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Congratulations!

You have just acquired an Anthélia® Médicale machine, one of the most performing of its class, for hair-removal and skin treatments.

Despite all the care brought to its manufacturing, if you meet a problem when starting or operating the machine, please contact your local distributor. He is the privileged interlocutor between yourselves and EUROFEEDBACK, manufacturer of the Anthélia® Médicale range. In case of problem, your distributor will be able to help you find a solution.
# 1. List of the Supplied Components

<table>
<thead>
<tr>
<th>Component</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator’s Manual (this document)</td>
<td>1</td>
</tr>
<tr>
<td>Anthélia® Médicale Light Generator</td>
<td>1</td>
</tr>
<tr>
<td>Mains power cable</td>
<td>1</td>
</tr>
<tr>
<td>Applicator</td>
<td>1</td>
</tr>
<tr>
<td>Dummy connector</td>
<td>1</td>
</tr>
<tr>
<td>De-ionization/filter cartridge (already in the tank)</td>
<td>1</td>
</tr>
<tr>
<td>2 liters demineralized water</td>
<td>2</td>
</tr>
<tr>
<td>Fuse cartridges T10A for 115 V a.c. operation only</td>
<td>2</td>
</tr>
<tr>
<td>Item</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>1 shelf</td>
<td>A single shelf section.</td>
</tr>
<tr>
<td>2 shelf supports</td>
<td>Two supports for the shelves.</td>
</tr>
<tr>
<td>2 sleeve flexible supports</td>
<td>Two flexible supports for sleeves.</td>
</tr>
<tr>
<td>1 gel bottle (PC250)</td>
<td>A gel bottle, model PC250.</td>
</tr>
<tr>
<td>1 pair of glasses for operator’s protection (ART11774)</td>
<td>Protective glasses for the operator.</td>
</tr>
<tr>
<td>1 pair of glasses for patient’s protection (ART11775)</td>
<td>Protective glasses for the patient.</td>
</tr>
</tbody>
</table>
2. PRESENTATION OF ANTHÉLIA® MEDICALE

2.1. TYPE OF EQUIPMENT

The present user guide describes the characteristics, deployment details, user recommendations, cleaning and maintenance requirements of your Anthélia® Médicale model pulsed light equipment. Anthélia® Médicale and its associated applicators compose a non-coherent, pulsed-light emission system, in the 600 to 1100 nm band for hair-removal applications, and between 475 and 1100 nm for skin rejuvenation. The applicator for hair reduction is identified as the PAM HR. The applicator for skin treatment is identified as the PAM SR. The generated fluences can go as high as 24 joules/cm², depending on the type of applicator. Anthélia® Médicale is intended to be used by medicine doctors having attended a specific training on the machine.

Anthélia® Médicale is designed and manufactured by the French company EUROFEEDBACK.

EUROFEEDBACK
ZI de la Petite Montagne Sud
3 rue de l’Aubrac
CE 1741
91017 EVRY
FRANCE

2.2. ANTHÉLIA® MEDICALE TECHNICAL CHARACTERISTICS

2.2.1. Mechanical characteristics

Total weight, without water, without applicator: 47 kg.

Dimensions, without shelf:
Width x Height x Depth = 392 x 970 x 607 mm.

Dimensions, with shelf:
Width x Height x Depth = 392 x 1215 x 607mm.

Maximum height of a Hand Piece sleeve flexible support: 1,86 m.

External body made in ABS, control panel in PETG.
Shelf made in ABS or PMMA, depending on the model.
Their outer coatings do not protect the equipment from liquid infiltration.

Do not submerge the applicator in liquid. Always avoid any presence of liquids on the equipment (goblets, mugs, bottles...).

2.2.2. Electrical Characteristics

Mains: 230 V a.c. or 115 V a.c., single-phase
Mains voltage tolerance: +/- 10%
Nominal Mains frequency: 47 to 63 Hz
Nominal current consumption: 4,8 A to 9,6 A
Stand-by consumption: 25W at 230 V a.c.
Maximal sound level: 63 dbA

The safety transformer is in accordance with EN60950 and 60601-1 norms
Primary / Secondary insulation: 5000 V rms / 50 Hz
Primary / Ground insulation: 5000 V rms / 50 Hz

The machine is cCSaus – CE120
The medical device and applicator are classed IP 20.
The medical device with an applicator is classed 1.
Applied part is BF type: optical guide of the applicator.
2.2.3. Recommendations
Anthélia® Médicale complies with the electromagnetic compatibility norm (EMC) 60601-1-2, 61000-3-2 and 61000-3-3.

L’Anthélia® Médicale is an electrical medical device which requires special precautions regarding electromagnetic compatibility. It is compulsory to read the recommendations included in the manual when the equipment is switched on and in use.

Do not use the equipment by (next to, above or under) a device which produces electromagnetic waves (including cell phones, wireless phones, microwaves, x-ray equipments etc.).

Use of a cell phone or any Radio Frequency communication device next to the Anthelia may impact its function.

Anthélia® Médicale is intended to function with the following cables and accessories:
- 2.50 meter original power cord supplied (adapted to the country where the device is to be used)
- a specific applicator for the Anthélia® Médicale device (HR or SR).

Use of cables or accessories other than the ones specified above may cause an increase in the emissions or decrease in the Anthélia® Médicale immunity.

For more information, refer to the EMC appendix at the end of this manual.

2.2.4. Operating conditions
Operation in clean environment, without dust.
Maximum relative humidity 60% at 30°C.
Operating temperature +5°C to + 30°C.
Intermittent operation recommended (10 minutes on maximum power followed by 15 minutes break): the flash frequency is automatically reduced in case of prolonged use and/or excessive ambient temperature.
Connection to the Mains network through a wall plug, mandatory with Ground, in accordance with NFC 15-100 norm. The connection through multi-plugs is forbidden.
Do not use the machine near equipment emitting electromagnetic rays (eg. telephone, microwave oven, x-ray equipment etc.).

2.2.5. Storage and shipping conditions
-10°C to +50°C without water in the hydraulic system, 60% max RH.
+5° to +50°C with water in the hydraulic system, 60% max RH.
2.2.6. Symbols
The following marks and icons are present at the rear back of the equipment.

**Table 1: Mains Configuration**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Current</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>115VAC +/-10%</td>
<td>I max = 9.6A</td>
<td></td>
</tr>
<tr>
<td>230VAC +/-10%</td>
<td>I max = 4.8A</td>
<td></td>
</tr>
</tbody>
</table>

**Warning:**
- The equipment and its accessories could be hot, and should not be touched without precaution.
- The equipment emits non-ionizing radiation.
- Type BF protection against electrical hit.

**2.3. ANTHELIA® MEDICALE BRIEF OPERATING PRINCIPLE**

The principle is to generate a pulsed light, in a first time cleared, by a filtering method, of its UV contents below 400 nm, which can be dangerous for the human body.

The light band between 400 and 600 nm is also filtered for the hair removal treatment.

For this application, the light generated by the dedicated applicator(s) is red. This red light will mainly be absorbed by the melanin, coloration pigment of the hairs. For fair complexions with dark hair, this light will increase the temperature of the hair bulbs and stop the growth.

In the case of skin treatment, the light is filtered between 400 and 475 nm. The light generated by the dedicated applicator(s) is yellow.
2.4. PRESENTATION OF ANTHÉLIA® MEDICALE FRONT FACE

Never lift the equipement by the desk!
Use the motion handle or the shelf support.
2.6. PRESENTATION OF THE TANK

The tank is equipped with a pumping tube, and a return tube which is directly plugged onto the deionizing cartridge.

- **Cooling path**
- **Applicators plugs**
- **Mains plug**
- **Rear trap door**
- **De-ionization cartridge**
- **Return tube and coupler**
- **Pumping tube and coupler**

**Never lift the equipment by the desk!**
**Use the motion handle or the shelf support.**
2.7. PRESENTATION OF ANTHÉLIA® MEDICALE APPLICATORS

2.7.1. Hair removal treatment applicator

Failure to clean the optical guide regularly may leave sediments on the surface (hair, gel...) which leads to a progressive deterioration of the product. Beware, a lack of or inappropriate maintenance of the optical guide may cause burns on the patient’s skin (see § 4.2.2.2 for adverse effects).

It is your liability to maintain the optical guide in impeccable cleanliness conditions.

If a regular cleaning of the optical guide is not performed, sediments can remain at the surface (hair, gel...), causing a progressive damage.

An applicator showing a damaged optical guide is not covered by the warranty.

Regularly clean the optical guide with a non-abrasive linen, humidified with water or alcohol.
2.7.2. Skin rejuvenation treatment applicator

Failure to clean the optical guide regularly may leave sediments on the surface (hair, gel...) causing a progressive deterioration. Please note, a lack of or inappropriate maintenance of the optical guide may cause burnt on the patient's skin (see § 4.2.2.2 for adverse effects).

It is your liability to maintain the optical guide in impeccable cleanliness conditions.

If a regular cleaning of the optical guide is not performed, sediments can remain at the surface (hair, gel...), causing a progressive damage.

An applicator showing a damaged optical guide is not covered by the warranty.

Regularly clean the optical guide with a non-abrasive linen, humidified with water or alcohol.
3. INSTALLATION OF ANTHÉLIA® MEDICALE

3.1. ASSEMBLING THE ACCESSORIES

3.1.1. Installation of the shelf

Remove the screws fixing the desk.

Replace these screws by the two shelf supports (supplied), until the gasket comes in contact with the desk.

If necessary, loosen the screw on the back of the base using the provided Allen key to unlock the hole for the passage of the shelf support.

Slide shelf supports inside the base.

Replace screws on the back of the base, using the provided Allen key.

Plug firmly the shelf support in the two bases.

Place the pieces in the main compartments of the shelf.
3.2. SELECTION OF THE MAINS VOLTAGE

Anthélia® Médicale is factory-set for operation in France and Europe with 230 V a.c. Mains.
To configure Anthélia® Médicale for 115 V a.c., proceed as follows:
- Check that the Mains switch is in position «0».
- Disconnect the Mains cable from the machine if it is connected.
- Remove the rear trap door of the machine.
- With a small flat screwdriver, extract the fuse cartridge.
- Replace the fuses with those supplied in the accessories box (T10A).
- Put the fuse cartridge back into place so that the «110 – 120 V» arrow faces the white mark of the Mains connector.
- Put the rear trap door back into place.

The label at the rear of the machine (remove the rear trap door) shows the right configuration for your Country’s Mains voltage.

3.3. INSTALLATION OF ANTHÉLIA® MEDICALE

Anthélia® Médicale must be located in a place well adapted to its operating conditions:
- Close to a 16-A wall plug (do not use a multiple-plug extension).
- The mains voltage must be within the specified tolerances (+/- 10% of the nominal value).
- In order to have enough ventilation, Anthélia® Médicale must be located at least 20 cm from any wall or other obstacle.
- The temperature of the operation room shall not exceed + 30° C.
- The temperature of the operation room shall not be below + 5° C.
- The machine shall not be exposed to direct sun.
- The machine shall not be installed behind a window.
- The access to the rear trap door shall always remain free to allow the maintenance of the hydraulic system.
- The floor shall be flat and horizontal.
- All the casters’ brakes must be blocked on the locked position.
  The brakes can be controlled using your foot/toes by pushing the command downwards until they are locked or by lifting the command until they are released.

Anthélia® Médicale may not be moved while it is in use.
3.4. FIRST OPERATION

Anthélia® Médicale is delivered without water in the cooling system. It is necessary to fill the tank of the cooling system before starting the machine. Use only demineralized water. 2 liters of demineralized water are delivered with the accessories (see § 1).

To fill the tank, proceed as follows:

- Remove the rear trap door to have access to the tank.
- Unlock the pumping tube coupler.
- Unlock the return tube coupler.
- Take the tank out.
- Remove the de-ionization cartridge.
- Fill the tank upto the level «First Fill» with demineralized water.
- Place the de-ionization cartridge into the tank.
- Put the tank back in place.
- Re-lock the pumping tube coupler.
- Re-lock the de-ionization cartridge tube.
- Put the rear trap door back in place.
3.5. CONNECTION OF AN APPLICATOR

Up to 2 applicators can be simultaneously to Anthélia® Medical.

When only one applicator is connected to the machine, it is mandatory to connect the electrical dummy connector (supplied as an accessory) to the unused electrical connector.

The applicator(s) can be indifferently connected to the right or to the left.

2 identical applicators can also be used on Anthélia® Medical.

Before connecting an applicator to Anthélia® Medical, make sure that the two connector’s couplers are unlocked: for this, press the two ends of the connector, as shown on the picture below.

Place the connector on the chosen socket at the rear of Anthélia® Medical. Only one connection way is possible. Firmly plug the connector into the socket, until you hear two «clicks» indicating that the two couplers are locked. The applicator is then correctly connected.

To disconnect the applicator, press again the two ends of the connector, to unlock the couplers and then free the connector.

IMPORTANT! Never disconnect an applicator when Anthélia® Médicale is live.

You may then place the sleeve of the applicator on a flexible support. However, this is not mandatory.

Depending on the Anthélia® Médicale model, the applicator can be placed different ways.

Avoid any excessive bending of the cable and under no circumstances fold, pinch or squash the cable: should you do so you risk permanently damaging the tubing which enables the essential cooling of the applicator.

3.6. CONNECTING ANTHÉLIA® MEDICALE TO THE MAINS SUPPLY

- Check that the Mains switch is in position «0».
- Connect the 3-pin female plug of the Mains cable to the machine.
- Connect the Mains plug to a wall socket, 10/16 A for 230 V a.c. (Europe) or 20/32 A for 115 V (North America).
- Anthélia® Médicale is ready for operation.
4. OPERATION

4.1. APPROPRIATE USAGE

4.1.1 Introduction
The Anthélia® Médicale is an electromedical machine, with a non-sterile applicator, to be used with an appropriate transparent contact gel.
The equipment is used repeatedly on different patients, while respecting standard hygiene and maintenance procedures as described in the present user manuel.

The company EUROFEEDBACK and its subsidiaries may under no circumstances be held responsible for the consequences, of any nature whatsoever, of inappropriate use of the Anthélia® Médicale equipment.

The present guide is in no way a substitute for training and training documentation essential to the operator of the equipment for suitable usage of the Anthélia® Medical.

4.1.2 Applications
The Anthélia® Medical, a Polychromatic Pulsed Lamp (PPL), is designed to treat benign skin damage or minor anomalies **exclusively on the surface of human skin**. The skin damage concerned is of the following types:

- **Vascular**: port wine stains, rosacea, or telangiectasia.
- **Pigmentary**: Lentigines, Actinic Keratosis, Follicular Keratosis.
- **Acne**: hormonal acne hyperkeratosis of the sebaceous gland
- **Hair Removal treatment**: treatment of Hirsutism, of Hypertrichosis or for esthetical purposes.

Important: Any kind of medical treatment on human beings using the equipment, other than that described above, is forbidden.

4.1.3 Utilisation
The Anthélia® Médicale PPL must always be used with applicators selected for authorized usage, designed to be in contact with patients’ skin. A transparent contact gel such as that used with ultrasound equipment is used to facilitate the transmission of the light rays and to cool the skin. Eurofeedback recommends the use of contact gel reference REF PC250, or any equivalent reference.

During their period of validity, the applicators may be reused on all patients on condition that each patient’s individual characteristics selected on the equipment parameters at the start of each session.

After each patient and prior to each new treatment session it is compulsory to disinfect and clean the parts of the applicator in contact with the skin, ideally using antiseptic wipes (see §2.7.1 and 2.7.2). The applicators are neither antiseptic nor waterproof, they must under no circumstances be washed in water.
4.1.4 Treatment
The performance to be achieved during the treatment sessions described above, is fully described during training courses.
On average performance meets a high-level of patient satisfaction in 90% of cases.
4 to 6 treatment sessions are necessary for hair removal (HR) and vascular treatment (SR), and 2 to 4 sessions for pigmented treatment (SR) and acne (SR).
Undesirable secondary effects are very rare as long as the treatment protocols indicated during training sessions are respected.

Important, security: It is essential to be particularly vigilant with regard to the following precautions:

- The «spot test» is an important aspect of treatment security. It is essential to validate treatment on a small surface before generalizing the treatment across the selected zone.
- Cooling the skin, prior to treatment, to a temperature of 5°C during 5 minutes, for all SR treatments, is essential because the pigmented skin subject to sudden heat is trapped between the cold gel above and the cooled zone below. In this way the skin is protected and will not suffer any burns during treatment.
- Strong pressure on the tube (pigmentary applications and hirsutism)
- The optical guide must be cleaned at each change of treatment or patient.

Adverse side effects are very rare when the treatment protocols explained during the training sessions and the precautions included in this manual are duly respected. See possible side effects and recommendations on paragraph 4.2.

4.1.5 User
The Anthélia® Médicale machines are designed for use by healthcare professionals, specifically doctors and dermatologists. Exclusively in the context of esthetic treatments, Anthélia® Médicale may be used by professionals (other than doctors).

Each user of the Anthélia® Médicale must follow an appropriate training course covering the treatments and related know-how necessary for use of the equipment prior to ensuring treatment.

The present guide is in no case a substitute for training and training documentation which are essential to the user to ensure correct usage of the Anthélia® Médicale equipment.

4.1.6 Patients and parts of the body
The equipment may be used on all areas of skin, with the exception of blemishes, scars and beauty spots. Usage restrictions and precautions are identical to those defined for our previous product ranges. The equipment is intended to flash the entire skin, except injured skin or skin with mole or tattoos. To conduct the treatments, protect the moles and tattoos solely with white materials (special pencils or stickers).

Patients must be adults, or adolescents over 14 years of age, in good health and aware of the implications of intense pulsed light treatments.

4.1.7 Environment
The equipment may in no circumstances be used in an operating theater or outdoors; it is designed for use in beauty institutes and skincare centers. The area where the equipment is used must be light, without mirrors or panels which could reflect the light of the flashes.

The ambient air must be normal and not charged with oxygen.

4.1.8 Moving the Anthélia® Médicale
The Anthélia® Médicale may not be moved while in use.
To move the Anthélia® Médicale from one place to another it is compulsory to switch it off (see §4.12), to empty it (see §5.1.5), to disconnect the power cord, to disconnect the applicators and to withdraw the supports.
Moving the Anthélia® Médicale must be done using the directing handles with both hands and by pushing the equipment.
4.2 ANTHELIA® MEDICALE USAGE PRECAUTIONS AND SIDE EFFECTS

4.2.1 Recommandations

4.2.1.1 Handling
As the equipment emits flashes of light, it is compulsory to put on protective glasses before starting the device.
Flashes must never be directed towards the eyes even when protective glasses are worn.
Avoid any excessive pressure on the applicator cables, particularly bending, folding or pinching the applicator cable.

4.2.1.2 Ocular Protection
Two pairs of eye glasses are supplied as accessories with each new Anthélia® Médicale device (see 1). These glasses respect the Directive on individual protection 89/686/EEC and are conform to the quality standard EN166 dated 2002.
It is compulsory for each pair of eye glasses to be worn prior to and during treatment by the patient and equipment operator.
The light green pair of glasses is intended for the operator. The product reference code is: 31-9623 IPL SHADE 3 or LCD 31-91900.
The dark green pair of glasses must be worn by the client. The product reference code is: 31-9624 IPL SHADE 5.

It is compulsory to replace the protective glasses as soon as they present any signs of damage or usage.
Please also read the requirements presented in paragraph 3.3 before starting your Anthélia® Médicale device.

4.2.1.3 Other precautions
The medical device and applicator are classed IP 20.
Their outer coatings do not protect the equipment from liquid infiltration.
Do not submerge the applicator in liquid. Always avoid any presence of liquids on the equipment (goblets, mugs, bottles...).

4.2.2 Side effects

4.2.2.1 Possible temporary and normal reactions after a treatment:
- Brief tingling during the flash
  ➢ important following the zone and hair density
  ➢ Warm sensation
- Light redness around the hair (perifollicular oedema)
  ➢ on thick and highly pigmented hair
- Light redness (erythema)
- Light soreness
- Brown spots due to sun tan and ageing become darker
  ➢ Lighten after two weeks
4.2.2.2 Adverse effects
For hormonal, genetic or physiological reasons, the hair-growth cycle may be disturbed and new hair may grow.
• When the safety rules and contra-indications are not respected (flash test, protocol, inappropriate optical guide maintenance), burns or pigmentary disorders may appear.
   ✴ First-degree burns: redness and persistent redness
   ➢ Apply a soothing cream or an equivalent. Do not have any sun exposure.
   ✴ Superficial second-degree burns: blister
   ➢ Disinfect the burn with an antiseptic and apply a soothing cream for burns or equivalent;
   ➢ Stop the treatment. Do not have any sun exposure.
   ➢ Visit a GP if required.
   ✴ Pigmentary disorder: hypo or hyper pigmentation
   ➢ Apply a soothing cream.
   ➢ Stop the treatment. Do not have any sun exposure.
   The skin will regain its normal colour within 6 to 12 months.

4.2.2.3 Managing side effects
Before the treatment:
- Fill-in with the client a consent form to identify the potential contra-indications as in §4.2.4.
- Make sure the skin doesn’t show any lesions
- Realise a spot test on a small zone in order to ensure that there are no contra-indications as in §4.2.4, and to assess the reaction of the skin to the selected parameters.
- For photo depilation, ensure that the zone to be treated is shaved.
- Verify that the optical guide is clean (see §2.7).

During the treatment:
- Eye protection must be worn as in §4.2.1.2, it is compulsory both for the patient and operator.
- Protect the moles and tattoos and avoid them.
- Use a cold transparent gel (gel temperature must be around 5°C).
- For vascular and pigmentary treatments, the zone to be treated must be cooled down with an ice cube to reach the coldest possible temperature of the skin that is close to the gel temperature.
- Respect the training and utilisation protocols.

4.2.3 Contra-indications
• Epilepsy, because of the luminous flashes,
• Pace maker (battery) or equivalent, internal defibrillator,
• Self-tanning lotion, pills activating tanning or self-tanning shower gels etc. used at least a week before the treatment.
• Sun or UV exposure made at least 4 weeks before the treatment and a week after the treatment.
• Treatment on pregnant woman as a safety measure (a pregnant operator may not conduct IPL treatment sessions).
• Zones with suspicious spots or tattoos or skin diseases (spots, inflammations, moles, Naevus, melanoma, psoriasis, herpes...).
• Medicines except Paracetamol, Aspirin, birth-control pills.
(a treatment may be photo-sensitive to light, ask for a medical certificate of non-contraindications to IPL treatments).
4.3. PRESENTATION OF THE CONTROL PANEL

- **Left Application**
- **Right Application**

**Skin Phototypes**
- Green lights (life time)

**Skin Rejuvenation Treatment**
- 5 green lights

**Hair Removal Treatment**
- 5 green lights

**Keys and Green Lights**
- Ready
- Wait
- Pause
- Green light
- RESET Key
- PAUSE Key
- WAIT Green light
- READY Green light
- PAUSE Green light
- GREEN LIGHT
- Key

**5 Green Lights (Life Time)**
4.4. STARTING THE MACHINE

Place the Mains switch to «I» to start Anthélia® Medical.

The hydraulic system starts circulating the water in the cooling system and the connected applicators. It is the water-setting phase.

The «WAIT» light goes on, and a waiting message, with count-down, is displayed on the Anthélia® Médicale screen, showing the remaining time before the end of the water setting-phase. This time is 2 minutes, whatever the number of connected applicators.

The «LEFT» and «RIGHT» lights are on if two valid applicators are connected to the left and right sides of Anthélia® Medical.

The life time lights are on as a function of the degree of wear of the applicators (left and right sides).

A «BIP» sound can be heard during the last 5 seconds. At the end of the water-setting phase count-down, the «WAIT» light goes out, and the display shows that a care selection is possible.

4.5. SELECTING A CARE

WARNING: The basic instructions described hereunder explain the selection principle of a care; they do not define how to provide a care to patient, and shall not be performed on a patient.

Anthélia® Médicale shows the possible selections by having the control panel's lights for which the choice is possible blink. Depending on the connected applicators, some care, types of skin or applicator lights may remain out.

To be able to perform a treatment, Anthélia® Médicale requires the choice of a skin type and the type of desired treatment. Anthélia® Médicale then automatically selects the adequate applicator. However, if two identical applicators are connected (hair removal for example), you systematically must select the applicator to be used.

As you make a choice, Anthélia® Médicale eliminates the keys that can no longer be selected. By this method, you may make the selection in any order. You may first choose the applicator with which you want to work, but it is recommended to first select the type of skin and the type of treatment, and leave Anthélia® Médicale select the applicator for you.

As long as some lights are blinking, choices must be made before shooting flashes. The valid selections are indicated by permanent lights.

When you have selected a valid type of skin, the «SKIN COLOR» light goes on.
When you have selected a valid hair-removal treatment, the «HAIR SIZE» light goes on.
When you have selected a valid skin rejuvenation treatment, the «SKIN REJUVENATION» light goes on.

When the applicator, the type of skin and the treatment have been selected, Anthélia® Médicale prepares the configuration during a time depending on the choices made. During this period, the «READY» light goes out, and the «WAIT» light goes on.
When the configuration is ready, the «WAIT» light goes out, and the «READY» light goes on, and a BIP sound warns you.

Anthélia® Médicale is ready to make a flash.
It is possible to change your selection choices at any time; Anthélia® Médicale will take them into account, but may in this case require a little more time to prepare the latest configuration you have chosen.

The RESET key cancels all the selections, and allows coming back to the initial situation of the end of the water setting phase.

4.6. CARE

WARNING: The basic instructions described hereunder explain the selection principle of a care; they do not define how to provide a care to patient, and shall not be performed on a patient. To provide a care to a patient, you must have been trained and respect the instructions of the associated manual.

After having chosen a treatment configuration, the lights corresponding to the choices of applicator, type of skin and treatment are permanent. The «READY» light shows that Anthélia® Médicale is ready to make flashes.

To induce a flash, push the trigger of the chosen applicator.

After a flash, Anthélia® Médicale goes into a re-charge configuration cycle. During this period, the «WAIT» light is on, and the «READY» light goes out. As soon as the configuration is ready again, the «READY» light goes on, the «WAIT light goes out, and a «BIP» sound informs you.

The Customer’s counter is incremented for each flash. You may reset it to zero with the «RESET» key at any time.

4.7. MODE «PAUSE»

The «PAUSE» key turns Anthélia® Médicale into a waiting mode. This «PAUSE» mode is also automatically set if Anthélia® Médicale is not used for 5 minutes.

The «PAUSE» mode is displayed on Anthélia® Médicale screen.

In this mode, it is not possible to trigger a flash. However, the hydraulic circuit keeps running, to assure a correct cooling of the machine.

The cooling is assured during a time between 5 and 30 minutes, depending on the hydraulic system’s water temperature and the ambient temperature. After this period, the hydraulic circuit stops, to reduce the noise level to a minimum. Anthélia® Médicale is then in «SLEEP» mode.

To leave the «PAUSE» mode or the «SLEEP» mode, press again the «PAUSE» key. Anthélia® Médicale is now ready for a new treatment selection; the control panel shows the possible selections.

Particular cases:

If a complete treatment configuration was validated before activation of the «PAUSE» mode, the lights corresponding to the choice of applicator, type of skin and treatment blink. When you leave the «PAUSE» mode, this treatment configuration will automatically be restored, and Anthélia® Médicale will be prepared accordingly.

If a complete treatment configuration has been validated before activation of the «PAUSE» mode, passing into «SLEEP» mode will cancel all the selections, and all the lights go out.

If an incomplete treatment configuration has been validated before activation of the «PAUSE» mode, or if Anthélia® Médicale is in «SLEEP» mode, leaving the «PAUSE» or the «SLEEP» mode will not restore any of the previous selections.

When you get out of the «SLEEP» mode, a water setting time is applied, equivalent to the time the machine was in «SLEEP» mode but with a minimum of 15 seconds and a maximum of 2 minutes.
4.8. LIFE TIME OF THE APPLICATORS

The total life time of an applicator connected to Anthélia® Médicale is shown by 5 drawings. The life time corresponds to the number of flashes available in the applicator.

As the applicator is used, the life time decreases and the corresponding light goes on.

When an applicator reaches a life-time level between 20% and 0%, the corresponding light blinks.

When the applicator is completely life-time, it is not possible to use it any more.

4.9. REPLACEMENT OF AN APPLICATOR

To replace an applicator with another or with a dummy connector, proceed as follows:

- Empty Anthélia® Médicale and the connected applicators (see §5.1.5).
- Switch Anthélia® Médicale off.
- Disconnect the Mains cable.
- Disconnect the applicator by pressing its connector’s ends (see §3.5).
- Connect the new applicator or the dummy connector (see §3.5).
- Re-connect the Mains cable.
- Start Anthélia® Medical.
- Wait the end of the water-setting phase.
- Check the water level and add water if necessary (see §5.1.3).

4.10. APPLICATOR CHECK

It is possible to check the serial number (S/N) of each applicator as well as the number of flashes still available. With Anthélia® Médicale in «PAUSE» mode, press once the selection key of the chosen indicator. The information relative to this applicator scroll on the screen for about 30 seconds.

4.11. LANGUAGE SELECTION

Anthélia® Médicale is factory-set with messages in French language.

It is possible to select one of the following languages: Portuguese (Por), Spanish (Esp), English (Eng), French (Fra).

To change to another language, proceed as follows:

- Place Anthélia® Médicale in the mode allowing a care selection (the screen shows « Sélectionner »). If necessary, see paragraphs above.
- Maintain the «RESET» key depressed for 6 seconds (the screen blinking can help you), then release the key.
- The screen shows successively the various possible languages.
- When the chosen language is displayed, press shortly the «RESET» key for validation.
- The chosen language is then memorized.

4.12. STOPPING THE EQUIPMENT

There are no required conditions, or particular dispositions to take to stop the equipment: it may be on pause mode, selection mode or even ready to shoot flashes. Stopping the Anthélia® Médicale is done by putting the switch button at the rear of the equipment on 0.
5. MAINTENANCE

5.1. ANTHÉLIA® MEDICALE

A correct maintenance of the machine is essential for a good operation; it essentially concerns the hydraulic cooling circuit and the applicators.

During the various interventions, you may have to place back in place the pumping tube or the tank return tube. Make sure that the machine hydraulic couplers are well locked before placing these tubes back in place.

Do not force if the coupler's locks are not in correct position, you may damage the tubes or the couplers, and this would not be covered by warranty.

5.1.1. Maintenance of the hydraulic circuit

The hydraulic circuit shall be filled only with demineralized. Anthélia® Médicale hydraulic circuit must be emptied every 6 months and re-filled with new demineralized water.

The de-ionization cartridge must be replaced every 6 months by a new original cartridge.

No other liquid shall be used: cooling liquid, scaler... This list is not exhaustive.

The warranty will not apply in case of poor maintenance of the hydraulic circuit.

5.1.2. Checking the water level

At least once a week, check the water level. For a correct operation of Anthélia® Médicale, it must be between the «MAX Refill» and «MIN Refill» marks on the tank.

To check the water level, turn Anthélia® Médicale off, disconnect the Mains cable and remove the rear trap door; then check the water level on the tank.

If necessary, complete with demineralized water if the level is below the «Min» mark (see §5.1.3).

5.1.3. Water complement

If the water level is low, proceed as follows to complete it:

- Stop Anthélia® Médicale and disconnect the Mains cable.
- Remove the rear trap door to have access to the tank.
- Unlock the pumping tube's coupler.
- Unlock the return tube's coupler.
- Take out the tank.
- Remove the de-ionization cartridge.
- Complete the tank with demineralized water by the cartridge hole, without exceeding the «ReFill Max» mark. The «First Fill» mark is used only during the first installation phase (see §3.4).
- Place the de-ionization cartridge back in the tank.
- Place the tank back.
- Re-lock the pumping tube's coupler.
- Re-lock the return tube's coupler.
- Place the rear trap door back.
5.1.4. Replacement of the de-ionization cartridge
To replace the de-ionization cartridge, proceed as follows:

- Stop Anthélia® Médicale and disconnect the Mains cable.
- Remove the rear trap door to have access to the tank.
- Unlock the pumping tube’s coupler (see §2.5).
- Unlock the return tube’s coupler (see §2.5).
- Take out the tank (see §2.5).
- Remove the used cartridge, and separate the cartridge’s coupler by gently pulling it.
- Place the coupler on the new cartridge, making sure it is well plugged.
- Place the new de-ionization cartridge in the tank.
- Place the tank back.
- Lock the pumping tube’s coupler (see §2.5).
- Lock the tube of the de-ionization cartridge (see §2.5).
- Place back the rear trap door.

5.1.5. Emptying the machine
In normal use, it is necessary to change the water of the hydraulic circuit every 6 months.

To remove the water of the machine and its associated applicators, proceed as follows:

- Stop Anthélia® Médicale and disconnect the Mains cable.
- Remove the rear trap door to have access to the tank.
- Unlock the pumping tube’s coupler (see §3.4).
- Unlock the return tube’s coupler (see §3.4).
- Take out the tank (see §3.4).
- Remove the pumping tube from the tank (see §3.4).
- Place the tank back in place.
- Lock the pumping tube’s coupler OUT OF THE TANK.
- Lock the return tube’s coupler.
- Place the rear trap door back.
- Start Anthélia® Médicale and wait the end of the water-setting phase.

At the end of the water-setting phase, a message «Code 1» will be displayed, showing a water flow fault, which is normal in this case. However, the cooling circuit keeps running, allowing the extension of the water change process beyond 2 minutes if necessary.

- Stop Anthélia® Médicale again and disconnect the Mains cable.
- Remove the rear trap door to have access to the tank.
- Unlock the pumping tube’s coupler (see §2.6).
- Unlock the return tube’s coupler (see §2.6).
- Take out the tank (see §2.6).
- Empty the tank in a sink.
- Place the pumping tube back into the tank.
- Place the tank back in place.
- Lock the pumping tube’s coupler.
- Lock the return tube’s coupler.
- Place the rear trap door back.
5.1.6. Disuse of the machine for a long period
If you foresee not to use Anthélia® Médicale for 8 days or more, it is necessary to preserve the de-deionisation cartridge and prevent the hydraulic circuit from clogging.

You may then:
- Either leave Anthélia® Médicale live in «PAUSE» mode if the room is maintained at a temperature over + 5°C. A maintenance cycle will be automatically started every 12 hours, in order to circulate the water for about 10 minutes.
- Or empty the machine and its applicators. See paragraph 5.1.3 to follow the water change procedure. Store the de-ionisation cartridge vertically in a sink or on a linen to allow its draining. For re-starting the machine, see paragraph 3.4.

5.1.7. Cleaning the machine’s exterior
Before cleaning the exterior parts of the machine, it is mandatory to stop Anthélia® Médicale by placing the Mains switch to «0» and to disconnect its Mains cable.

The dust at the outside of the machine can be removed with a vacuum cleaner equipped with a soft brush. Do not rub with a hard piece.

Use a soft cloth slightly dampened with water or alcohol to clean all the external parts of Anthélia® Medical, except of the shelf that should not receive alcohol.
Do not use acid or alkaline chemical, bleach, acetone or common domestic cleaning products containing powder. This list is not exhaustive.

In case of poor maintenance of Anthélia® Medical, the warranty will not apply.

5.1.8. Filter
The filter can also be replaced if necessary.

- Stop Anthélia® Médicale and disconnect the Mains cable.
- Remove the rear trap door to have access to the filter.
- Remove the filter from the black coupler.
- Remove the filter from the silicone tube, without damaging it.
- Place a new filter on the silicone tube (mind the way).
- Place the filter in the black coupler.

Re-start Anthélia® Médicale and check that the operation is correct.

5.2. APPLICATOR
5.2.1. Cleaning an applicator
To be efficient and ensure an optimal treatment, the optical guide of the applicator must always remain clean. For this, you must clean it, disinfect it and wipe it with a clean soft cloth, to remove any trace of gel or other residue after treatment of each patient and prior to each new session and / or treatment zone.

The optical guide may then be desinfected and delicately cleaned using a soft cloth slightly dampened with colourless surgical spirit (or any appropriate and equivalent disinfectant or cleaning product) and immediately wiped dry.

An applicator with optical guides damaged by a poor maintenance will not be covered by warranty.
6. REPAIR

6.1. TROUBLESHOOTING

6.1.1. Anthélia® Médicale does not start.
• Make sure the Mains plug is correctly connected to a working wall plug.
• Check the fuses as follows:
  - Make sure the switch is in position «0».
  - Disconnect the Mains cable from the machine.
  - Remove the trap door.
  - Extract the fuse cartridge with a small screwdriver.
  - Check the fuses with a tester.
  - Place the fuses back.
  - Place the trap door back in place.

6.1.2. Anthélia® Médicale emits a permanent sound «BIP»:
• Make sure the rear trap door is well in place.
• Make sure you have correctly connected the applicators, and if need be the dummy connector.

6.1.3. Anthélia® Médicale starts, but permanently displays «Code 1»
• See §6.3.2.

6.1.4. Anthélia® Médicale starts, but permanently displays «Code 5»
• See §6.3.3.

6.1.5. Anthélia® Médicale starts, but no flash is possible.
• Make sure that the applicator is not worn out (see§ 4.9).
• Make sure you have correctly selected a type of skin and a care. If you have connected two identical applicators, you must also select the one you want to use. See §4.4 to have more information.

6.2. APPLICATOR ANOMALIES

If the 5 lights of an applicator’s keyboard blink together, this applicator does not operate correctly anymore.
To solve the problem, turn Anthélia® Médicale off, and then wait 2 seconds before starting it again. If the problem is still present, replace the applicator, or contact your distributor.

The LED light of the applicator blinks orange to show a parameter problem inside the applicator. Re-start Anthélia® Medical. If the problem is still present, contact your distributor.

The LED light of the applicator blinks green to show that it is not adapted to the machine to which it is connected.

Make sure you have connected an applicator intended for Anthélia® Medical. If the problem is still present, contact your distributor.
6.3. MANAGEMENT OF THE « EVENT » CODES

6.3.1. General

Unexpected events may occur during operation. They cause the complete stopping of Anthélia® Médicale and do not allow flashes anymore.

The screen shows the type of event under the form «Code X», where X is a number corresponding to the type of the present event (see list §7.4). The display remains in this state until the Mains supply is shut down.

In all cases, only the shut down of Anthélia® Medical, followed by a restart, allows to reset the event.

The operator may try to solve by himself the types of events listed hereunder. The other events can be reset by a cycle OFF / ON of Anthélia® Medical.

In all cases, if the event persists, contact your distributor and give him the necessary information.

6.3.2. Code 1

This code indicates a low water flow.

**What can be done?**
- Check if the tank water level is sufficient (see §5.1.1) and complete if necessary (see §5.1.3).
- Check that the applicators are correctly plugged.
- Check that the dummy connector (if any) is correctly connected.
- If you have at least two applicators available, connect alternatively each applicator and the dummy connector to determine if one of the applicators is defective.
- Check that the pumping tube of the tank is correctly connected (see §2.6).
- Check that the tube of the de-ionization cartridge is correctly connected (see §2.6).
- If the problem persists, replace the de-ionization cartridge.

6.3.3. Code 5

This code indicates an insulation problem. It may be linked to the presence of humidity formed by condensation in the electronic parts of Anthélia® Medical, after storage in cold environment during several hours, and then a re-start of the machine in a room having a temperature lukewarm or warm.

**What can be done?**
- Stop the machine for about 10 seconds, and re-start it. Repeat this OFF / ON operation at least 3 times.
- If the problem persists, empty Anthélia® Médicale (see §5.1.3) and fill the water circuit with new demineralized water (see §5.1.3).
- If the problem persists, replace the applicators, or connect alternatively each applicator and the connector cap to determine if one of the applicators is defective.
- When the humidity level exceeds the allowable threshold, due to the condensation phenomenon described above, let Anthélia® Médicale rest in the room for several hours, until its complete drying; the defect will disappear by itself.
6.3.4. Code 10
This code indicates a problem of resistivity.

What can be done?
- Stop the machine for about 10 seconds, and re-start it. Repeat this OFF / ON operation at least 3 times.
- If the problem persists, empty Anthélia® Médicale (see §5.1.3) and fill the water circuit with new demineralized water (see §5.1.3).
- If the defect reappears after some operation time, replace the de-ionization cartridge (see §5.1.4).
- If the problem persists, replace the applicators, or connect alternatively each applicator and the dummy connector to determine if one of the applicators is defective.
- If you have replaced the de-ionization cartridge or the cooling circuit water, leave Anthélia® Médicale in operation for several minutes, with the «Code 10» message displayed. The defect shall disappear by itself.

6.3.5. Code 28
This code indicates a flash defect; it is generally linked to a faulty applicator.

What can be done?
- Replace the applicators, or connect alternatively each applicator and the dummy connector to determine if one of the applicators is causing the problem.

6.3.6. Code 35
This code indicates a communication problem between the generator and the desk. It appears mainly when Anthélia® Médicale is started.

What can be done?
- Switch off the machine for about 10 seconds with the Mains switch, then turn it ON again.

6.3.7. Code 67
This code indicates a loss of supply in the generator.

What can be done?
- Switch off the machine for about 10 seconds with the Mains switch, then turn it ON again.
- If the problem persists, check that the rear trap door is well in place.

6.3.8. Other codes
For any other code, try to re-start Anthélia® Médicale several times. If the problem persists, contact your distributor and give him the information about the code displayed, and if possible the last operations you have done on the machine.
### 6.4. LIST OF THE EVENT CODES

This exhaustive list is given for information only. Most of the codes listed hereunder are events linked to the internal operation of Anthélia® Medical.

<table>
<thead>
<tr>
<th>Event</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>Low water flow</td>
<td>1</td>
</tr>
<tr>
<td>Interlock chain open</td>
<td>2</td>
</tr>
<tr>
<td>Generator temperature too high</td>
<td>3</td>
</tr>
<tr>
<td>Insulation defect (w.r.t. GND)</td>
<td>5</td>
</tr>
<tr>
<td>IGBT defect</td>
<td>8</td>
</tr>
<tr>
<td>Flash duration defect</td>
<td>9</td>
</tr>
<tr>
<td>Low water resistivity</td>
<td>10</td>
</tr>
<tr>
<td>Abnormally active Crow-bar</td>
<td>16</td>
</tr>
<tr>
<td>End-of-charge signal absent after a 20 s timeout</td>
<td>17</td>
</tr>
<tr>
<td>Abnormally inactive Crow-bar</td>
<td>18</td>
</tr>
<tr>
<td>Number of pulses of the shooting configuration abnormal (zero)</td>
<td>20</td>
</tr>
<tr>
<td>Total of pulses of the shooting configuration &gt; 100ms or zero</td>
<td>21</td>
</tr>
<tr>
<td>Wrong unit cost of the shooting configuration (zero)</td>
<td>23</td>
</tr>
<tr>
<td>Unknown key</td>
<td>25</td>
</tr>
<tr>
<td>Current detected before flash shooting</td>
<td>27</td>
</tr>
<tr>
<td>No current detected during the flash</td>
<td>28</td>
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<tr>
<td>Current detected during a dead time of the flash configuration</td>
<td>29</td>
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<tr>
<td>Current detected after the flash shooting</td>
<td>30</td>
</tr>
<tr>
<td>Crow-bar abnormally active at end of charge</td>
<td>31</td>
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<tr>
<td>Control panel/ display communication error</td>
<td>32</td>
</tr>
<tr>
<td>No communication acknowledgement from desk / display</td>
<td>33</td>
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<tr>
<td>Checksum error</td>
<td>34</td>
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<tr>
<td>Acknowledgement not received after 100 ms timeout</td>
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<td>Frame format error</td>
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<td>Frame parity error</td>
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<tr>
<td>Generator communication buffer overload error</td>
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<tr>
<td>Wrong communication frame headline</td>
<td>42</td>
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<tr>
<td>Wrong communication data</td>
<td>43</td>
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<tr>
<td>Wrong communication frame tailline</td>
<td>44</td>
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<tr>
<td>Reception timeout triggered</td>
<td>45</td>
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<tr>
<td>Communication error mismanaged</td>
<td>46</td>
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<tr>
<td>Communication error in reception</td>
<td>47</td>
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<tr>
<td>Shooting preset at zero</td>
<td>64</td>
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<tr>
<td>Total configuration pulses over 100 ms</td>
<td>65</td>
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<tr>
<td>No + 5 V supply</td>
<td>67</td>
</tr>
<tr>
<td>Communication error I2C</td>
<td>68</td>
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<tr>
<td>No flow-meter board</td>
<td>71</td>
</tr>
<tr>
<td>SPI port not available</td>
<td>72</td>
</tr>
<tr>
<td>Communication error with applicator</td>
<td>73</td>
</tr>
<tr>
<td>Error detected in the applicator’s counters</td>
<td>74</td>
</tr>
<tr>
<td>Error detected in the applicator’s real counters</td>
<td>75</td>
</tr>
</tbody>
</table>
7. WARRANTY

The warranty covers problems which may arise on the equipment in the context of normal use of the machine and on the condition that the maintenance of the hydraulic circuit is ensured in conformance with the manufacturer's recommendations.

The machine shall not be used without de-ionization cartridge.
The machine shall not be used with a de-ionization cartridge having an operation time of more than 6 months.
The machine shall be used with an original de-ionization cartridge guaranteed by the manufacturer.

The damages caused to the machine or its elements by development of algae or micro-organisms in the hydraulic circuit are not covered by the warranty.

The warranty on the machine and its accessories no longer applies should any modification, transformation, alteration, adaptation take place, or in case of the non respect of the usage, operations or user conditions intended by the manufacturer, and described in the present document.
When an Anthélia® Médicale machine is definitely out of use, it shall be returned for recycling operations, against current legislation norms, to the address below:

EUROFEEDBACK
ZI de la Petite Montagne sud,
1 rue du Mâconnais
91090 LISSES - FRANCE

EFB beauté® equipment is commercialised by the company Eledis Innovation, subsidiary of Eurofeedback.

ELEDIS INNOVATION
Groupe EUROFEEDBACK
1 rue du Mâconnais – CE1724
91017 EVRY Cedex - FRANCE
The tables below provide complimentary information on the installation and use of the Anthélia® Médicale regarding electromagnetic compatibility.

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<th>Emissions test</th>
<th>Conformity</th>
<th>Electromagnetic environment - directives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions RF CISPR 11</td>
<td>Group 1</td>
<td>Anthélia® médicale uses RF energy solely for internal functions. As such, the RF emissions are very weak and are not likely to cause interferences with any electronic device next to it.</td>
</tr>
<tr>
<td>Emissions RF CISPR 11</td>
<td>Class B</td>
<td>Anthélia® médicale may be used in all premises, including in domestic premises and those wired to the low voltage electrical public network which supplies buildings for domestic purposes.</td>
</tr>
<tr>
<td>Harmonic emissions IEC 61000-3-2</td>
<td>Class A</td>
<td></td>
</tr>
<tr>
<td>Voltage fluctuations / flickers IEC 61000-3-3</td>
<td>In conformance</td>
<td></td>
</tr>
</tbody>
</table>
Directives and Manufacturer declaration - electromagnetic emissions

Anthélia® médicale is intended to be used in an electromagnetic environment as specified below. The client or user of the Anthélia® médicale must ensure it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity test</th>
<th>Test level IEC 60601</th>
<th>Conformity level</th>
<th>Electromagnetic environment - directives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrostatic discharges (DES) IEC 61000-4-2</td>
<td>± 6 kV at the contact, ± 8 kV in the air</td>
<td>In conformance ± 6 kV at the contact, ± 8 kV in the air</td>
<td>It is necessary that the floors are made of wood, concrete or ceramics tiles. If the floors are covered of synthetic materials, the relative humidity rate will be at least 30%.</td>
</tr>
<tr>
<td>Fast transient electrical burst IEC 61000-4-4</td>
<td>± 2 kV for electrical power lines, ± 1 kV for in/out lines</td>
<td>In conformance ± 2 kV for electrical power lines, ± 1 kV for in/out lines</td>
<td>It is necessary that the quality of the electrical network is standard for a commercial or hospital environment.</td>
</tr>
<tr>
<td>Transient overvoltages IEC 61000-4-5</td>
<td>± 1 kV between phases, ± 2 kV between phase and earth</td>
<td>In conformance ± 1 kV between phases, ± 2 kV between phase and earth</td>
<td>It is necessary that the quality of the electrical network is standard for a commercial or hospital environment.</td>
</tr>
<tr>
<td>Voltage dips, brief power cut and voltage variations on the input power supply IEC 61000-4-11</td>
<td>&lt;5 % of $U_{T}$ (&gt;$95 %$ voltage dip of $U_{T}$) for 0,5 cycle, 40 % of $U_{T}$ (60 % voltage dip of $U_{T}$) for 5 cycles, 70 % of $U_{T}$ (30 % voltage dip of $U_{T}$) for 25 cycles, &lt;5 % of $U_{T}$ (&gt;$95 %$ voltage dip of $U_{T}$) for 5 s</td>
<td>In conformance &lt;5 % of $U_{T}$ (&gt;$95 %$ voltage dip of $U_{T}$) for 0,5 cycle, 40 % of $U_{T}$ (60 % voltage dip of $U_{T}$) for 5 cycles, 70 % of $U_{T}$ (30 % voltage dip of $U_{T}$) for 25 cycles, &lt;5 % of $U_{T}$ (&gt;$95 %$ voltage dip of $U_{T}$) for 5 s</td>
<td>It is necessary that the quality of the electrical network is standard for a commercial or hospital environment. If the user of the Anthélia® médicale requires continuous use during power cuts, it is recommended to plug the Anthélia® onto an energy supply without power cut or battery.</td>
</tr>
<tr>
<td>Magnetic field at the power-line frequency (50/60 Hz) IEC 61000-4-8</td>
<td>3 A/m</td>
<td>In conformance 3 A/m</td>
<td>It is necessary that the magnetic fields at the power-line frequency have the characteristics of a representative premise in a typical commercial or hospital environment.</td>
</tr>
</tbody>
</table>

NOTE : $U_{T}$ is the voltage of the AC supply before the test level is applied.
## Directives and Manufacturer declaration - electromagnetic emissions

Anthélia® médicale is intended to be used in an electromagnetic environment as specified below. The client or user of the Anthélia® médicale must ensure it is used in such an environment.

<table>
<thead>
<tr>
<th>Immunity tests</th>
<th>Test level IEC 60601</th>
<th>Level of conformity</th>
<th>Electromagnetic environment - directives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducted RF disturbances</td>
<td>IEC 61000-4-6</td>
<td>3 Vrms from 150 kHz to 80 MHz</td>
<td>3 V</td>
</tr>
<tr>
<td>Radiated RF disturbances</td>
<td>IEC 61000-4-3</td>
<td>3 V/m from 80 MHz to 2,5 GHz</td>
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It is necessary that hand-held and RF mobile communication devices are not to be used any nearer the Anthélia® médicale, including cables, and that the recommended separation distance is calculated from the equation applicable to the transmitter frequency.

**Recommended separation distance**

\[
d = \left[ \frac{3.5}{3} \right] \sqrt{P}
\]

\[
d = \left[ \frac{3.5}{3} \right] \sqrt{P} \quad 80 \text{ MHz at } 800 \text{ MHz}
\]

\[
d = \left[ \frac{7}{3} \right] \sqrt{P} \quad \text{of } 800 \text{ MHz at } 2,5 \text{ GHz}
\]

where \( P \) characterises the maximal output power of the transmitter in watts (W) according to the transmitter manufacturer, and \( d \) is the recommended distance in meters (m).

Is therefore that the electric fields strength of the fixed RF transmitters, determined by the electromagnetic investigation on site\(^a\), are inferior to the level of conformity in every range of the frequencies\(^b\).

Interferences may occur by the device marked with the following symbol:

![Radio waves symbol]

**NOTE 1:** At 80 MHz and at 800 MHz, the highest range of frequencies applies.

**NOTE 2:** These directives cannot be applied in every situation. Electromagnetic propagation is affected by the absorption and reflection of the structures, objects and people.

\(^a\) The electric fields strength of fixed RF transmitters including basic stations for radiophone (cells/ wireless) and terrestrial radio mobile, radio amateur, radio diffusion AM and FM, as well as TV diffusion, may not theoretically be planned with exactitude. To measure the electromagnetic environment due to fixed RF transmitters, It is necessary to consider an electromagnetic on-site investigation.

If the field intensity measured where the Anthélia® médicale is used, exceeds the RF conformity level as applicable above, It is necessary to monitor the Anthélia® médicale to verify that it functions properly. If abnormal performances are observed, additional measures are to be taken including re-orienting or repositioning the Anthélia® médicale.

\(^b\) On the frequency range from 150 kHz to 80 MHz, It is necessary that the intensity field are inferior to 3 V/m.
Directives and Manufacturer declaration - electromagnetic emissions

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