



LS-436

Portable Nebulizer



Mesh Technology

Instruction Manual

- English
- 20150508V1

LifeSmart LS-436 Portable Nebulizer - Instruction Manual

Dear Customer,

This manual contains important information you must know about nebulizer.

Please read it thoroughly before use. Always keep this manual with you.

Nebulizer flow rate will be different by different medicine characteristic;
the flow rate may be varied. Besides, when medicine is in low temperature
then flow rate will decrease.

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Intended use

Medical purpose This product is intended to be used for inhaling medication for respiratory disorders..

Intended user Legally certified medical experts, such as doctor, nurse and therapist, or healthcare personnel or patient under the guidance of qualified medical experts.

Environment This product is intended for use in a medical facility, such as hospital, clinic and doctor's office, in a room of general household, and in open-air environment with a roof.

Durable period Durable periods are as follows.
Durable period may vary depending on usage environment.

Main body	1year	Mouthpiece	1year
Medical cup	6 months	Mask	1year

Precautions Warnings described in the instruction manual should be observed.

IMPORTANT SAFETY INSTRUCTIONS **READ THIS BEFORE USING**

When using an electronic appliance, basic precautions should always be followed, including the following.

WARNING:

1. Close supervision is necessary when nebulizer is used by, on or near children, handicapped person or invalids. Besides, the dosage and frequency of the use also has to be specified by the prescribing physician.
2. Do not operate under the blanket or pillow. Excessive heating can occur and cause fire, electric shock, or injury to persons.
3. Use nebulizer only for its intended use as described in this manual.
4. Do not use cotton swabs or other object to touch the mesh; otherwise, your nebulizer will not operate.
5. Do not use different type of batteries in the same time.

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6. Discard the remaining medicine after use. Do not carry or store the product which is remaining from last use.
7. For the type, dose, and regimen of the medication, be sure to follow the instructions of a doctor.
8. Do not immerse the nebulizer in water. Do not clean with wet cloth.
9. Do not use disinfection solution containing sodium hypochlorite.
10. You are advised to place the power adaptor of your nebulizer at proper position so as to easily plug-in or plug-out from the power supply. Nebulizer should remain upright and stable after plugging the power adaptor in it.
11. Do not drop or apply strong shock to the main unit.
12. Do not use any attachments or accessories not recommended by the manufacturer.
13. Discard the waste batteries and device according to local law.
14. When environment temperature raised to 40° the product shelf temperature will raise up to 50°.
15. Do not use nebulizer on top of or close to other electronic device.
16. Do not drop the nebulizer. Do not apply strong shocks to the nebulizer.

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FEATURE:

1. Nebulizer utilizes piezoelectric vibration to turn liquid drug into fine mist which is then sent to the respiratory tract and oral cavity by a venting system so that therapeutic result can be achieved.
2. Compact and easy to carry.
3. Piezoelectric vibration produces 100,000~120,000 vibrations per second.
4. The nebulizer will automatically stop if operated for 20 minutes continuously or when the medicine cup is empty.
5. The nebulizer can be used in different angles. It will still operate normally for shorter duration. It can be used in upside down position too. However, we advise to use nebulizer in upright position.

NOTICE FOR SAFETY OPERATION

To ensure safety, kindly take following precautions:

1. Before using

- Use your nebulizer in the correct manners as outlined in this manual.
- The operational temperature range of nebulizer is 10 °C to 40 °C. The user is advised to use nebulizer between this temperature range only.
- The treatment using nebulizer should be taken only according to the directions given by a physician.
- Before using, please proceed with cleaning procedure described in the cleaning and maintenance procedure.
- If nebulizer operates improperly, please discontinue the use and send it for repairing immediately or consult your dealer.
- If the medical cup is not functioning very well (such as very weak flow rate....etc.), before using, please replace it.

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- Do not add medicine over the indicated line marked on medical cup (8ml marking).
- Do not disassemble or make any modification on this appliance.

2. When using

- Children or disabled patients should be assisted by adults or medical personnel when using nebulizer.
- Do not use nebulizer under a high humid environment (>85% RH)
- Do not use nebulizer when medical cup is empty.
- Keep nebulizer position upright and steady during operation to avoid spillage.
- Do not open the cover of medical cup during operation.
- Keep eyes away from the mist output.
- Kindly follow your Physician's advice during treatment period.
- We advise each patient to use separate individual clean medical cups and mouthpieces in order to avoid cross-infection.

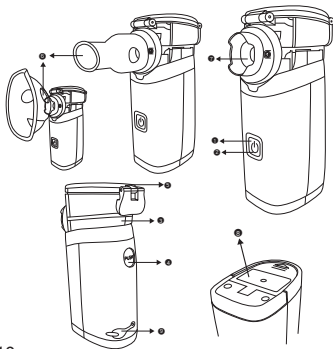
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- Some medicine do not nebulize well, please consult with your doctor.
- Nebulizer has a low-battery indicator. When the indicator light is GREEN, the power is good for working. When the indicator turns to ORANGE, the battery has become weak, you still can use nebulizer, however, it is an indicator that you may need to replace the battery soon. When the indicator turns RED, it means voltage is too low to operate and you need to replace the battery immediately.
- If any irregularity or discomfort is observed during using nebulizer, kindly discontinue the use and consult your Physician immediately.
- This product has a built-in timer which turns off automatically in 20 minutes. If it cannot be turned off automatically, discontinue using and consult your dealer for help.
- When the medical cup is empty, the LED indicator will turn RED and flash three times then turn off automatically.
- You can use your nebulizer at any angle, however, make sure that the medicine has good contact with the mesh.

After using

- Please clean all parts after each usage and follow instructions in the manual.
- Do not immerse nebulizer in water when cleaning to avoid damaging any electrical parts.
- Do not store nebulizer in direct sunlight or outside the suggested storage temperature & humidity.
- Keep nebulizer out of reach of children.

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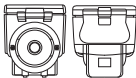


1. Power Button: Press to turn on or off the appliance.
2. Indicator Light: Indicate the power condition. (Green for normal / Orange for battery weak / Red for exhausted battery) If there is no medicine inside, indicator light will turn red and flash three times before turn off automatically. However, the no-medication detector has the possibility of no function if high residual medication is using.
3. Medical Cup: Contain the medicine. (Suggestion: Replace a new medical cup 6 months)
4. Push Button: Push here to release the medical cup from the main body.
5. Medical Cup Cover: Open here to pour the medicine.
6. Mouthpiece or Mask.
7. Mesh
8. Battery Cover: Open here to replace batteries.

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Main body



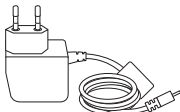
Medical cup



Mask



Mouthpiece



AC Adapter (option)

AC Adaptor brand: FranMar/ model:
FRM06-S03-SU or FRM06-S03-SE

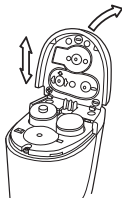
HOW TO USE

1. Ensure the cleanliness of all parts such as mouthpiece (mask) and medical cup before use. Clean these parts if required.
2. Open the battery cover and put in batteries. (The battery life varied by using different brands of battery)

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- Remove batteries if the unit is not in use for longer periods. Failure to do so could result in damage due to battery leakage.
- Discard the waste batteries according to local law.
- Open the medical cup cover and pour the medicine into medical cup and close the cover completely.
- Install mask or mouthpiece properly and start using your nebulizer.



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- Your nebulizer starts working when the power button is pressed. The GREEN light will turn ON and the built-in timer shall start countdown to 20 minutes.
- When the indicator light turns ORANGE it indicates that batteries are weak, RED indicates the batteries are exhausted and need replacement immediately.
- If there is no medicine inside the medical cup, indicator light will turn red and flash three times before the appliance turns off automatically.

CLEAN AND MAINTAINANCE NOTICE

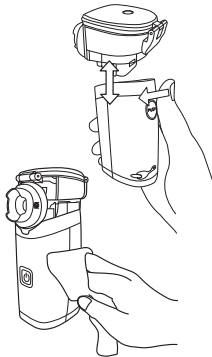
The steps of cleaning and maintenance.

After each use, please follow below procedures to clean and maintain.

1. Open the medical cup and pour hot water (temperature not more than 70 °C).
Close the medical cup cover and shake for 30 seconds.
2. After step 1, power on the device and operate for 1 minute.
3. Discard the remaining water from the medical cup and then wash and rinse the medical cup with clean water.

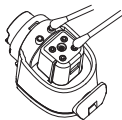
Repeat step 1 to step 3 three times.

4. After cleaning, put the medical cup in clean and dry place and let it get dried naturally.



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5. Use clean cotton cloth and cotton swab to clean main unit.
6. Use clean water to wash nozzle and mask, keeping it in a clean and safe place after wiping by a medical grade cotton cloth.

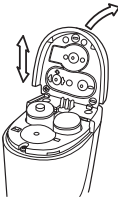


Warning

1. Individual patient shall use his personal mouthpiece, medical cup and mask to avoid cross infection.
2. Please do not use over 70°C water to clean the mask.
3. If atomizer clogging persists after cleaning process, please change to a new medical cup.
4. Follow doctor's instructions to use medicine.
5. Do not use cosmetic products, essential oil or any related essence products.
6. Clean medical cup thoroughly, otherwise atomizer would be clogged.
7. Do not use volatile liquid for cleaning, for example: Benzene, alcohol, diluent etc.

TROUBLE SHOOTING

After checking the followings, if any problem still persists, please return nebulizer to your dealer for servicing.

Cause of failure	Causes and reaction measures
Push power button, but no operation	<p>1. Check if the battery voltage is sufficient?</p> <p>When nebulizer red indicator light is on, the battery power is too low. Please replace the battery immediately.</p> <p>2. Discard the waste batteries according to local law.</p> <p>⚠ 1. Check the battery is installed correctly?</p> <p>Open battery cover and check if the battery electrode is rusted or not.</p> 

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<p>Cannot nebulization or not enough mist output</p>	<ol style="list-style-type: none">1. Check if the medical cup is filled with appropriate amount of medicine?2. Check if the mesh in medical cup is blocked by remaining medicine. If yes, then clean the medical cup. If the problem persists, replace the medical cup.3. If mesh surface is covered with water or medication then remove water or medication from mesh surface.4. Medical cup is not installing properly. Release the medical cup from main body and push it back again. <p>Suggestion: Replace a new medical cup 6 months.</p>
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THE ACCESSORIES

Item	Mode no.	Size
Child Mask	PY-001-MS	87.22 x 64.35 x 57 mm
Adult Mask	PY-001-ML	123 x 77 x 68.5 mm
Mouthpiece	PY-001-MP	43 x 27.5 mm
Medical Cup (Gray)	PY-001-MCG	70 x 43.5 x 47.5 mm
Medical Cup (Blue)	PY-001-MCB	70 x 43.5 x 47.5 mm
AC Adaptor	PY-AE/AU	95 x 44 x 65 mm

ELECTROMAGNETIC COMPATIBILITY

Many electronic devices are used in our near environment. Your nebulizer is susceptible to electromagnetic interference from these electronic devices. These interferences may cause incorrect functioning of the nebulizer and can generate unsafe situations. In order to prevent such unsafe situations, your nebulizer is designed and tested according to EN60601-1-2 standards. These standards define the levels of immunity to a device from electromagnetic interference as well as maximum levels of electromagnetic emissions from the medical device. The electromagnetic emissions of your nebulizer are extremely low, however, special precautions should be observed:

- It is recommended that you do not place the device on top of or close to other devices (such as mobile phone). Should you notice any interference with other electrical devices, keep the device away from those electronic devices.


EMC Declaration Sheet

Guidance and manufacturer's declaration-electromagnetic immunity			
This device is intended for use in the electromagnetic environment specified below. The user of this device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge(ESD) IEC 61000-4-2	$\pm 6\text{kV}$ contact $\pm 8\text{kV}$ air	$\pm 6\text{kV}$ contact $\pm 8\text{kV}$ air	Floors should be wood,concrete or ceramic tile.If floors are covered with synthetic material, the relative humidity should be least 30%.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels characteristic of typical location in a typical commercial or hospital environment.
NOTE <i>UT</i> is the a.c. mains voltage prior to application of the test level.			

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Guidance and manufacturer's declaration-electromagnetic immunity			
This device is intended for use in the electromagnetic environment specified below. The user of this device should assure that it is used in such an environment.			
Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Radiated RF IEC61000-4-3	3V/m 80MHz to 2,5GHz	3V/m	<p>Portable and mobile RF communications equipment should be used no closer to any part of this device, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.</p> <p>Recommended separation distance</p> $d = 1,2 \sqrt{P}$ $d = 1,2 \sqrt{P} \quad 80 \text{ MHz to } 800 \text{ MHz}$ $d = 1,2 \sqrt{P} \quad 800 \text{ MHz to } 2.5 \text{ GHz}$

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Radiated RF IEC61000-4-3	3V/m 80MHz to 2,5GHz	3V/m	<p>Where P is the maximum output power rating of the transmitter in watts(W) according to the transmitter manufacturer and d is the recommended separation distance in metres (m).</p> <p>Field strengths from fixed RF transmitters,as determined by an electromagnetic site survey ,a should be less than the compliance level in each frequency range.b</p> <p>Interference may occur in the vicinity of equipment marked with the following symbol:</p> 
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NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

- a Field strengths from fixed transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which this device is used exceeds the applicable RF compliance level above, this device should be observed to verify normal operation. If abnormal performance is observed, additional measures may be necessary, such as reorienting or relocating this device.
- b Over the frequency range 150 KHz to 80 MHz, field strengths should be less than 3 V/m.

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Guidance and manufacturer's declaration-electromagnetic emissions		
This device is intended for use in the electromagnetic environment specified below. The user of this device should assure that it is used in such an environment.		
Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group1	This device is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
RF emissions CISPR 11	Class B	
Harmonic emissions IEC 61000-3-2	Not applicable	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Not applicable	

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Recommended separation distances between portable and mobile RF communications equipment and the ME EQUIPMENT or ME SYSTEM

The ME EQUIPMENT or ME SYSTEM is intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the ME EQUIPMENT or ME SYSTEM can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the ME EQUIPMENT or ME SYSTEM as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = 1,2 \sqrt{P}$	80 kHz to 800 MHz $d = 1,2 \sqrt{P}$	800 MHz to 2.5 GHz $d = 2,3 \sqrt{P}$
0,01	0,12	0,12	0,23
0,1	0,38	0,38	0,73
1	1,2	1,2	2,3
10	3.8	3.8	7,3
100	12	12	23

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







For transmitters rated at a maximum output power not listed above, the recommended separation distance d in metres (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (w) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

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SYMBOLS DESCRIPTION

	Warning
	Symbol for Type BF applied part (Mouthpiece or Mask)
	Direct current
	Read the documentation symbol
	Batch Symbol
	Serial number Symbol
	Manufacturer
	EC Representative Symbol
	CE marking of conformity (the number represents the code of notify body)
	Reference number
	WEEE symbol, this indicates that it should not be disposed of, with other household wastes at the end of its working life
	Protection against solid foreign object of 12.5 mmØ and greater and protection against vertically falling water drops when enclosure tilted up to 15°

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TECHNICAL DATA

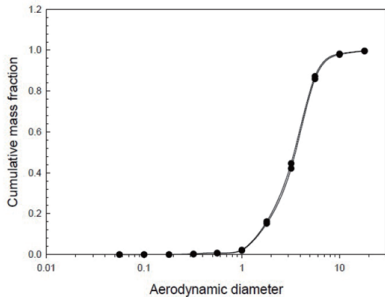
Model Number	LS-436
Power Supply	1.5V X 2 AA Size Alkaline Battery or AC adaptor (optional), Adaptor brand: FranMar / model: FRM06-S03-SU or FRM06-S03-SE; Input: 100~240VAC, 0.3-0.15A, 50-60Hz/Output: 3VDC, 1.33A
Power Consumption	< 2W
Active current consumption	< 650 mA
Standby current consumption	< 0.35 mA
Battery life	Continue operation: 1.5 hour (min) for brand new 1.5V X 2, AA Alkaline battery or Ni-MH rechargeable batteries (option)
Full battery indication	Green light
Weak battery indication	Orange light
Low battery indication	Red light

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Operation environment	10°C~40°C, 30%~80%RH
Storage / Transportation	-20°C~70°C, ≤85%RH
Nebulization rate	0.2ml/min~1.0ml/min (max)
Particle size	About 5μm (MMAD)
Time AUTO-OFF	Power on, operate 20 min. Then auto-off
Nebulizer AUTO-OFF	No medication and no power
Medical cup volume	2~8ml (max.)
Mesh Oscillation Frequency	103KHz~123KHz ±1KHz
Reusable parts life	Medical cup: 6 months, Mask, Mouthpiece: 1 year According to reliability test result-one time per day

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Particle size



The method of measuring particle size is according to EN 13544-1:2007 Annex CC

- Particle size: about 5μm
- Nebulization rate: within 0.2~1.0 ml/min (by weight loss)
- Aerosol output: 0.866 ml (2ml, 1% (M/V). NaF)
- Aerosol output rate: 0.102 ml/min (2ml, 1% (M/V). NaF)
- Sound: Less than 30dB

Manufactured For: GENESIS BIOTECH PTY LTD

Address: Level 1, 16 McDougall Street, MILTON QLD 4064 AUSTRALIA

www.mylifessmart.net.au

CONTACT US

For Australia & New Zealand customers

support@mylifessmart.net.au

Australian customers 1300 110 155



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Taipei, Taiwan, R.O.C.

TEL: 886-2-26270630

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E-mail: service@puyuan-bio.com

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Obelis s.a.

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1030 Brussels

Belgium

E-mail : mail@obelis.net

C €0120

LifeSmart Portable Nebulizer Warranty Card

The manufacturer warrants to the original retail purchaser that nebulizer will be free from defects in materials and workmanship for 1 year from the date of the original purchase (medical cup : 6 months). During the period, we shall, at no charge, repair or replace a unit found to be defective with an equivalent or current version of the original warranty expiration or ninety (90) days after shipment of the repaired or replacement system, whichever period is longer. This warranty is limited to replacement due to defects in parts or workmanship. Failure of the device due to damage by accident, abuse, or use not in accordance with the instructions is not covered by this warranty.

Manufacturer	Local distributor
Pu Yuan Biotech Co., LTD. 4F., 4F.-1, No.51, Ln. 35, Jihu Rd., Neihsu Dist., Taipei City 11492, Taiwan (R.O.C.) TEL: + 886-2-2627-0630 / FAX: + 886-2-2627-0636	

Dealer(Stamp)

Name : _____

Address : _____

Telephone Number : _____

E-mail Address : _____

Nebulizer Serial Number : _____

Date of Purchase : _____

Purchased Form(Dealer Name) : _____



LifeSmart Portable Nebulizer Warranty Card

From:

Stamp:

To:

