

COLD PLASMA EMITTER

With CoV capsule of complex metal ions

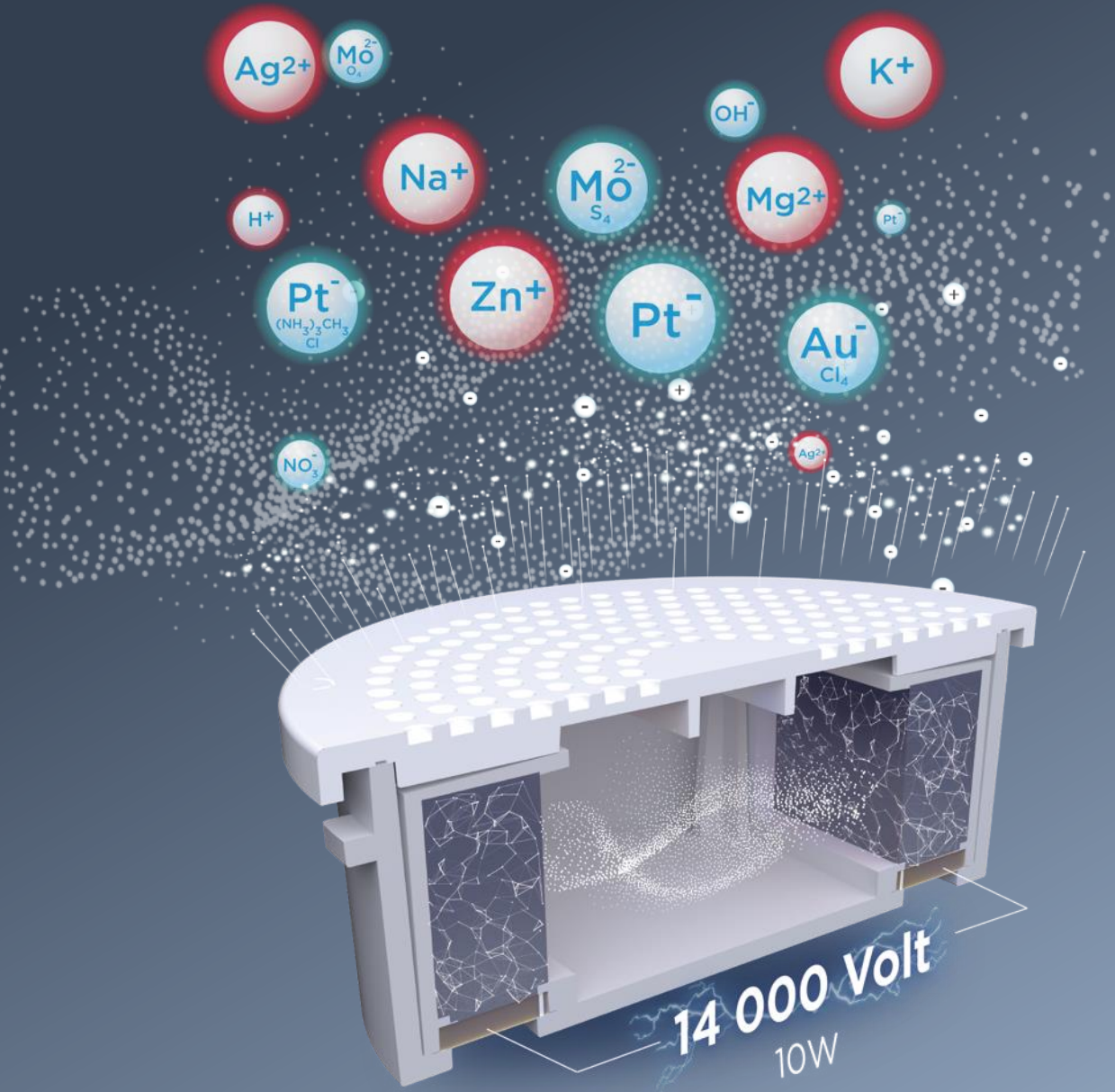
Effective against:

Human Coronavirus, Influenza A

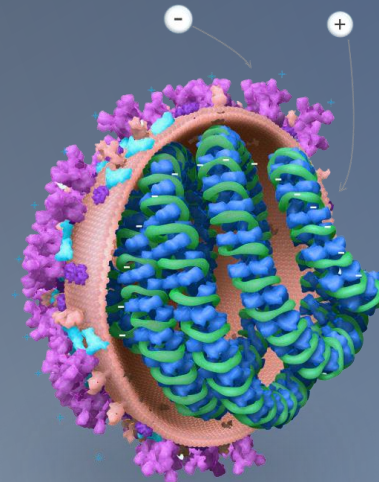
According to laboratory tests, PERENIO through Cold Plasma technology reduces the viral load in the air



HOW IT WORKS



- The cold plasma is invisible to the eyes, activated device creates the shield of metal ions from the capsule
- This shield is the semi-sphere with a volume of approximately 3 m^3
- The «-» metal ions “burn” the “+” membrane of the virus leading to its destruction



IT'S PROVEN

Special notes:

Methodology verification – requirements and limits:

- N ranges from 7.70 to 9.30
- T is at least 1 higher than the required reduction,
- n1 and n3 are higher than 0.5 N1.

8. CONCLUSIONS

The product under test at 20°C, in the presence of a interfering substance, in 12 hours working time, passes set test requirements, demonstrating the following reduction:

0,32 log (52,68%) against Influenza A virus (H3N2) ATCC VR-1679
0,27 log (46,45%) against Influenza A virus (H1N1) ATCC VR-1469
0,29 log (48,27%) against Human coronavirus 229E ATCC VR-740

The results obtained during all the controls and tests met all the requirements of the methodology and fell within the set limits.

Date issued: 29th of July 2022

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The results were authorised by: Jakub Jafłowski, M.Sc Eng

The report was approved by: Mateusz Latosiński, Eng

--- End of Report ---

25/10/2021 – RT-PCR Results

- > The experiments were conducted in private clinical laboratories which comply with the specifications for conducting RT-PCR test for SARS-CoV-2 detection.
- > The experiments were performed using the VIASURE SARS-CoV-2 Real Time PCR Detection Kit which was designed for the specific identification and differentiation of 2019 Novel Coronavirus (SARS-CoV-2) in respiratory samples from patients with signs and symptoms of COVID-19 infection. The detection was done in one-step real-time RT format where the reverse transcription and the subsequent amplification of specific target sequence occurred in the same reaction well. The isolated RNA target was transcribed generating complementary DNA by reverse transcriptase which was followed by the amplification of a conserved region of ORF1ab and N genes for SARS-CoV-2 using specific primers and a fluorescent-labeled probe. The test has a detection limit of 210 RNA copies per reaction for ORF1ab and N genes.
- > The Rotor-Gene Q MDx Real-time PCR cycler with 6 channels was used for the experiments.
- > 170 samples were tested which 5 were Positive (~3% Positive Rate).

Phase B: Study Conclusion

- The 4 positive tests were samples from rooms 17 and 13, where the Ionic Shield was on, while 1 positive sample was from room 1 where the Ionic Shield was off.
- Positive samples in rooms 13 and 17 were observed during the first 2 weeks of the trials. Subsequently and while positive patients were entering the rooms no positive sample was detected in the following days.
- The positive sample in room 1, where the Ionic Shield was off, was detected last week.
- Four patients were transferred to the ICU during the trials, from the rooms where the Ionic Shield was operating normally. Note that patients had additional medical conditions and wore an oxygen mask.
- No negative effects reported from Ionic Shield Operation from Patients

Recovery Results Increase using Health shield

Difference	7.02 %
95% CI	-18.0291% to 36.8642%
Chi squared	0.218
DF	1
Significance level	P = 0.6402

Confidential



Evaluation of Decoqua Health Shield

According to laboratory tests, PERENIO through Cold Plasma technology reduces the viral load in the air

- **86,2% Virus reduction percentage (Coronavirus 229) within 15 hours**
- Under test at 20°C, in **12 hours** working time, demonstrating the following reduction:
 - **52,7 %** against **Influenza A virus (H3N2)** ATCC VR-1679
 - **46,5 %** against **Influenza A virus (H1N1)** ATCC VR-1469
 - **48,3 %** against **Human Coronavirus (229E)** ATCC VR-740



Perenio Ionic Shield is proved in following tests:

- In-vitro culture test (more survived cells in activated device area)*
- The evaluation methodology from the PN-EN 17272:2020-10**
- PCR control with “VIASURE SARS-CoV-2 Real Time Kit”***
- NO increasing OZON concentration in activated device area****

* “Sure Laboratories”, United Kingdom, “Microbiological review of report D/21/V0177”

** “Ekolabos Laboratory”, Poland, “Biocidal effectiveness assessment report – room fogging disinfection”, 29.07.2022

*** Nicosia hospital, Cyprus, Clinical report, 25.10.2021

**** “Laboratory for comprehensive hygiene research”, February 2021

USE ANYWHERE

CAR



HOME-OFFICE



HOME WITH PETS



PARENTS' PLACE



RESTAURANT



OFFICE



PUBLIC PLACES



HOTEL



Wherever you are being, whatever you are doing, PERENIO through Cold Plasma technology has been proven to reduce viral load in the air around you

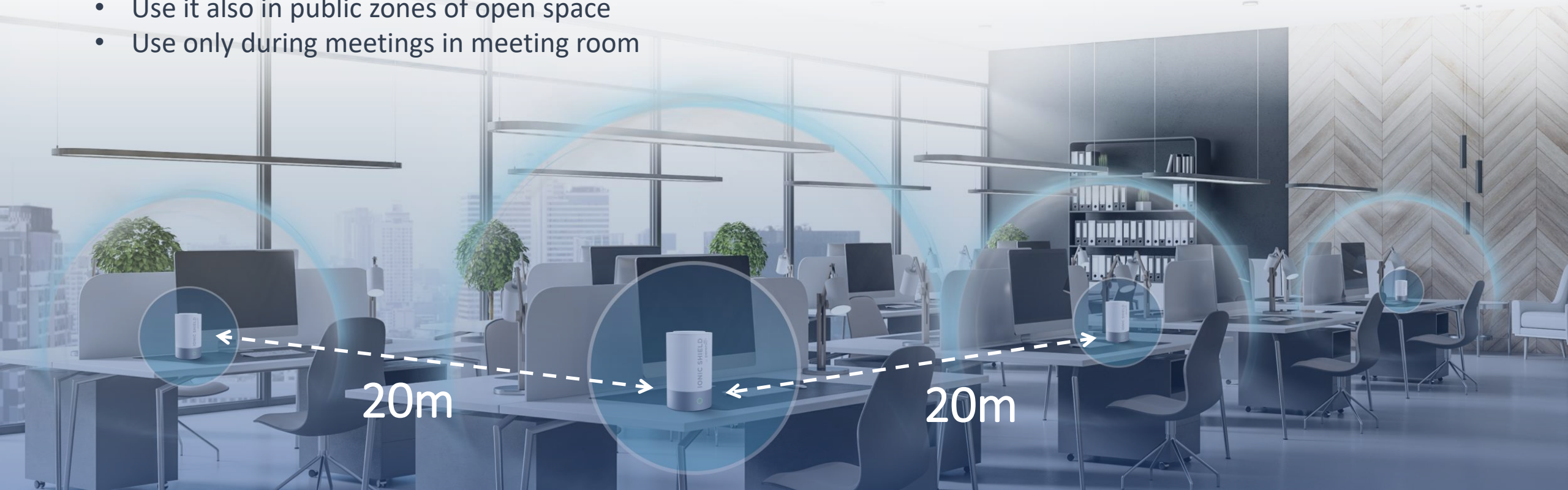
TO COVER LARGE CLOSED SPACES

How to equip open space office for safe from virus load?

- Put Perenio Ionic Shield to cover every 60 square meters
- The recommended distance between devices is 20 meters with a ceiling height of 3 meters
- Use it also in public zones of open space
- Use only during meetings in meeting room

$$\frac{S_{\text{Office space}}}{60\text{m}^2} = \text{Number of cold plasma emitters}$$

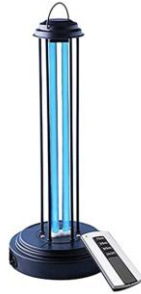
Number of meeting rooms



COMPETITORS



UV-C lights



Ozon lamps



Air-purifiers



Airborne ionizers



Hydroxyl sterilizers
and air purifier



Perenio Ionic
Shield

	UV-C lights	Ozon lamps	Air-purifiers	Airborne ionizers	Hydroxyl sterilizers and air purifier	Perenio Ionic Shield
Possibility to use in the presence of humans	YES	NO	YES	YES	YES	YES
Antivirus efficiency in the air	NO	YES	LOW	NO	NO	YES
Antimicrobial efficiency in the air	NO	YES	LOW	NO	YES	YES
Has an independent power supply	YES	YES	YES	YES/NO (depends on size)	NO	YES
Emission	UV-C Rays	Ozone O ₃ strong oxidizing agent	No emission	Ions from the air (O ₂ , N ₂ , N ₂ O)	Hydroxyl Radicals	High energy ions (K, Mg, Ag, Zn, H, Pt, Au)

TARGET GROUP and DEMAND DRIVERS



“how to protect yourself from FLU”



“how to decrease viral replication”

Source: <https://trends.google.com>

There are THREE targets:



Town-folks (20-60), all genders, interested in anti-viral protection



Owners/Administrators/HRs in legal entities with open spaces



Managers of big hospitals, taxi service and transportation companies (airports, stations etc.)

MARKETING MIX AND SUPPORT



Digital promotion

- Media campaign in Global PERENIO site, Instagram and Facebook with traffic to the partners' site
- Paid media (traffic to the partners' site)

On-line support

- Promotion in e-retail (highlighted product on the partners' site)
- Banners to support promo
- Seasonal offers (FLU periods, winter vacations, back-to university) – “1 capsule for free”

Off-line support

- Product stoppers in POS
- Seasonal offers (FLU periods, winter vacations, back-to university) – “1 capsule for free”
- Motivation for the sales staff in POS (SELL-OUT Champions)

OFF-LINE Support

BTL Sales Support

- Merchandising
- Motivational programs for sales staff
- POS staff motivation programs (in case of applicable)
- Participation in partner commercial programs

In POS on-shelf + banner

- Increases visibility and works for SELL-OUT
- Simplify scientific messages and communicates directly to customers



REDUCES VIRUSES LOAD IN THE AIR

IN ENCLOSED SPACES 24/7*

PROVEN EFFICIENCY AND SAFETY**

BASED ON LABORATORY TESTS***

189€

Cold Plasma Emitter
PERENIO IONIC SHIELD®

IONIC SHIELD by pereni[®]

PATENTS APPLIED
TUV certified
CE

* Nicotia General Hospital (Cyprus), Dr. C. Loizou, Dr. A. Hadjilavrou, "Intensive Care Unit Research to Unravel SARS - CoV-2-dispersion ability" (Bioethics approval: EEBK/ET/2020/01/01/11, 27/01/2021)
** LLC "Sera of security technologies" Laboratory for comprehensive hygiene research, 10/02/2020
*** "Sera Laboratories", TPA, van der Zanden, Study report (code: VISA-2020) "Performance test of ionizer virus sterilization using Mouse Hepatitis Corona Virus cultured on a L-929 culture", 02/09/2020

TECHNICAL SPECIFICATIONS



On / off button with indicator



5V, 2A, 10W



1.5m USB-A to USB-C cable



Changeable capsule COV



Power adapter, battery (5 h.)



Compact: 130 mm high and 80 mm in diameter



Lightweight: only 100 grams

TECHNICAL SPECIFICATIONS



Ion Diffuser



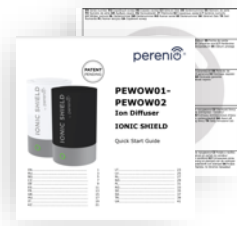
Capsule



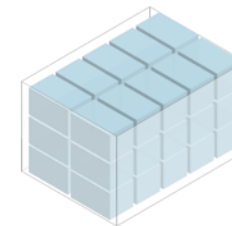
USB-A - USB-C



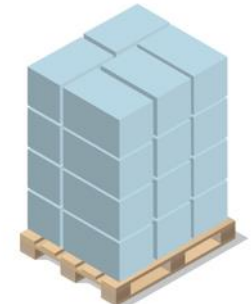
Power adapter



Quick Start Guide &
Warranty card



Master carton
555x410x350mm – 30 pcs



Pallet - 20 cartons
5 boxes in layer, 4 layers

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