

medspray

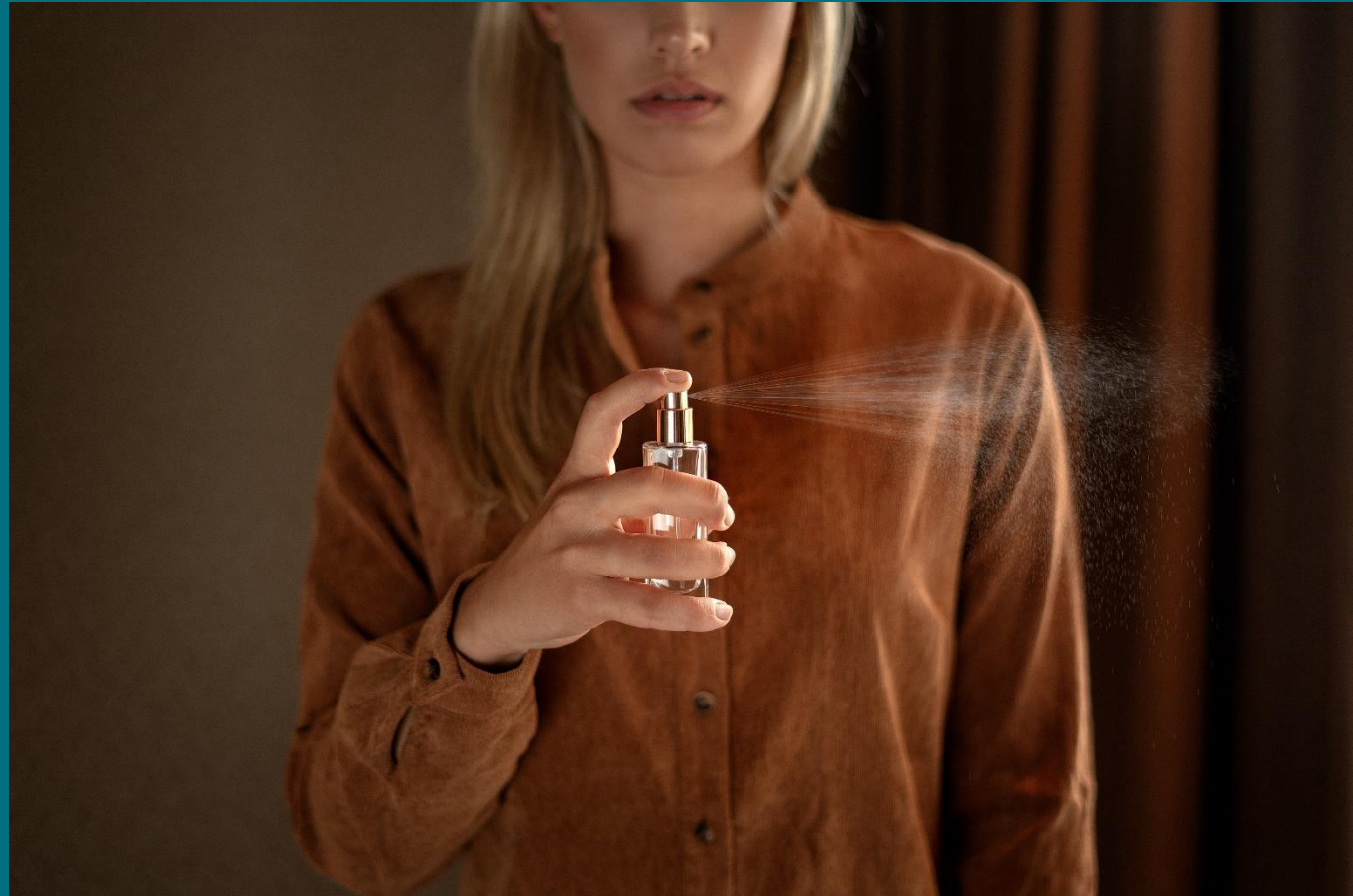
Propellant free soft mist technology

2022-09-22 - FEAerosol 2022

med tiny technology,
for a sustainable future

- **Medspray Technology**
- **Possibilities**
- **Applications**





medspray

tiny technology,
for a sustainable future



medspray

tiny technology,
for a sustainable future

Spray Nozzle Unit = SNU



plastic part



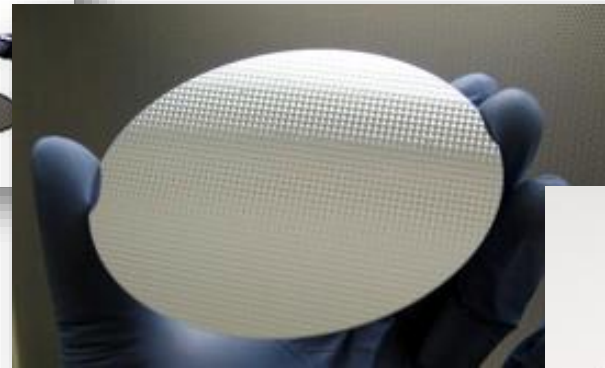
silicon plate



pre filter



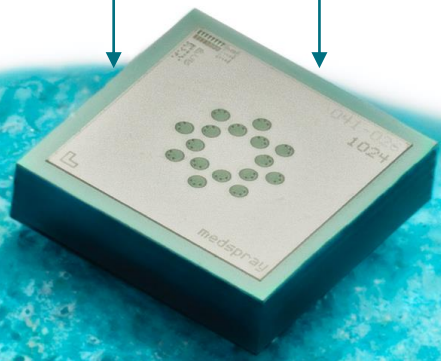
Silicon Plate with multiple pores*



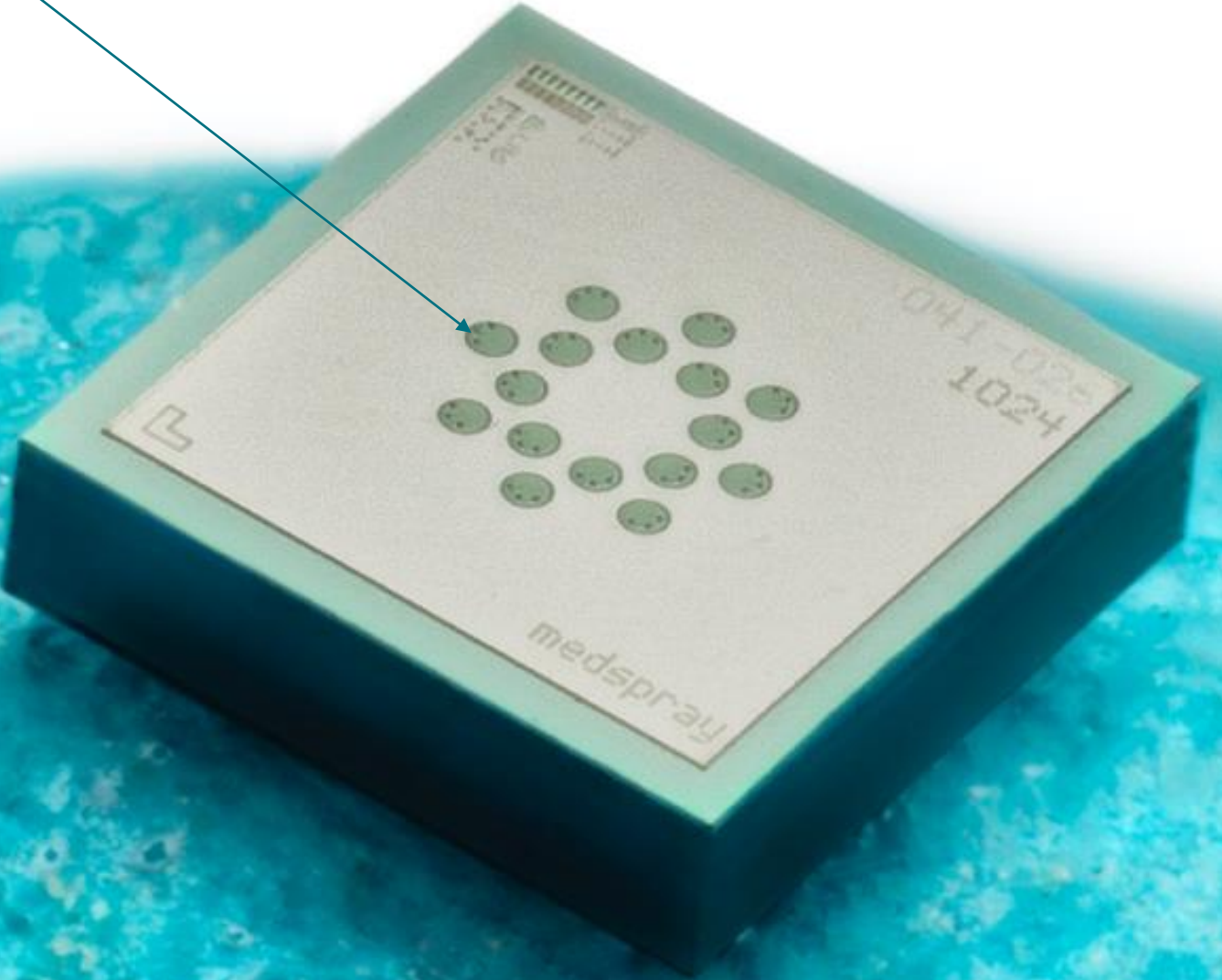
** Medspray owns multiple patents, offering protection and exclusivity for their customers.*



Dimensions: 1 x 1 mm



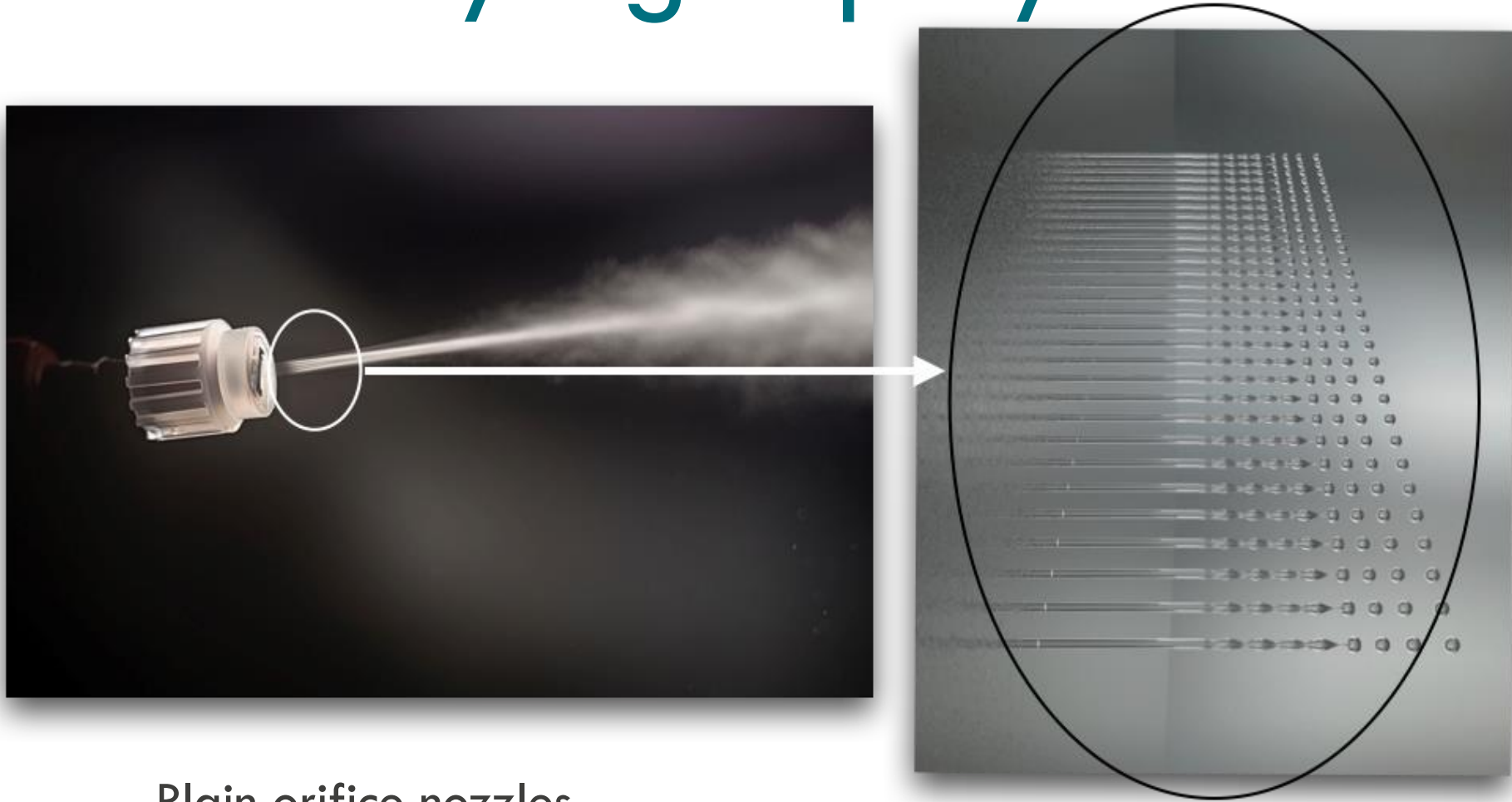
Pore size: 2-40 μm



Diameter Human Hair = 70 μm



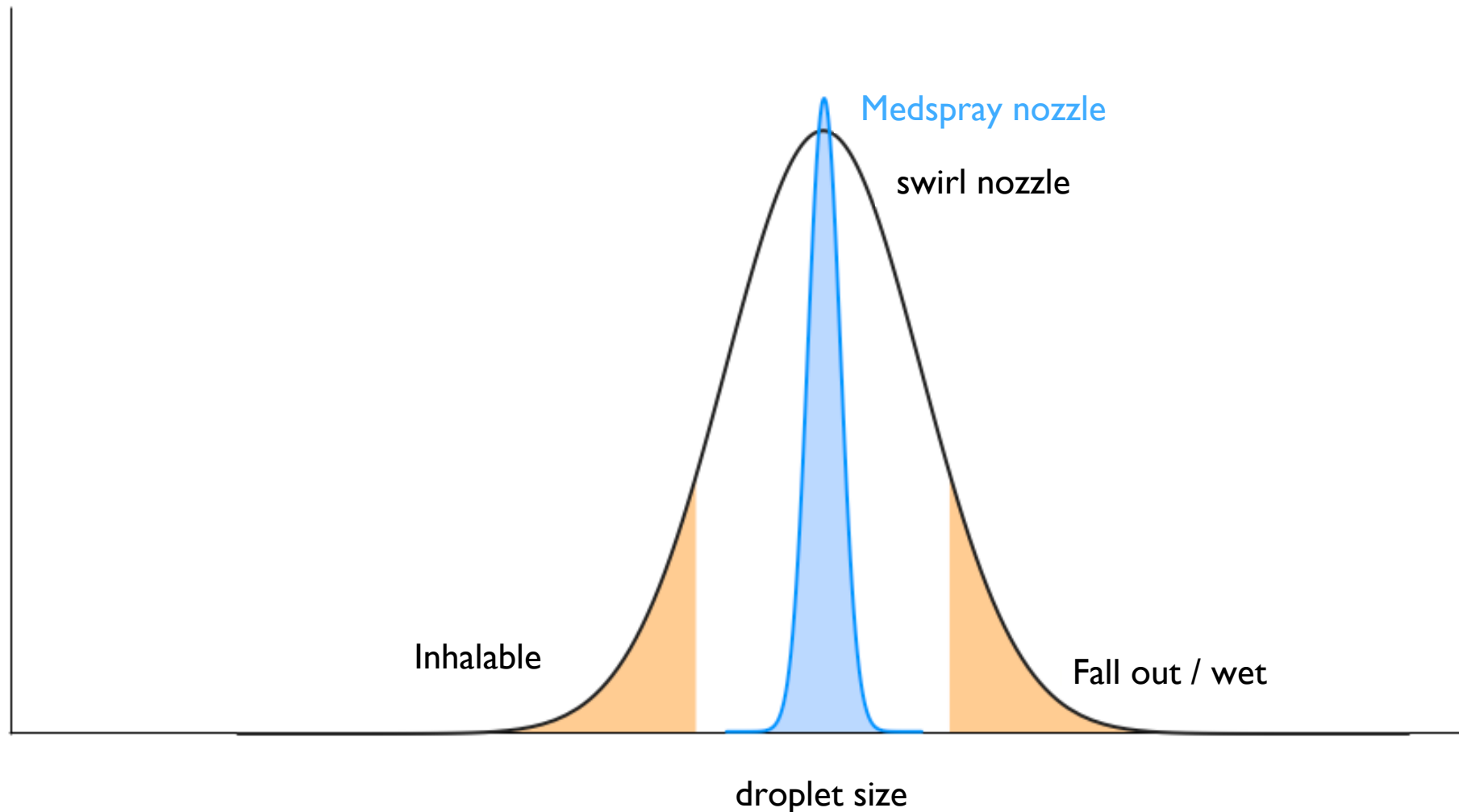
Rayleigh Spray



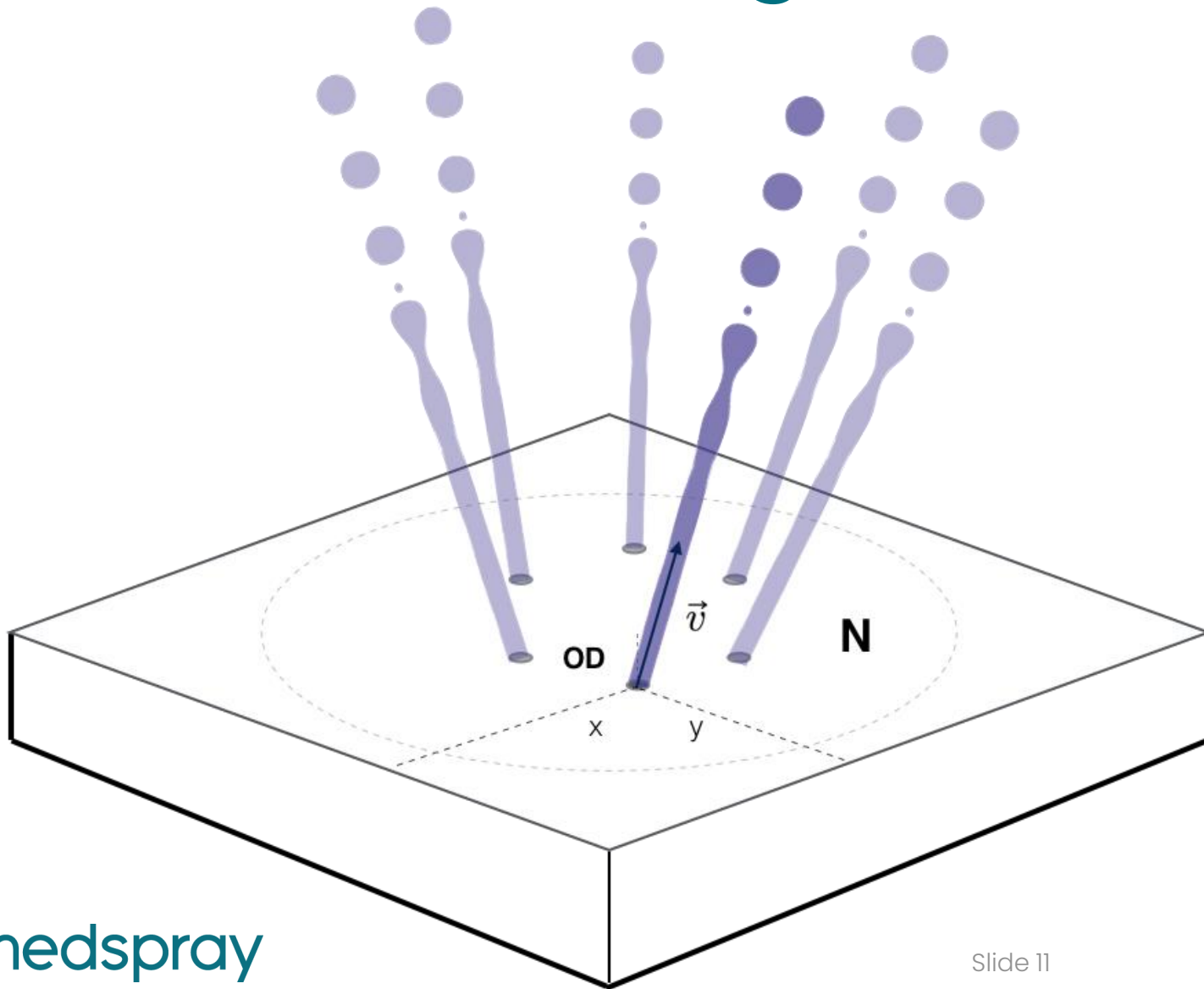
Plain orifice nozzles

Droplet diameter = $2 \times$ orifice / jet diameter

Narrow Particle Size Distribution



Design Parameters



Parameter	Effect
OD	Droplet size, aerosol velocity, liquid flowrate, visual appearance
N	Liquid flowrate, aerosol velocity, particle size, visual appearance
X Y	Plume pattern
Vector	Plume shape, visual appearance



2µm holes



4µm holes



10µm holes



10µm holes



20µm holes



25µm holes

No need for: Alcohol
Propellants

Tuneable spray



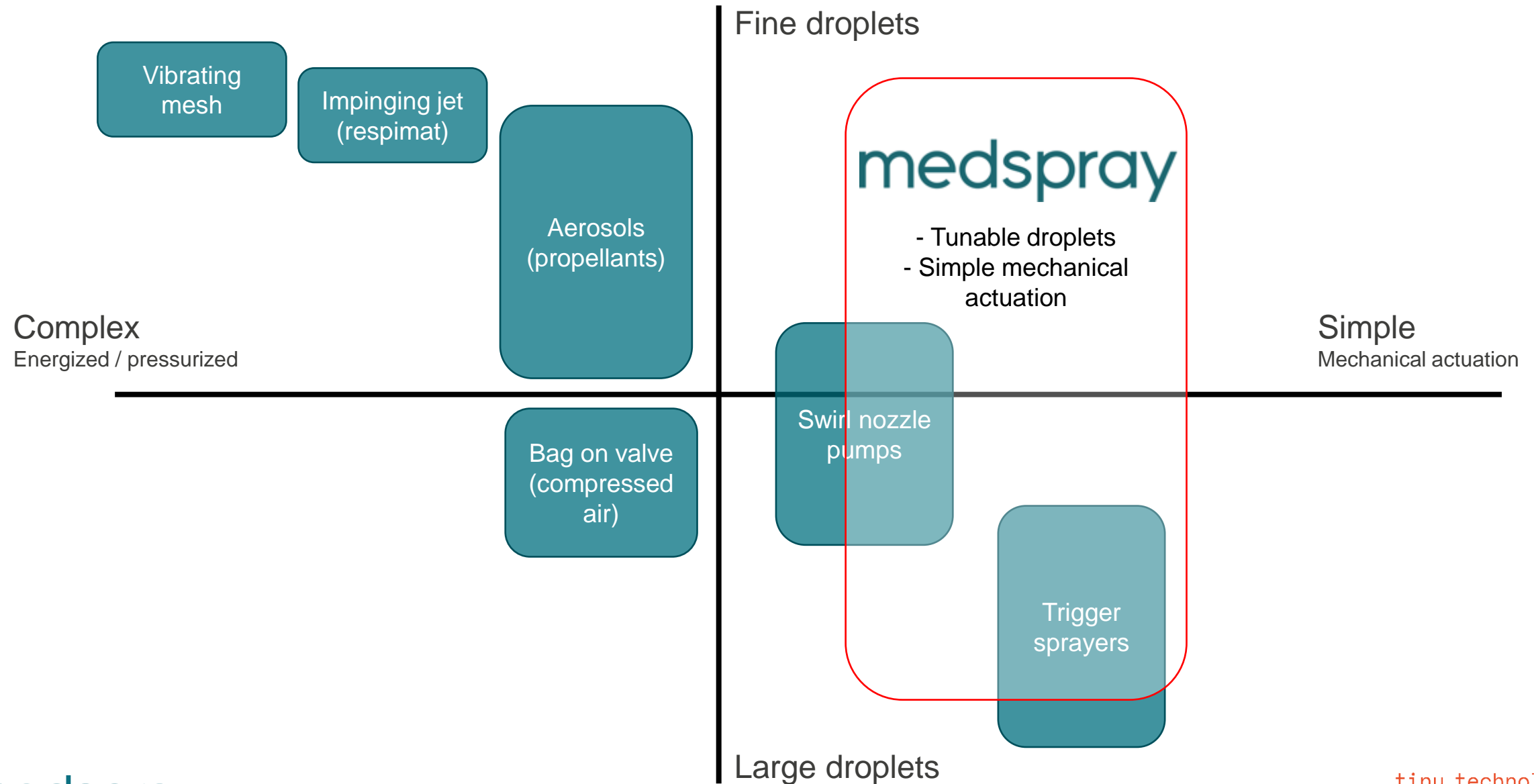
Silent

Extreme fine mist;
soft & dry

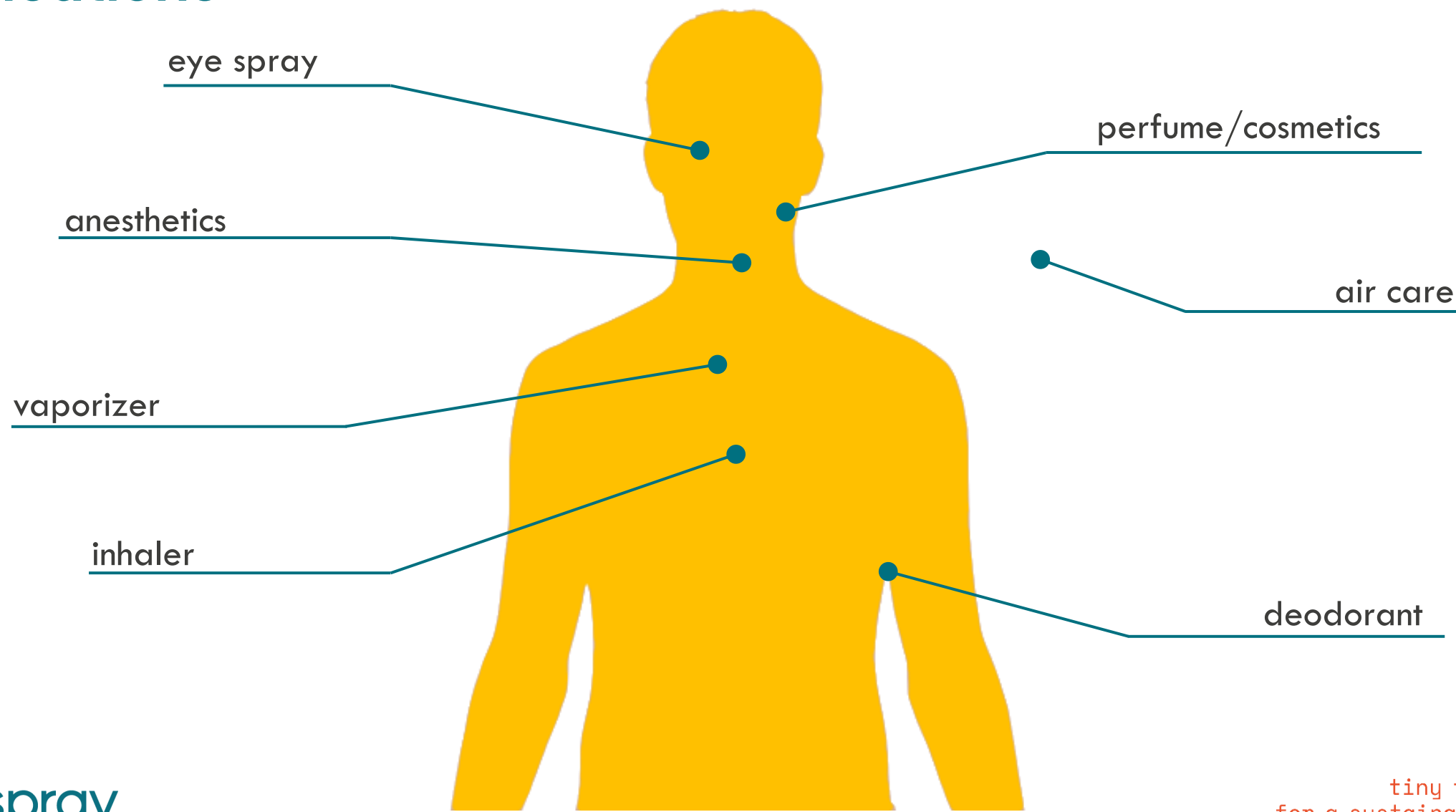
Narrow Particle Size Distribution

- **Medspray Technology**
- **Possibilities**
- **Applications**





Applications



Markets & Applications



Consumer Health (OTC)

Ophthalmic, Nasal, Topical



Pharma

*Pulmonary, Respiratory,
Anesthesia*



Beauty, Home & Personal Care

Cosmetics, Body Sprays, Aircare



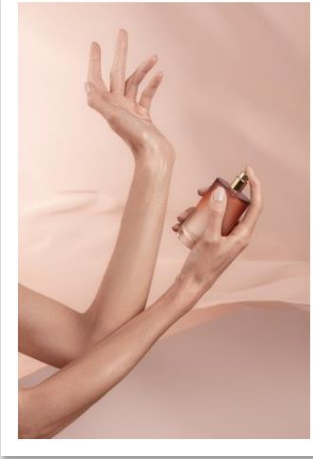
Veterinary Care

Inhalation, Topical, ENT

- **Medspray Technology**
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Selection of Medspray products in the market



Silk

by Aptar

- Aptar's new fine fragrance pump
- Medspray Nozzle inside
- Platform launched in November 2019
- First commercial product launch scheduled Q4 2022

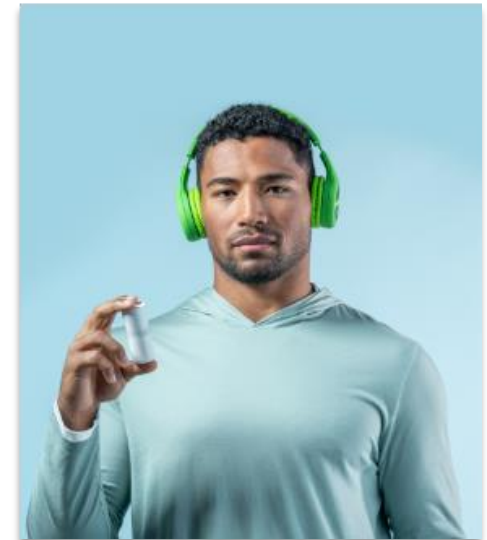
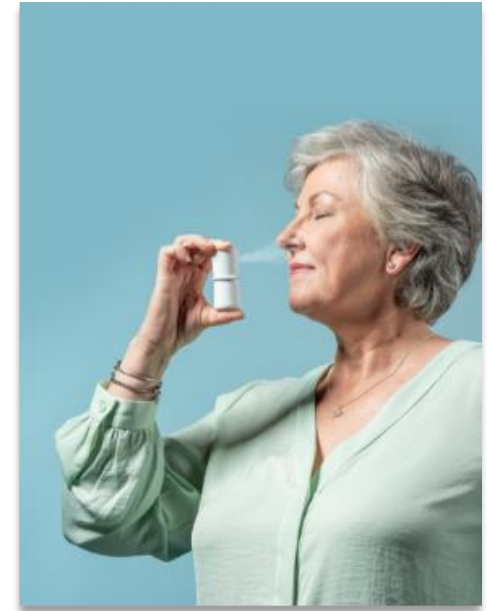


www.aptar.com/products/beauty/silk-inune

Fend

- Delivers NaCl and CaCl in the upper respiratory tract
- For airway hygiene cleaning
- Launched November 2021

www.hellofend.com



 **FEND**

tiny technology,
for a sustainable future



Ecomyst 90

- Soft mist inhaler platform launched with Aero Pump
- Platform directly available at Aeropump
- First launching customer: medical cannabis fine mist inhaler



URSATEC's SoftBreezer® is a new preservative free inhalation system for the application of aqueous solutions.

The novel inhaler features extremely fine nebulization without using propellants. First preservative-free mobile nebulizer for consumer health products such as isotonic saline inhalation solutions. Suitable for all kind of preventive products. The SoftBreezer® spray nozzle unit developed by Medspray is based on highly precise orifices in a small surface.

Pressing water through the SoftBreezer® spray nozzle unit results in multiple jets which will automatically break up in small droplets (Rayleigh principle). The resulting spray mist is mono-disperse which means that all droplets have the same size for good lung deposition. The SoftBreezer® is a manually actuated, pocket size nebulizer device for aqueous solutions, releasing a mono-disperse aerosol, targeting the airways very efficiently. Its preservative-free spray pump is based on Ursatec's proven spray devices used over 20 years. The SoftBreezer® nebulizer system is exceptionally user-friendly. The manually activated preservative-free 3K® pump combines accurate dosing with comfortable handling.

Softbreezer

- Soft mist inhaler platform launched with Aero Pump
- CE certified product in 2021 as medical device with 0.9%, 3.0% and 6.0% NaCl
- Product launch: Autumn 2022

Eyespray

A close-up profile of a woman with dark curly hair, smiling as she sprays a fine mist from a small white bottle into her eye. The mist is visible as a soft, white cloud near her eye.

Fine mist for convenient application
launched with Aero Pump

1. Treating Dry Eye Disorders
2. Spray mist with 10-30 μm droplets
3. Users will barely feel
4. Apply onto the naked eye (no blinking reflex)
5. From close distance (approx. 10 cm)
6. More formulation on eye surface
7. No ethanol
8. Use on the road or at the office
9. Use with contact lenses and make-up
10. Unique contamination barrier (Preservative free)

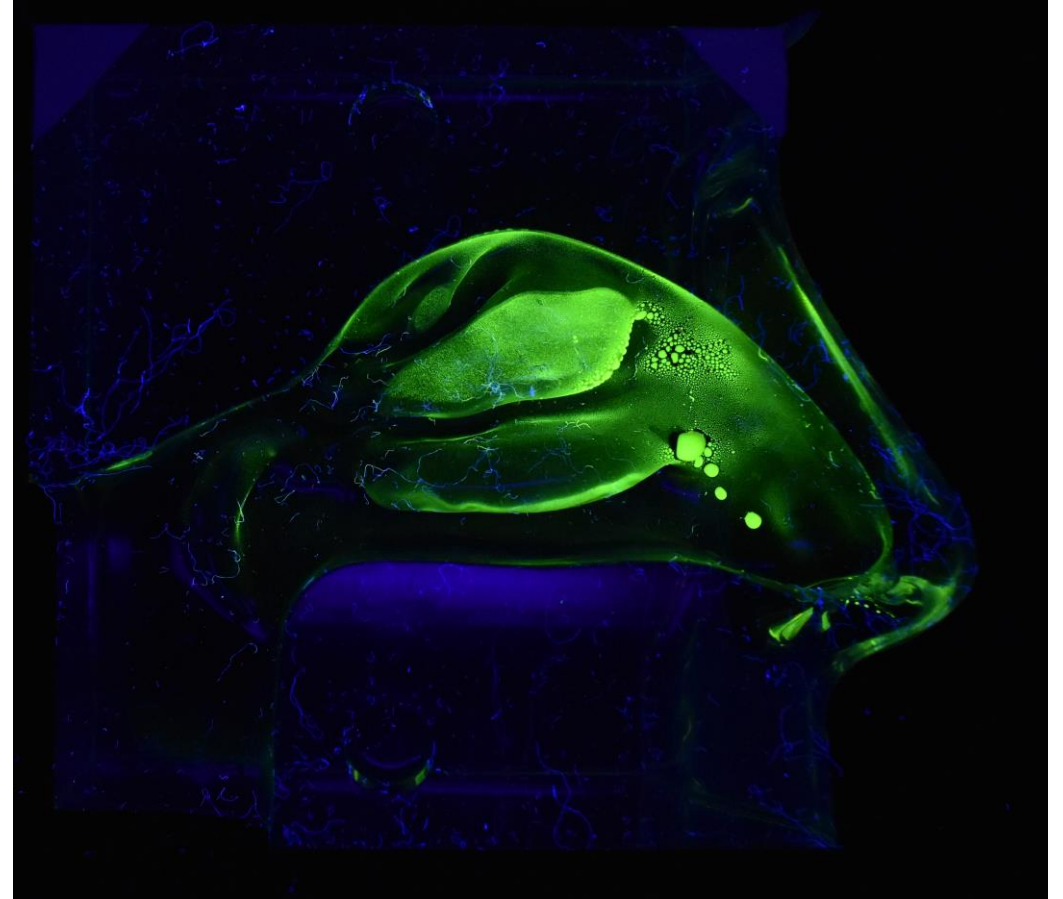
Soft mist Nasal spray



Pump based



Syringe based



Unique deposition pattern due to slow moving and smaller droplets

Purehale

- Cooperation with Aptar Pharma
- Medspray Nozzle inside
- Bag on Valve System
- For upper respiratory delivery



www.aptar.com/products/pharmaceutical/purehale

medspray



Get in touch

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