 1

UV-C disinfection

What is happening?

- The UV-C irradiation with 254nm wavelength is modifying the DNA of a microorganism to stop the reproduction
- When a virus or bacteria is unable to multiply it is considered dead and can no longer be infectious
- Very short deactivation time
- Development of a resistance is impossible



UV-C light

Summary



Disinfection up to 99.9%

Elimination of all microorganisms

Very effective and quick disinfection method

Low maintenance and inexpensive

Chemical free



Disinfection process

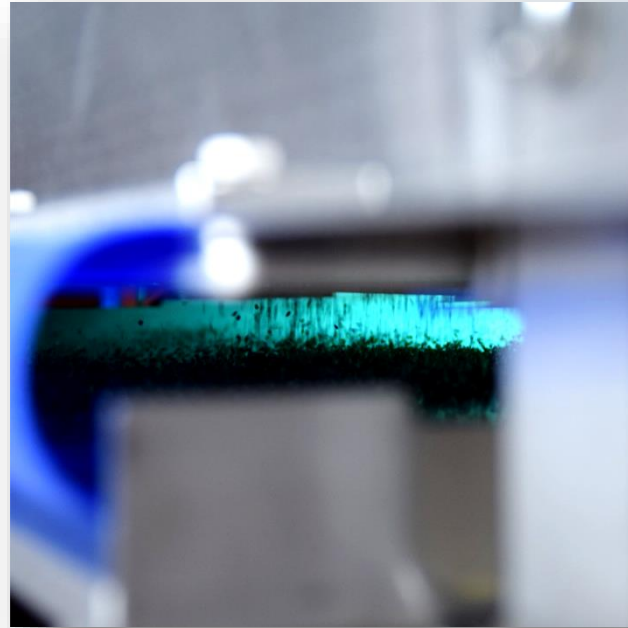


UV-C disinfection process

How does it work?



Product is filled directly into the feed hopper



The input control regulates how much seeds are getting through



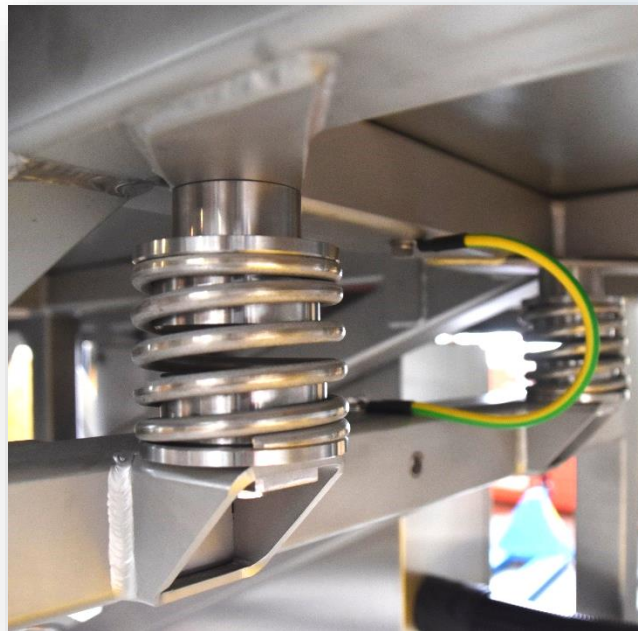
The replaceable filter will keep out unwanted dirt and soil

UV-C disinfection process

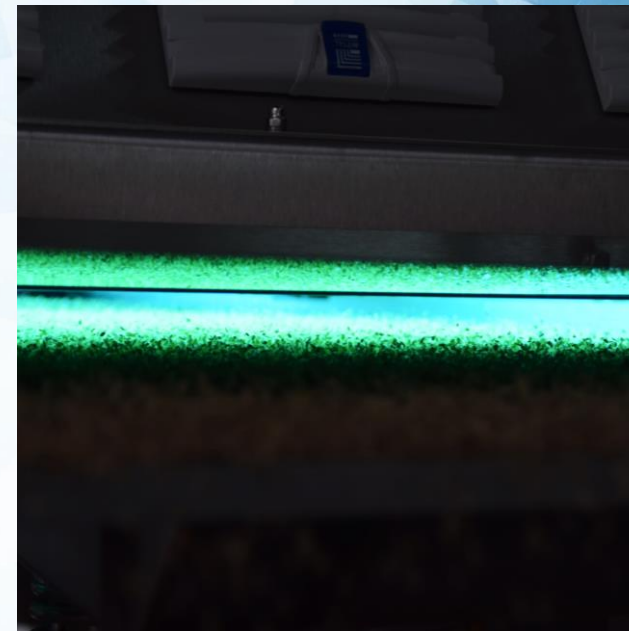
How does it work?



The seeds are distributed evenly onto the transport plate



And then transported through a vibration technique



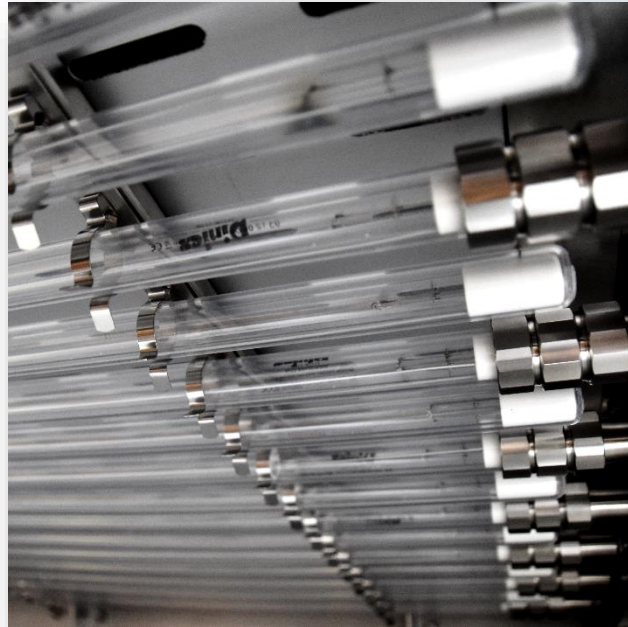
The seeds are passing underneath the UV-C lights

UV-C disinfection process

How does it work?



Due to the vibration the seeds are rotating so they are disinfected 360°



The UV-C lights are disinfecting the seeds



After disinfection the seeds arrive at the end of the transport plate

UV-C disinfection process

How does it work?



The seeds are falling into the funnel



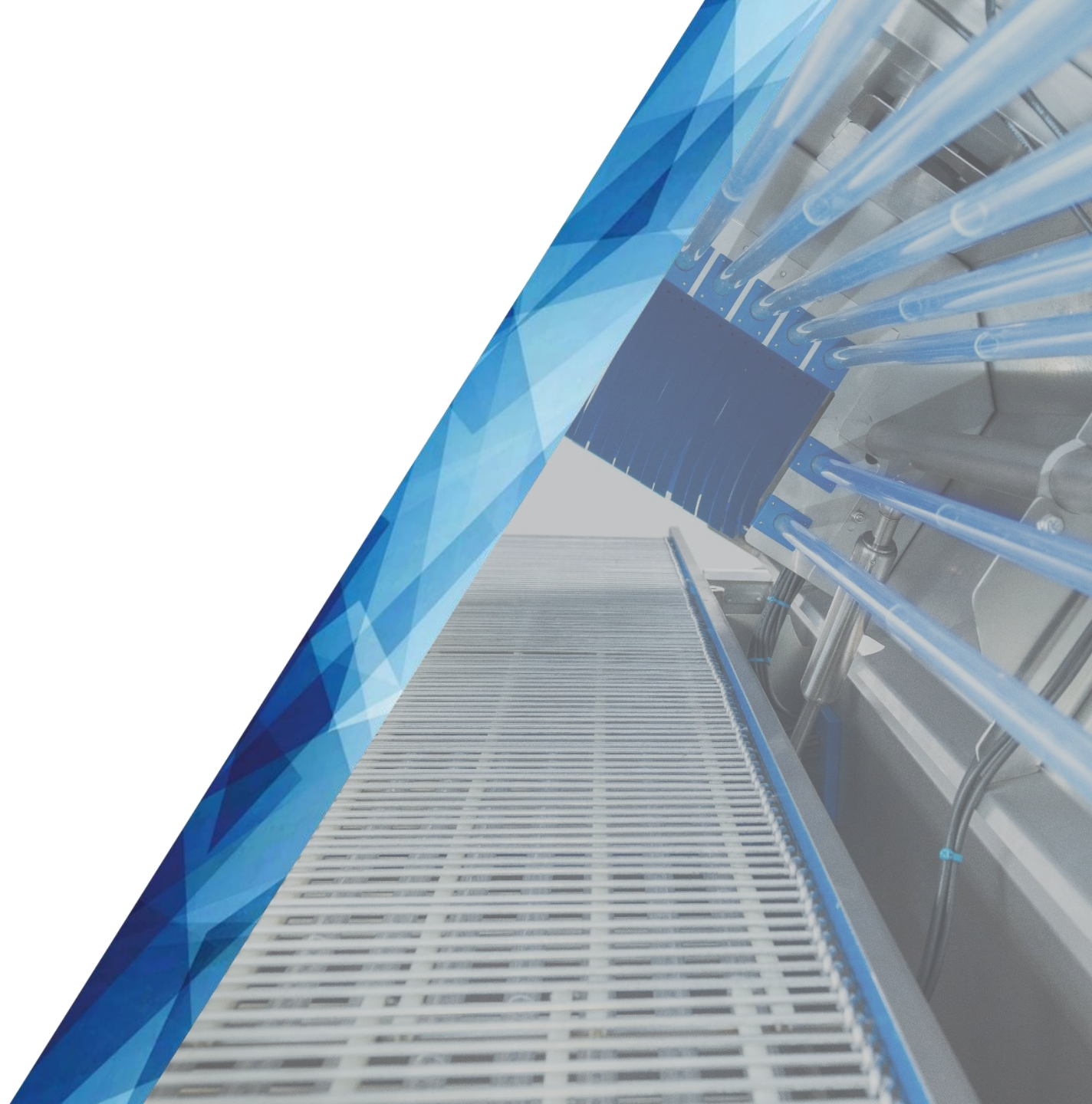
Where they can be poured directly into a container or bag



Naiopur can be cleaned very easily when opened



Product specifications



4 different options available

Naiopur, Naiopur Jumbo I, Naiopur Jumbo II & Naiopur Jumbo III



Typ	Naiopur	Naiopur Jumbo I	Naiopur Jumbo II	Naiopur Jumbo III
Rated power	900W	2500W	4900W	6900W
Lamp power	540W	1900W	3800W	5700W
Rated voltage	230V / 50Hz	380V / 50Hz	380V / 50Hz	380V / 50Hz
Number of lamps	6 x 90W	16 x 120W	32 x 120W	48 x 120W
Dimension L x W x H	1800 x 600 x 1400mm	2500 x 900 x 1200mm	3800 x 900 x 1200mm	5200 x 900 x 1200mm
Band width	300mm	800mm	800mm	800mm
Disinfection length	900mm	1200mm	2400mm	3600mm
Working height	900mm	900mm	900mm	900mm

Product features

Naiopur UV-C disinfecter

Stainless steel

Splinter protection according to HACCP

Suitable to various product sizes

Safety switch that turns off UV-C lamps when opened

High quality transport plate and feed hopper

Naiopur

Product pictures



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Details



Flow regulator



Replaceable filter



Safety switch

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Details



Transport plate



Feed hopper



Dust exhaust host

Naiopur

Details

Patented method for disinfecting seeds and a device for it



Den aktuellen Rechtsstand und Schutzzumfang entnehmen Sie bitte dem DPMAregister unter www.dpma.de.

Naiopur Jumbo

Product pictures



Coming
soon

Naiopur Jumbo

Details



Control panel



UV-C lamp power



Safety switch

Naiopur Jumbo

Details



Transport plate



Feed hopper with input control



Emergency stop switch



Your advantages

Naiopur UV-C disinfectant



Advantages

Naiopur UV-C disinfectant

- Previously, herbs and seeds were either not disinfected at all or were sterilized with a complicated steam process
- NO disinfection with steam → NO lost valuable contents
- Disinfection of seeds and grains optimizes your product
 - *Elimination of microorganisms (viruses, bacteria, mold, ...)*
 - *Improvement of germination capacity*
 - *Clean and disinfected product*
 - *Longer shelf life of product*

Advantages

UV-C disinfection



Advantages

For your product



Disinfection up to 99.9%

Increase of storage life

Improvement of germination capacity

No negative influence on product quality

Consistency of product remains unchanged

Advantages

Naiopur UV-C disinfectant

100% ecological without the use of chemicals

Safety switch for prevention of burns

Easy handling with high production efficiency

Low operating costs

Low maintenance

Thank you for your
attention



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