

# SILVERLAB MESH NEBULISER

Thank you for purchasing this product. Please read the instruction manual carefully and keep it for later use. Be sure to have the manual accessible to other users.



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## 1. Getting to know your instrument

This nebuliser is a mesh-membrane type nebuliser (atomiser) for treating the upper and lower respiratory tract.

The nebulisation and inhalation of medication prescribed or recommended by a doctor or other healthcare practitioner can prevent against ailments of the respiratory tract, treat the side-effects of these disorders and accelerate healing.

For more information on possible applications, consult your healthcare practitioner.

The device is suitable for inhalation at home or in a healthcare facility. Prescription medication should only be inhaled when instructed by a healthcare practitioner.

Inhalation should be performed in a calm and relaxed atmosphere. Inhale slowly and deeply to enable the medicine to reach the small bronchi deep into the lungs. Exhale normally.

## 2. Signs and Symbols

The following symbols appear in these instructions



### **Warning**

Warning instruction indicating a risk of injury or damage to health



### **Important**

Safety note indication of possible damage to the unit/accessory



### **Note**

Note on important information

### 3. Safety information and warnings



#### Warning

- i. Before use, ensure that there is no visible damage to the unit or accessories. When in doubt, do not use the unit and contact your dealer or customer care.
- ii. Using the unit is not a substitute for consultation with or treatment from a healthcare practitioner. Whenever you have any pain or illness, always contact your healthcare practitioner first.
- iii. If you have health concerns of any kind, contact your healthcare practitioner.
- iv. Only use medicines that are suitable or that have been prescribed or recommended by your healthcare practitioner.
- v. If the unit dose is not functioning correctly or if you begin to feel unwell or feel any pain, stop using the unit immediately and contact your healthcare practitioner.
- vi. During use, hold the unit away from the eyes, as some nebulising medicines may cause irritation or damage to the eyes.
- vii. Do not operate the unit in the presence of flammable gases.
- viii. Do not use the device near electromagnetic transmitters.
- ix. This device is not intended to be used by children or persons with restricted physical, sensory (e.g., insensitivity to pain) or mental abilities or persons lacking in the required experience or knowledge for safe operation of the device, unless supervised or instructed by a person responsible for their safety.
- x. Do not dip the unit into water and do not use it in wet rooms. Do not allow any liquid to penetrate the unit.
- xi. Remove the batteries from the device if you will not be using it for an extended period of time. Leaking batteries may damage the device.



#### Important

- i. Store the device in a location protected against environmental influences. The device must be stored in the specified ambient conditions.
- ii. Do not use any liquids that have a viscosity (thickness) greater than 3, as these may damage the metal mesh-membrane irreparably.
- iii. Do not use any medicines in powder form (even if dissolved).
- iv. Do not shake the nebuliser/atomiser, as this may cause liquid to leak, and the device may be damaged.
- v. Unplug the cable from the USB socket after using USB power.
- vi. Switch the unit off immediately if it is defective or malfunctioning.
- vii. The manufacturer shall not be held liable for damage or injuries caused by improper or incorrect use.

## 4. Useful information on the device

### Accessories

The safe functioning of the device can only be guaranteed if the accessories recommended by the manufacturer are used.



**Important**

### Protecting against leaks

When filling the medicine container with medicine, ensure that you do not exceed the maximum mark (8 ml or 8 cc). The recommended filling amount is between 2 ml and 8 ml. During use, you can tilt the device up to a maximum angle of 45 ° in any direction without impairing its nebulising function or the success of the treatment. However, please try to hold the device as upright as much as possible.

### Automatic switch-off

The device has an automatic switch-off function. To prevent damage to the mesh, the device switches off automatically when the medicine/liquid has been almost entirely used up.

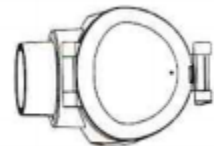
Do not use the device if the medicine container (liquid tank) is empty.

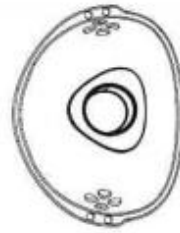
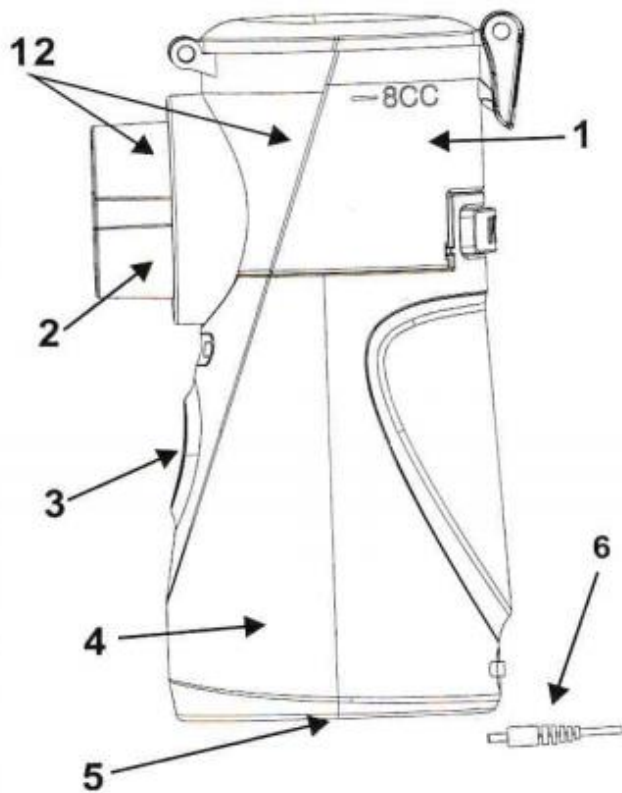
The device switches off automatically if the substance to be sprayed is no longer in contact with the mesh.

From time-to-time it may be necessary to shake out the condensed liquid onto a tissue or cloth. Failure to do so may cause the device to temporarily stop nebulising. This normal condensation build-up is caused by the powerful output of the device.

## 5. Description of device and accessories

- a. For convenience, the following 1. Medicine container, and 2. Mesh atomiser will be called by a joint name: medicine cup module (ref. image 12 below)





7. Adult mask



8. Child mask



9. Mouthpiece



11. Batteries



10 USB cable

1. Medicine container
2. Mesh atomiser/nebuliser
3. On/Off button / Operation LEDs
  - a. Green (left)= device ready
  - b. Red (right) = change batteries / low battery
4. Apparatus body
5. Battery compartment
6. USB connector
7. Adult mask
8. Child mask
9. Mouthpiece
10. Batteries (2 Alkaline AA)
11. USB cable
12. Medicine cup module

## 6. Initial use

### Before using the unit for the first time

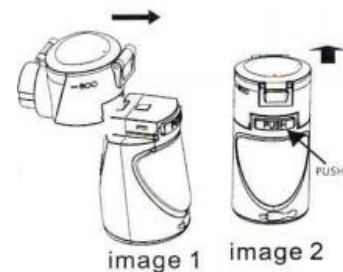


#### Notes

The atomiser and accessories must be cleaned and disinfected before they are used for the first time. For information about this, see “Cleaning and disinfection”.

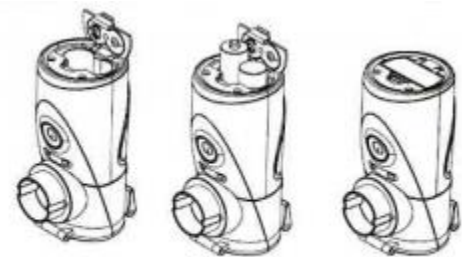
### Assembly

1. Remove the unit from the packaging.
2. Fit the medicine cup module (ref. 12), please press the PUSH button, and pull up the medicine cup module. (image 2)



### Inserting the batteries

1. Open the battery compartment (ref. 5 & image 3) on the underside of the device.
2. Insert ALKALINE or rechargeable batteries (type AA).
3. Ensure that the poles of the batteries are touching their respective poles in the device.
4. Close the battery compartment lid and push it back in place.



Inserting the batteries image 3



#### Notes

1. When changing batteries, ensure that the medicine container is completely empty, otherwise there is a risk of leaks.
2. When the red (right side) LED (ref. 3) lights up, replace the batteries; the nebulising spray becomes much less effective when the batteries are weak.
3. You can operate the device for approximately 60 - 90 minutes with new lithium batteries.
4. If the unit will not be used for a long time, please remove the batteries.

### Operating the device with the USB cable

1. Insert the USB cable into the USB (D/C) connection socket of the nebuliser.
2. Plug the other end of the cable into a USB power source.

## 7. Operation

### Preparing the nebuliser

For reasons of hygiene, it is imperative that the nebuliser and accompanying accessories are cleaned and disinfected after every use.

If the therapy requires that various different medicines be inhaled in succession, ensure that the medicine cup module is rinsed after every use.

### Filling the atomiser

1. Open the medicine container (ref. 1) by opening the clip, and fill the medicine container with **Silverlab ioNano46™** or **Silverlab Daily Immune Booster & Anti-Microbial Liquid**. Do not overfill! The maximum recommended fill amount is 8 ml/8 cc (ref. 1)
2. Use prescription medication as prescribed and advised by a healthcare practitioner and check the appropriate inhalation duration and quantity for your needs.
3. If the recommended dose of the medicine is less than 2 ml, add this quantity to at least 4 ml using only isotonic saline solution. Viscous medicines may also require dilution. Always follow the instructions of your healthcare practitioner. Point 3 here applies to medicine that may be diluted.
4. Close the lid of the medicine container and lock the clip in place (image 7).

### Fitting accessories

1. Attach the accessories (mouthpiece, adult mask or child mask) firmly to the assembled medicine container (ref. 1).
2. Place the device into your mouth and close your lips firmly around the mouthpiece. When using either of the masks, place it over the nose and mouth.
3. Start the device using the on/off button (ref. 3).
4. The spray mist (atomisation) coming from the device and the illuminated green (left) LED (ref. 3) show that the device is working perfectly.

### Inhaling correctly

#### Breathing technique:

1. The right breathing technique is important to ensure that the particles are distributed as widely as possible into the airways. For optimal flow into the airways and lungs, you must inhale slowly and deeply, hold your breath briefly (4 to 6 seconds) and then exhale quickly.
2. In case of a severe respiratory disorder, nebulise under the prescription or supervision of a healthcare practitioner.
3. Certain medicines are only available on prescription, however **Silverlab** products for nebulisation are available without prescription.



### Notes

You should hold the device as upright as possible. Tilting it slightly will not, however, affect its function, since the container is leak proof. To ensure that the device functions correctly, make sure that you do not tilt it more than 45 ° in any direction and that the medicine is in contact with the atomising-mesh while in use. It should take less than 6 minutes to nebulise 5 ml of nebulising liquid.



### Important

Essential oils, cough medicines, solutions designed for gargling and drops for application to the skin or for use in steam baths are wholly unsuitable for inhalation using the nebuliser.

### End of inhalation

1. After treatment, switch off the device using the on/off button (ref. 3).
2. Both LEDs (ref. 3) switch off.
3. Once the inhalant has been fully sprayed out, the device will switch off automatically. For technical reasons, a small amount may still remain in the medicine container.
4. If applicable, disconnect the USB cable (ref. 6 & 10) from the D/C outlet.

## 8. Cleaning and disinfection



### Warning

Observe the following hygiene instructions in order to avoid any health risks. The nebuliser and accessories are intended for multiple use. Please note that cleaning and hygienic reconditioning requirements differ according to the different areas of application.



### Notes

1. Do not put pressure on the metal mesh-membrane with brushes or similar, as this may easily puncture the mesh-membrane, causing irreparable damage and will void the warranty. The metal is very thin and can be punctured easily.
2. Prior to cleaning the body or the medicine chamber, always remove first the battery or USB cable before cleaning as the liquid may leak into the electronic components. Any



**liquid that penetrates into the unit can damage the electrical parts and impair the function of the device.**

**Cleaning:**

1. Remove the mouthpiece and any accessories from the atomiser.
2. Add 6 ml of clean water to the medicine container (ref. 1) and switch on the device to first remove any medicine residue from the mesh. Please use up all of this water.
3. Remove the batteries.
4. If any traces of medical solutions or impurities remain on the gold-coloured contacts on the device and atomiser, use cotton wool to remove them.

**Disinfection:**

First, clean the atomiser and the accessories as described under “Cleaning”.  
Nebulising with **Silverlab ionic<sup>+</sup> Colloidal Silver** itself serves as a disinfectant.  
The masks and/or mouthpiece can be boiled in hot water for 2 minutes after the last nebulisation of the day, or before use by another individual.

**Drying:**

1. Carefully dry all components using a soft, clean cloth.
2. Shake the mesh atomiser lightly backwards and forwards (5 to 10 times), so that the water inside is removed.
3. Place the individual components on a dry, clean and absorbent surface and allow to dry completely (for at least 4 hours).



**Notes**

Ensure that all parts are thoroughly dried after cleaning, otherwise there is an increased risk of bacterial growth.

Once all components are fully dry, reassemble the nebuliser and place the components in a dry, sealing container.

Ensure that the medicine container has dried completely by shaking it, otherwise nebulisation may not function properly after reassembling the device. If this is the case, disassemble the medicine container again and shake it so that the water can escape. Once it has been reassembled, the nebuliser should function properly again as usual.

## **9. Storage**

1. Do not store the nebuliser in a damp atmosphere (e.g., in the bathroom) or transport it together with damp objects.
2. Store and transport the nebuliser away from direct sunlight.

## 10.Troubleshooting

Problem Question	Possible Cause/Remedy
The nebuliser produces little or no aerosol	<ol style="list-style-type: none"> <li>1. Insufficient medicine in the nebuliser.</li> <li>2. The nebuliser is not held in an upright position.</li> <li>3. The medicine used is unsuitable for spraying (e.g., too thick, viscosity must be less than 3)</li> <li>4. The metal contacts between the medicine cup module and body are dirty.</li> <li>5. Condensation has built up. Carefully shake out condensed liquid onto a tissue or cloth.</li> </ol>
Output is too low	<ol style="list-style-type: none"> <li>1. The batteries are flat. Replace the batteries or connect the power supply unit and try again.</li> <li>2. There are air bubbles inside the medicine container which are preventing the medicine from coming into continuous contact with the mesh. Please check and remove any air bubbles.</li> <li>3. Particles on the mesh are impeding/blocking output. To remove the particles, fill the nebuliser with 2 to 3 drops of vinegar and 3 ml to 6 ml water, then nebulise this solution completely. Do not inhale this spray and ensure that you clean and disinfect the medicine container afterwards.</li> <li>4. Tiny metal mesh-membrane is worn out.</li> </ol>
Which medicines are suitable for inhalation?	<p>Only a healthcare practitioner should advise which prescription medicine to use to treat your condition. <b>Silverlab ioNano46™</b> and <b>Silverlab Daily Immune Booster &amp; Anti-Microbial Liquid</b> have been found to be suitable complementary medicine for use in the mesh nebuliser. With a mesh nebuliser, you can only atomise medicines with a viscosity lower than 3.</p>
Some inhalation solution remains in the nebuliser	<p>This is normal and occurs for technical reasons. Stop inhaling as soon as you can hear a marked difference in the sound made by the nebuliser, or when the device switches off automatically due to insufficient inhalant.</p>
What special steps should be taken for babies and children	<ol style="list-style-type: none"> <li>1. In babies, the mask should cover the mouth and nose to guarantee effective inhalation.</li> <li>2. In children, the mask should also cover the mouth and nose.</li> </ol> <p>NOTE: Children should only use the device with help and under supervision of an adult. NEVER leave a child alone with the nebuliser.</p>
Inhalation with the mask takes longer	<p>This is for technical reasons. Less medicine is inhaled per breath through the mask holes than using the mouthpiece. The aerosol is mixed with ambient air through the holes in the mask.</p>

Does each user need their own accessories?	This is absolutely necessary for hygiene reasons.
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## 11. Technical specifications

Power consumption	2,0 W
Input	5 V/1 A
Oscillation frequency	110 kHz +/- 10 %
Condensation rate	≥ 0,2 ml/min
Atomised particles	≤ 5 µm
Volume	Max 8 ml or 8 cc
Product weight	115 g +/- 10 %
Size (L x W x H)	45 x 45 x 100 mm
Housing material	ABS
Operating conditions temperaturesµ	+5 °C to +40 °C
Relative humidity	< 93 % RH non-condensing
Storage and transport temperatures	-20 °C to +50 °C
Relative humidity	< 93 % RH non-condensing

### Distributed by:

Silverlab Healthcare  
 27 Malta Road  
 Cosmo Business Park  
 Roodepoort, 2188  
 SOUTH AFRICA  
[www.silverlab.co.za](http://www.silverlab.co.za)  
 Customer care: +27 83 450 2112  
 Email: [info@silverlab.co.za](mailto:info@silverlab.co.za)

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