

**MICERIUM – LABORLUX3
LIGHT CURING UNIT**

INSTRUCTIONS FOR USE AND MAINTENANCE

Micerium S.p.A. thanks you to have bought a product of its own brand and asks you to read this handbook .
Inside you'll find all the necessary information for a correct use of the acquired unit, the user is consequently requested to follow with attention the included instructions and to read the entire handbook.
In addition it should be kept in a suitable place to maintain it unchanged.
The substance of this handbook can be modified without warning, or further obligations, with the purpose of including alterations and improvements to the already delivered units.
It's forbidden to copy or to translate any parts of this handbook without written advice by the owner.
Don't use the unit for any other purposes than the ones it was designed for.
The eligibility is published by the affixing of the data plate representing the CE mark on the unit and by the herewith enclosed declaration of conformity.

CE DECLARATION OF CONFORMITY

WE

**MICERIUM SPA
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DECLARE UNDER OUR EXCLUSIVE RESPONSIBILITY THAT THE PRODUCT :

LABORLUX LIGHT CURING UNIT
MODEL: LABORLUX3

WHICH THIS DECLARATION IS REFERRED TO, IS IN COMPLIANCE WITH WHAT IS ESTABLISHED BY THE DIRECTIVES:

**2006/42/CE (MD)
2014/30/UE Electromagnetic compatibility
2014/35/UE (LVD)
2011/65/EU(2016/1029/EU)- RoHS
2012/19/EU-(WEEE)
AND FURTHER MODIFICATIONS**

Avegno (GE) October 2017

(Dr. Eugenio Miceli)



SAFETY DIRECTIONS

Read and keep these instructions

Look out! : with the use of electric tools and to avoid contacts with electric power, injuries and danger of fire, the following safety directions must always be observed.

Read and observe these indications before using the unit and keep with care these directions.

Please note that owner has to ensure that the operating personnel is:

-introduced to all safety devices of the unit.

-trained according to safe working methods

-supervised concerning the carrying out of safety regulations

This personnel has to be provided with the adequate tools and testing devices

An area of at least 0,5 m (approximately 2 feet) around the unit is to be declared a danger zone, as this is the area in which the personnel does all work.

1. **Keep your working place in order** - Disorder on the working place may cause accidents.
2. **Environmental conditions** - Don't expose electric tools to the rain. Don't use electric tools in wet or soaked places. Take care of good light conditions. Don't use electric tools near inflammable liquids or gas.
3. **Avoid electrification** - Avoid contacts with earthing objects, for ex. tubes, radiators, refrigerators.
4. **Keep children away** - Don't let third persons touch the unit or the cord, keep them far from the working place.
5. **Put your tool in a safe place** - Put your unit in a dry and safe place in order to not be accessible by children.
6. **Don't overload your tool** - You'll work better and safer using the rating plate's power.
7. **Choice of the unit** - Don't use low power tools or accessory that must be used with high power. Don't use tools for work and purposes to which they aren't designed.
8. **Work attire** - During working, always dress properly, avoiding the use of loose-fitting dresses or too large sleeves.
9. **Use safety glasses** - Always use protective glasses. If you should work on something that produces dust, use a mask.
10. **Pay attention to the cord** - Don't lift the tool by the cord and don't use it to pull off the plug from the tap. Avoid contacts between the cord and high temperatures, oils, edges.
11. **Placement of model** - Be sure that the material to be cured on the model is placed in the middle of the light curing chamber.
12. **Avoid unsafe positions** - Be sure to stay in a safe position, in order to maintain a good balance.
13. **Take care of your tools** - In order to work in a safe way, sharper and clean your tools, follow the assistance prescriptions.
Often control the cord and, in case of damages, have qualified people change it. Control regularly the extension cords and change them if they are damaged.
14. **Changing of bulbs** - Before making repairs and changing of bulbs, always pull off the plug from the power tap.
15. **Don't leave service keys on the unit** - Before using the tool be sure that service keys are taken away.
16. **Avoid unworked starting** - Before You put the plug in the power tap be always sure that the switch is off.
17. **Don't use the unit in open places** - The unit must be used in well lighted and only indoors.
18. **Always be careful working** - While working, don't be distracted. A lack of attention can cause accidents. In presence of other people in the working place, we recommend to maintain a suitable distance from the operator and the unit, in order to avoid unwanted and unintentional contact with materials during curing procedure.
19. **Always control that the tool isn't damaged** - Before using the unit, check with attention its efficiency and the perfect working of the safety devices and if necessary of damaged parts.
Control the efficiency of the movable parts, that they aren't blocked, that there aren't broken parts, that the others are assembled in a right way and that all the conditions that could influence the correct efficiency of the unit are optimal. Safety devices or damaged parts must be repaired or changed by an Authorized Centre of Assistance if different indications aren't given.
20. **Watch out!** - For your safety use only tools or accessories indicated in the direction for use or offered in proper catalogues. The use of different accessories or using tools, or anyway not indicated in the direction for use or in the catalogue, may cause accidents.
The producer declines any responsibility for damages caused by the use of not original parts or accessories. Replacement parts are always replaced together. Their reparation is not possible.
21. **Have qualified people change the tools** - This electric unit is in conformity with the safety directions in force. The repair of electric tools must be done only by authorized centres of assistance.

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1.0 TECHNICAL FEATURES

1.1 DATA SPECIFIC TO THE PRODUCT

Light hardening synthetic dental material

1.2 DIMENSIONS AND WEIGHT

Depth:	300 mm
Width:	220 mm
Height:	290 mm
Weight:	9,7 kg

1.3 ELECTRIC VALUES

Power supply voltage	230 V
Output	330 W
Phase number	1 Phase N+PE
Mid-point conductor/neutral	N - stable under load
Protective conductor	separate protective conductor(PE) (GREEN - YELLOW)
Protective class	1
Kind of protection	covered
Frequency	50 / 60 Hz
Fuse protection	4 A (medium)
Spectral area	310 - 500 nm
Light source	300 Watt halogen bulb MHL/MH projector, life about 400 hours (ref. LABORLUXL-L) 2 x 9 Watt fluorescent UV bulbs (ref. LAMPADINE)

1.4 GENERAL DATA

Environmental temperature	5 - 50°C
Humidity	max 65%
Noise level	< 70 dB (A)

1.5 TESTS ACCORDING TO VDE 0701

The appliance was tested before delivery:

- Permanent connection of the protective conductor
- Visual inspection
- Check of stable connection of protective conductor
- Functional test

1.6 SYMBOLS ON EQUIPMENT AND/OR ON BOX - DISPOSAL OF THE UNIT

Caution. Specific warnings and precautions associated with this device



See instructions for use



Product reference



Serial number followed by device model



Information to Users

This product is covered by the European Directive 2012/19/UE, for the reduction of the use of hazardous substances in electrical and electronic equipment, and disposal of waste.

The symbol of bin crossed reported on your equipment or its packaging indicates that the product at the end of its useful life must be disposed separately from other waste.



A separate collection of this equipment arrived at the end of its life is organized and managed by the manufacturer. If you want to get rid of this equipment, please contact the manufacturer and follow the system that he has chosen to allow separate collection of the apparatus arrived at the end of its life.

A proper separate collection for the next launch of the disused equipment to recycling, treatment and environmentally compatible disposal helps to avoid possible negative effects on the environment and on health and promotes reuse and / or recycling of materials composing the equipment. The illegal disposal of the product by the holder includes the application of administrative sanctions provided for by law.

2.0 DEVICES OF CONTROL

2.1 OPERATIONAL ELEMENTS

Door of the working area

Fan

Working area

Rotating plate

Switch On/Off button

Start/Stop program

Timer buttons

2.2 FUNCTIONAL ELEMENTS AT THE BACK OF DEVICE

Cover for ventilator

Power socket for cold appliance connection cable with dual polarity fuse holder

3.0 GENERAL INDICATIONS ABOUT THE UNIT

LABORLUX3 is a light curing unit ideal for polymerization of resins that cure under UVA or visible light: light curing composite, light curing trays, light curing resins for crown and bridges (also soft liners) and stains. The unit is made by:

- Light curing unit
- Curing elements: one 300 Watt bulb and two 9 Watt fluorescent removable bulbs.

Enclosed Accessories:

- Electric cord with a tap EN 60320-C13 and a SCHUKO plug
- Transparent appliance holder with metal pins

4.0 TRANSPORT AND PACKAGING

All units and systems are thoroughly checked and carefully packed before dispatch, however, damages during transport cannot be ruled out.

Check at the arrival:

- Check the completeness at the delivery by use of the delivery note.

If the packaging material is damaged

- Check if the goods have been damaged as well (visual check)

In case of any complaints

If the delivery has been damaged during transport:

- Contact the last shipping agent. Time limits for claiming damages of the packing material are: transport by train-one week, transport by mail- 24 hours, and transport by shipping agency- four days.
- Keep the packing material (for a possible check by the shipping agency or for returning the unit).

5.0 INSTALLATION OF THE UNIT

5.1 INSTALLATION

- Remove the unit from the package by at the opening side taking care of not to collide against the door.
- Check that all the parts of the unit are whole (SEE 3.0). If this should not be the case, immediately contact the retailer (SEE 4.0).
- Lay the unit on a fixed plane in a well lighted and dry place and, free with space of at its sides, at least 30 cm.
- Tighten the two UV bulbs which are sent disassembled and apart.

5.2 INDICATIONS ABOUT THE USE OF THE UNIT

The operator must be in front of the unit.

Concerning the use of the unit, follow these operations chronologically:

- Switch on power switch in the back of the device. It displays a green light.
- Open the door to working area, insert the model with the material to be cured on rotary table inside the unit.
- Select recommended exposure times (SEE 7.0) with the dial minutes/seconds.
- Close the door to working area securely
- Press "start/stop" button firmly(start occurs once button has been released).
- If required, terminate polymerization process prematurely by using the start/stop button
- Wait for signal tone at end of polymerization cycle, the open door to working area
- Remove polymerized material
- Close covered
- Delay/waiting time before next polymerization process: minimum one minute

LOOK OUT: Before starting the polymerization close carefully the door, otherwise the bulbs will not switch on.

5.3 LIGHT CURING IN TRANSPARENT TENDER FLASK

When using transparent Tender Flask, remove the two fluorescent bulbs before inserting the flask in order to allow the rotation. If the two bulbs remain inserted, the flask will not be able to turn and the light will not reach all the appliance.

When using the Tender Flask Magnetic with high cover, it is necessary to lower the rotating plate. To do this, release the black knob on the cylinder which supports the plate, extract the block, unscrew the screw on the plate: at this point the plate will separate from the cylinder, then loosen the upper part of the cylinder from the lower one. Replace the plate on the lower part of the cylinder fastening it with the screw and apply the lowered block again into the unit, blocking it with the black knob. Keep the unused cylinder to restore the high position of the plate when using a lower flask or when light curing directly without the flask.

6.0 MOVEMENT

Keep the package of the unit that will be useful if you have to move it to a different working place.

In this case, follow the operations indicated below .

A. Switch off the unit, disconnect the electric plug and later pull it out of the unit.

B. Put in the electric plug and the handbook of the directions for use and maintenance , then put on the cover and close the box .

7.0 LIGHT CURING TIME

This unit is equipped with 1 bulb of 300 Watt (type projector MHL/MH, with a lifetime of about 400 hours) and two fluorescent bulbs for 9 Watt.

Following time are approximate and could be different changing manufacturer or type of curing material. Here we have some examples:

PRODUCT		TIME
Individual trays	(ex. DSIMP Micerium)	5 min. on model +1 min. on back side after taking away the model
Polishing varnish for resin		9 min.
Enamel Plus TEMP light curing liquid		3 min.
Stains	(ex. Enamel Plus acrylic Stain) (Ex. Primer)	3 min. 1 min.
Acrylic liner	(ex. Perform Soft)	15 min.
Composite:		
Dent.-enamel	(ex. Enamel plus HFO)	90 sec. intermediate polymerization 5 min. 30 sec. Curing in Tender Flask 6 min. final polymerization 5 min. colour fixing
opaque	in powder (ex. Temp Opaque) in paste (ex. Tender Opaque)	4 min. for light colours, 7 min. for dark colours 3 min.
bonding	(ex. Temp Bonding Fluid)	90 sec.

8.0 PERIODICAL MAINTENANCE BY THE OPERATOR

All the operations for maintenance must be done when the unit is stopped, disconnected by the mains supply.

8.1 MAINS SUPPLY CORD

Control periodically the conditions of the power cord. If it is damaged, make qualified people change it.

8.2 LIGHT CURING CHAMBER CLEANING

Keep a good cleaning maintenance, above all the mirror and the rotary-plate, with alcohol, in order to avoid any contamination of materials and to allow a better reflection effect of the unit walls. Do not clean casing with aggressive cleaning products.

8.3 CHANGING OF THE BULBS

LOOK OUT: before changing the bulbs switch off the unit and pull off the plug from the power tap. The replacement of the metal vapour lamp assumes a fully cooled down appliance, since otherwise burning is unavoidable.

8.3.1 CHANGING OF THE 300 W BULBS

The built-in metal vapour bulb has a lifetime of approximately 400 hours. After this point, the light intensity gradually diminishes and the bulb should be renewed.

IMPORTANT: only bulbs from the original manufacturer should be used.

8.3.1.1 CHANGING OF THE FLUORESCENT UV BULBS (REF. LAMPADINE)

Before changing the two fluorescent UV bulbs pull off the plug from the power tap.

This kind of bulbs should be renewed when the area near the lamp sockets tends to become darker.

Wear protective gloves in case the bulb breaks during removal.

Open the front door and remove the bulbs pulling them towards the operator, the connection is a G23 bayonet fitting, do not rotate the bulbs.

For reassembling just insert the new bulbs into the lamp sockets applying a slight pressure.

8.3.1.2 CHANGING OF THE HALOGEN BULB (REF. LABORLUXL-L)

Before changing the halogen bulb pull off the plug from the power tap.

This kind of bulb has a lifetime of approximately 400 hours. After this point, the performance is no longer guaranteed.

Wear protective gloves in case the bulb breaks during removal.

Proceed as follows:

1° Open the front door

2° Remove the two fluorescent bulbs as described above

3° Remove the protective glass from the frame pulling it towards the operator

4° Move the bulb laterally (to the right or to the left) in order to release one end of the lamp socket and lower the bulb to remove it

For assembling the new unit follow the above indicated instructions backwards.

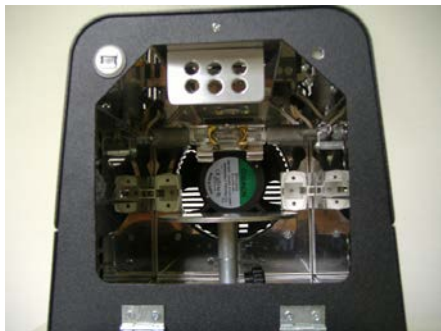
In case of malfunctioning see chapter 9.0 "TROUBLE SHOOTING GUIDE".



Picture 1



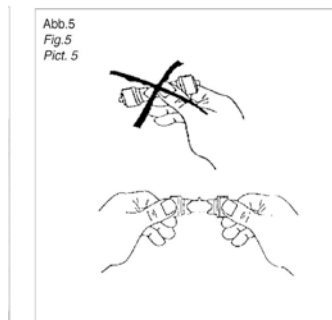
Picture 2



Picture 3



Picture 4



Picture 5

9.0 TROUBLE SHOOTING GUIDE

Problem	Remedy
1) Power switch not lits up / no power supply	-Check power connection with the unit and the grid - Check the fuses -Check power supply
2) Light source does not work correctly	- The burner is not inside or is not properly connected: insert the burner - The door is not properly closed: close the door - If it doesn't work in any case, contact the Assistance
3) Material does not cure	- Check if the burner work properly and that it's not used from more than 400 hours. Replace the burner

10.0 MAKER' S LIMITED GUARANTEE

The guarantee is limited. Micerium S.p.A. guarantees that the light curing unit LABORLUX3 operated by electric engine is free from imperfections of material and processing for a year from the purchasing date.

The guarantee is valid only if the product was bought from Micerium SpA or authorized retailers.

This guarantee isn't valid if the product was used in an illicit way, if was altered, changed or repaired by unauthorized personal by Micerium S.p.A. or by unauthorized services' agents.

In the case that the product shows, in one year from the purchasing, imperfections of material or processing it must be sent to Micerium S.p.A. or to an authorized by Micerium S.p.A. service's centre, paying the travelling expenses, enclosing name, address, purchasing date's proof and a short declaration of the noticed imperfection.

Micerium S.p.A., at its choice, will repair or change the imperfect product without any expense by the purchaser.

Possible repairs or changes are guarantee in the above described way for the rest of the original guarantee time. The guarantee is limited to the repair and change of the imperfect product.

(There are no other implicit or explicit guarantees and in addition Micerium S.p.A. will be not responsible of casual or special damages or of other damages, costs or expenses except the ones of repair or change as above described).



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