

Operating Manual pfm Waterbath 1000

Please read this operating manual carefully before using the instrument for the first time and make certain that you are familiar with the method of operation as well as the instrument's controls to ensure that it is used correctly.

www.pfmmedical.com



Note

Dear Customer,

Please read this operating manual carefully before using the instrument for the first time and make certain that you are familiar with the method of operation as well as the instrument's controls to ensure that it is used correctly.

All the information in this operating manual applies to the pfm Waterbath 1000.

Serial number: _____

Please enter the serial number of your instrument here. It can be found on the nameplate.

Part 1 – Safety instructions	4
1.1 Key to symbols	4
1.2 Intended purpose	6
1.3 User group/user profile	6
1.4 Protective devices in the pfm Waterbath 1000	6
1.5 Operating the instrument	6
1.6 General precautions	7

Part 2 – Introduction	8
2.1 View of the pfm Waterbath 1000	8
2.2 Technical data for the pfm Waterbath 1000	8
2.3 Scope of delivery	8

Part 3 – Operating instructions	9
3.1 Transportation, unpacking and setting up	9
3.2 Initial operation	9
3.3 Display	10
3.4 Temperature setting	10
3.5 Menu settings	10
3.6 Factory settings	11
3.7 Illumination	11
3.8 Filling the waterbath	12
3.9 Emptying the waterbath	12
3.10 Troubleshooting	13
3.11 Error messages	14
3.12 Change history	14

Part 4 – Maintenance, cleaning and care	15
4.1 Maintenance	15
4.2 Cleaning and care	15
4.3 Cleaning and care of touchscreen/display	15
4.4 Returning the waterbath for repair or maintenance	16
4.5 Decontamination	16
4.6 Instrument fuse	16
4.7 Warranty	17
4.8 Declaration of Conformity	17

Part 5 – Accessories	18
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Part 6 – Disposal of the pfm Waterbath 1000 after decommissioning	19
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Part 1 – Safety instructions

Please read this operating manual carefully before working with the pfm Waterbath 1000. Make certain that you are familiar with the instrument's controls and method of operation. Failure to observe these precautions is contrary to the recognised standards of good practice and the intended use of the instrument.

In case of infringement, pfm medical gmbh does not accept any form of liability.

1.1 Key to symbols



Caution! This symbol indicates a possible danger to life and health. Failing to observe these instructions can result in severe health impacts, including life-threatening injuries.

NOTE

Indicates useful information

WARNING

Indicates a dangerous situation



Manufacturer



Date of manufacture



Consult operating manual

NOTE The up-to-date electronic operating manual can be found on our website:
<http://www.pfmmedical.com/downloads>



In vitro diagnostic (IVD) medical device



Catalogue number



Serial number



CE marking



Biohazard warning



Hot surface warning



Dangerous electrical voltage warning



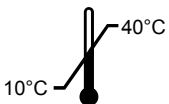
The instrument must not be disposed of in normal domestic waste.
It must be collected separately.



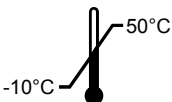
Keep dry



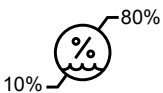
Fragile, handle with care



Permissible temperature range at the place of use
+10°C – +40°C



Permissible temperature range for storage and transportation
-10°C – +50°C



Permissible humidity range for storage and transportation, and at the place of use
10% – 80% (non-condensing)

1.2 Intended purpose

The pfm Waterbath 1000 is a modern waterbath used to stretch paraffin sections of human and animal tissue samples in histology laboratories in the fields of medicine, research and industry. It can be used as a diagnostic aid in connection with in vitro examination as part of the histopathology

process and must only be operated by appropriately trained staff. The device facilitates the preparation of tissue samples, which are then diagnosed by a pathologist after further processing and provide information about the physiological or pathological condition of the tissue.

1.3 User group/user profile

- ▶ The pfm Waterbath 1000 must only be operated by appropriately trained staff who are familiar with the instrument's method of operation.
- ▶ Before using the instrument for the first time, the operating manual must be read so that the user is familiar with the method of operation and the controls. This is essential to ensure proper handling.

NOTE

The operating manual should be accessible to everyone.

1.4 Protective devices in the pfm Waterbath 1000

- ▶ Excess temperature protection device
- ▶ Minimum water level control device

- ▶ The mains power connection is recessed into the housing for splash protection

WARNING

Caution! Protective devices must not be removed from the instrument or modified. The proper functioning of the protective devices must be checked by the user before starting work.

1.5 Operating the instrument

- ▶ Only use suitable accessories and connecting cables recommended/supplied by pfmmmedical.
- ▶ The external fuse protection must not exceed 10 A.
- ▶ If the instrument fuse is replaced, the factory-specified parameters must be observed (T 6.3 A delayed-action fuse).
- ▶ Observe all warnings.
- ▶ Warnings on the instrument must not be removed or obscured.
- ▶ The surface of the water tank must not be damaged or scratched with sharp or pointed objects.
- ▶ Only operate the instrument when it has been filled.
- ▶ We recommend using distilled water to fill the waterbath.
- ▶ During operation, the surface of the instrument and the bath liquid may be very hot.
- ▶ Do not start up the instrument if it is damaged or leaking.
- ▶ Do not start up the instrument if it has a damaged mains power cable.
- ▶ The mains power cable must not come into contact with heated surfaces.
- ▶ No corrosive, acidic or alkaline solutions should be used in the vicinity of the instrument, as they could cause corrosion and damage the device and accessories.
- ▶ The instrument must only be opened and repaired by service technicians trained and authorised by pfmmmedical.
- ▶ For servicing and repair work, the instrument must be switched off and disconnected from the power supply.

1.6 General precautions

Please take special note of the following warnings:

Beware of explosive gases

The instrument must not be used if dangerous gas concentrations could occur in the surrounding area.

Risk of infection

When working with infectious materials, appropriate safety measures must be implemented. The specimens used may potentially be infectious. The general laboratory rules regarding protection against infections must therefore be observed.

Risk of radioactivity

When working with radioactive materials, the radiation protection regulations must be followed. Protective clothing must be worn in accordance with the rules and regulations that apply in your laboratory for handling radioactively contaminated materials. For the disposal of radioactive waste, the applicable regulations will apply in each instance.

Avoiding malfunctions

To avoid malfunctions, the instrument must not be used close to radio transmitters, e.g. mobile phones. If the instrument malfunctions, please switch it off and contact your dealer.

Caution

Before switching the instrument on for the first time, please check that the supply voltage/frequency at the place of use match the specifications on the nameplate.

Protective earthing of the instrument

To avoid the risk of electrocution, the instrument must be properly connected to an earth conductor. The instrument is equipped with a mains power plug with earth conductor (protection class I). It is very important to check that the mains power outlet used is equipped with an earth conductor, and that it complies with the regulations of the International Electrotechnical Commission (IEC).

Mains voltage precautions

Never remove any part of the housing. The replacement of components and any adjustment or calibration must be carried out by trained service technicians.

Electromagnetic interference

The electromagnetic environment should be assessed before the pfm Waterbath 1000 is operated. Do not use this instrument near strong sources of electromagnetic radiation (for example, unshielded, intentionally operated high-frequency sources) because these can interfere with the proper operation of the instrument. The pfm Waterbath 1000 fulfils the requirements of the IEC 61326-2-6 standard on electromagnetic immunity and emissions.

WARNING

Caution! Switch off the instrument and disconnect it from the power supply before opening or removing any part of the housing.

WARNING

Caution! Warns of a hot surface. During operation, the surface of the instrument and the bath liquid may be very hot.



WARNING

Caution! Warns of dangerous electrical voltage.



Part 2 – Introduction

2.1 View of the pfm Waterbath 1000



- 1 Protective mains power connection
- 2 Emptying marking

- 3 Fill level marking
- 4 Display

2.2 Technical data for the pfm Waterbath 1000

- ▶ **Dimensions overall (W/D/H):** 280 x 386 x 77.5 mm
- ▶ **Dimensions of water tank (W/D/H):** 178 x 200 x 56 mm
- ▶ **Max. usable depth:** 56 mm
- ▶ **Filling level:** 50 mm
- ▶ **Tank capacity:** 1.77 l
- ▶ **Heated rim (W):** 50 mm
- ▶ **Temperature range:** up to +60°C
- ▶ **Weight:** 7.0 kg
- ▶ **Instrument fuse, primary circuit:** M 10 A
- ▶ **Power supply:** 230/240 V, 50/60 Hz
- ▶ **Operating environment altitude:** up to 2,000 m above sea level
- ▶ **Pollution degree (according to IEC 61010-1):** II
- ▶ **Overvoltage category (according to IEC 61010-1):** II
- ▶ **Fluctuations in mains voltage:** ±10% of the mains voltage
- ▶ **IP protection class:** IP20

2.3 Scope of delivery

pfm Waterbath 1000
REF: 041010

Scope of delivery

1 pfm Waterbath 1000
 1 Mains power cable

NOTE

The up-to-date electronic operating manual can be found on our website: <http://www.pfmmedical.com/downloads>

Part 3 – Operating instructions

3.1 Transportation, unpacking and setting up the instrument

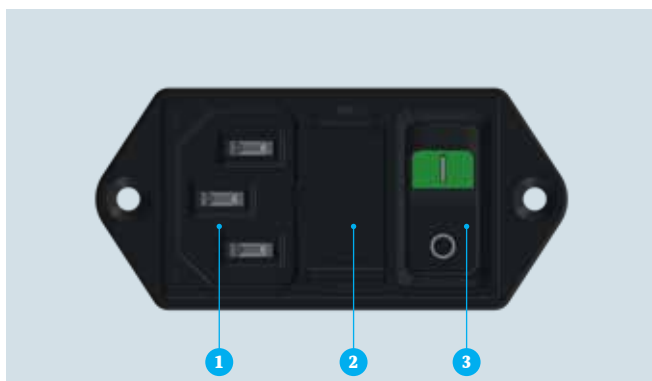
- ▶ Before unpacking the instrument, please check that it is complete and undamaged.
- ▶ Disassemble the packaging and remove the instrument. The accessories are packaged separately.
- ▶ Please read the operating manual carefully before using the instrument for the first time.
- ▶ The instrument should be placed on a stable, vibration-free table or desk.
- ▶ The instrument must be placed on a non-combustible, flat surface.
- ▶ Do not store flammable or combustible substances in the immediate vicinity of the instrument.
- ▶ The instrument must only be used indoors, and never in locations where there is a risk of explosion.
- ▶ Position the instrument in such a way that the mains power plug is always accessible.
- ▶ Avoid direct sunlight.
- ▶ Room temperature between + 10°C and + 40°C.
- ▶ Relative humidity at the place of use must not exceed 80% (non-condensing).
- ▶ Ambient temperature during transportation and storage between -10° and +50°C.
- ▶ Relative humidity during transportation and storage must not exceed 80% (non-condensing).

The operator is responsible for checking that the instrument is working properly and safely. The operator shall assume responsibility for any use of special equipment and/or materials for operating the instrument.

NOTE

If possible, retain the original packaging for the entire lifetime of the instrument so that you can repack the instrument correctly if it needs to be sent for servicing.

3.2 Initial operation



- 1 Power socket
- 2 Instrument fuse
- 3 Power switch

- ▶ Before switching on the pfm Waterbath 1000 for the first time, check that the supply voltage and frequency specified on the nameplate match the mains voltage at the place of use.
- ▶ Always connect the instrument to an earthed wall socket.
- ▶ Plug the power cable into the socket on the back of the instrument.
- ▶ The instrument socket also contains the fuse holder.
- ▶ Switch on at the mains power switch.
- ▶ Now switch on at the power switch on the instrument.
- ▶ 1=ON, 0=OFF

WARNING

Caution! Only use the mains power cable with ferrite core supplied with the instrument.

Caution! Do not use an extension cable.

Caution! If the instrument is not operated with the mains power cable supplied, the user must carry out a safety test with the new mains power cable before using the instrument for the first time.

Caution! If the instrument does not heat up, or heats up too much, it should immediately be taken out of operation. If this occurs, contact a service technician.

3.3 Display



- 1 Temperature setting Plus
- 2 Illumination white On/Off
- 3 Illumination blue On/Off
- 4 Temperature setting Minus

WARNING

CAUTION! Do not operate the instrument if the display does not work, shows illogical or incorrect values, or is damaged.

3.4 Temperature setting

- ▶ When the instrument is switched on, the display shows the **SET TEMPERATURE** and the **ACTUAL TEMPERATURE**.
- ▶ The desired temperature is set by pressing the or button.
- ▶ The temperature set will be maintained until the next adjustment is made.
- ▶ Depending on whether the newly set value is higher or lower than the current temperature, the temperature display can be observed rising or falling.

3.5 Menu settings



The pfm Waterbath 1000 are equipped with a modern touch screen. Lightly swiping the screen with the fingertip conveniently switches between the various display options.

Language

Press the button to select between the different languages.

Signal

Press the button to switch the signal on or off.

Brightness

Press the button to adjust the brightness of the display. There are three levels in total.

Service menu

Press the button to enter the service menu. Access is password-protected.

3.6 Factory settings



By lightly swiping the screen with the fingertip, you can access the factory settings display. Here you will find detailed information on the current status of the firmware (software) and hardware.

3.7 Illumination



Illumination white



Illumination blue



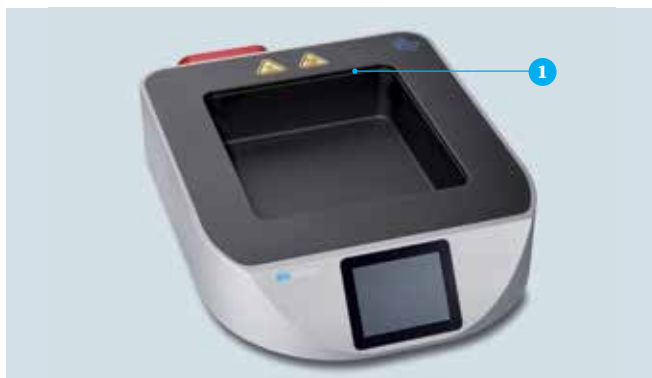
Illumination blue/white

- ▶ The pfm Waterbath 1000 has a triple illumination function.
- ▶ The surface of the water can be illuminated with white, blue or blue/white non-dazzling light.
- ▶ The **[LW]** button switches on the white light and the **[LB]** button switches on the blue light.
- ▶ Pressing the **[LW]** and **[LB]** buttons together activates the blue/white light.

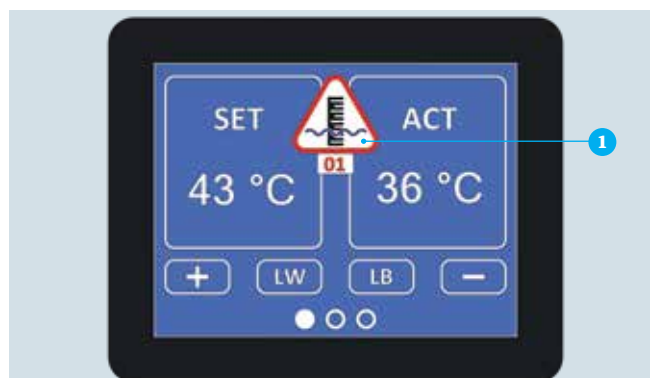
WARNING

Caution! The heating and illumination are deactivated if the water level is below the minimum fill quantity. The heating is automatically reactivated as soon as the water is topped up to the level. The preselected illumination is also switched on again automatically.

3.8 Filling



1 Fill level marking



1 Code 01: Water level too low

- ▶ We recommend using distilled water to fill the waterbath.
- ▶ Fill the waterbath to the top fill level marking.
- ▶ If the minimum water level in the water tank is not reached, the display will read the error message water level too low.
- ▶ The heating and illumination are deactivated if the water level is below the minimum fill quantity.

- ▶ The heating is automatically reactivated as soon as the water is topped up to the required level.
- ▶ The preselected illumination is also switched on again automatically.

WARNING

Caution! Do not use any organic solvents (e.g. xylene).

Caution! Do not use any flammable liquids.

Caution! Never use the instrument when it is empty.

Caution! Never use hot or boiling water to fill the waterbath, as this can trigger the internal temperature fuse.

Caution! If the water overflows during filling and gets under the instrument, it must be wiped up immediately.

Caution! Water must not get inside the instrument.

Caution! If water is spilled on the floor, it should be wiped up immediately to avoid a slip hazard.

3.9 Emptying



1 Emptying marking

- ▶ Switch off the instrument.
- ▶ First, carefully remove the mains power cable from the wall power outlet, and then from the instrument.
- ▶ Hold the instrument with both hands centrally on the right and left sides of the housing and carry the instrument to the nearest washbasin for emptying.
- ▶ Only pour out the water over the blue emptying marking.

WARNING

Caution! Take care when emptying the waterbath. The surface of the waterbath and the liquid may be very hot.



3.10 Troubleshooting

Fault	Possible cause	Remedy
No display after switching on the instrument	Mains cable not correctly connected	Check the mains cable connection
	Mains cable defective	Check the mains cable and replace if necessary
	Instrument fuse in the power socket defective	Check the instrument fuse and replace if necessary
	Display damaged	Check display function and replace if necessary
Instrument does not heat up	Waterbath not filled sufficiently	Check the minimum fill level and top up water if necessary
	Fill level sensor defective	Check the fill level sensor and replace if necessary
	Fuse on the circuit board defective	Check the fuse and replace if necessary
	Internal temperature fuse in the instrument defective	Check the fuse and replace if necessary
Instrument heats up too much	Temperature sensor defective	Check the temperature sensor and replace if necessary
Waterbath is not illuminated	LED defective	Check the LED and replace if necessary
	Fill level sensor defective	Check the fill level sensor and replace if necessary
	Waterbath not filled sufficiently	Check the minimum fill level and top up water if necessary Check the fill level sensor and replace if necessary

WARNING

Caution! The instrument must only be opened and repaired by service technicians trained and authorised by pfmmmedical.

3.11 Error messages

Error code		Possible cause	Remedy
Code 01		Water level too low	Fill the water bath up to the top fill level marking
Code 02		Fill level sensor defective	Check the fill level sensor and replace if necessary
Code 03		Temperature sensor defective Cable break	Check the temperature sensor and replace if necessary Check the cable and replace if necessary
Code 04		Maximum temperature exceeded	Check the temperature sensor and replace if necessary
Code 05		Set temperature is not reached	Check the temperature sensor and replace if necessary

WARNING

Caution! The instrument must only be opened and repaired by service technicians trained and authorised by pfmmmedical.

3.12 Change history

State of revision	Change
Rev.2022-12-02	Design reworked
Rev.2024-01-01	Corporate identity guidelines

Part 4 – Maintenance, cleaning and care

4.1 Maintenance

To ensure that the waterbath functions reliably, routine maintenance should be carried out once a year by a trained service technician authorised by pfmmedical. pfm medical gmbh provides maintenance to ensure that your instrument

always remains in perfect condition. Details can be obtained from your sales representative or directly from pfm medical gmbh. We recommend an annual electrical safety inspection.

4.2 Cleaning and care

For the instrument to function reliably, it must be kept clean by the user. Before cleaning, switch off the instrument and remove the mains power plug. Mild household detergents are suitable for cleaning the waterbath. Do not use any aggressive cleaning agents or solvents. Do not allow liquids to penetrate the inside of the instrument. Empty the waterbath completely and wipe the tank bottom, once it has cooled down, and the glass cover of the light with a lint-free cloth.

WARNING

Caution! Before cleaning the waterbath, switch it off and remove the mains power plug.

Caution! Never clean the waterbath under running water.

Caution! Always be aware of the dangers of water and electrical current.

Caution! When handling disinfectants and cleaning agents, always follow the manufacturer's instructions regarding safety, dilution and exposure time.

4.3 Touchscreen/display cleaning and care

The display and touchscreen are made of glass and should not be touched with hard objects. Do not use any solvents or aggressive cleaning agents for cleaning the display or touchscreen. Do not use glass cleaners or detergent, as they contain soap solutions that may damage the surface. We recommend cleaning the touchscreen without wetting it, preferably with a standard microfibre cloth.

WARNING

Caution! The display should not be sprayed with a cleaner or disinfectant because there is a danger that liquid will get between the films or behind the display, and damage the display.

4.4 Returning the waterbath for repair or maintenance

Repairs and maintenance work are usually carried out on site. If this is not possible for any particular reason, the instrument can be sent to pfm medical gmbh. Before you send an instrument to pfmmedical for a service, it must be suitably cleaned and decontaminated. This also applies to instruments undergoing a service on site. Contaminated instruments pose a potential health hazard for anyone coming into contact with them due to infectious agents, pathogens or medicinal products. The legal requirements for the handling of contaminated instruments are specified in various regulations, including the Occupational Safety and Health Act (ArbSchG), the Biological Agents Ordinance (BioStoffV), the Occupational Safety Act (ASiG) and the Accident Prevention Regulations (UVV). The legal requirements for the handling of contaminated instruments are specified in various regulations, including the Occupational Safety and Health Act (ArbSchG), the Biological Agents Ordinance (BioStoffV), the Occupational Safety Act (ASiG) and the Accident Prevention Regulations (UVV).

To confirm that the instrument has been decontaminated, please complete the decontamination certificate carefully. You can find the current certificate on our website: <http://www.pfmmedical.com/downloads>

Servicing can only be carried out if a certificate is fully completed in advance and enclosed with the instrument. If it is found that the instrument poses a potential hazard, we reserve the right to return the instrument to the sender immediately at the sender's expense.

WARNING

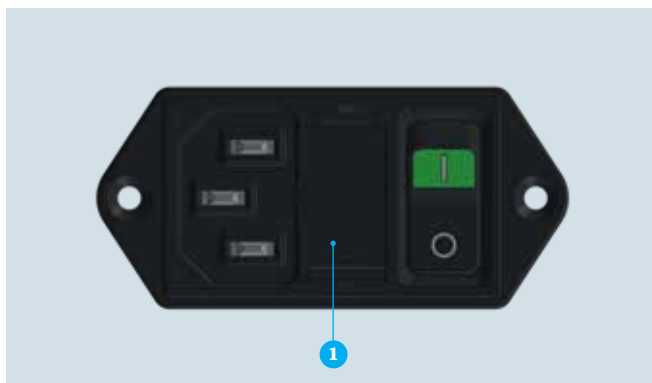
Caution! Always send the instrument in the original packaging together with the mains cable. Please contact pfmmedical if you no longer have the original packaging.

4.5 Decontamination

For regular disinfection of work surfaces and the exterior of the waterbath, we recommend using single-use disinfectant wipes, for example those recommended

by the RKI (Robert Koch Institute) or the VAH (Association for Applied Hygiene) list: "Mikrozyd AF" and "Bacillol AF".

4.6 Instrument fuse



1 Instrument fuse

- ▶ The instrument fuse is located on the rear of the instrument, and is integrated into the power switch.
- ▶ To replace the fuse, the instrument must be switched off at the power switch and the mains power plug must be unplugged.
- ▶ Open the protective cover with a small flat screwdriver and remove the fuse holder.
- ▶ The fuse can then be replaced with a new one.

WARNING

Caution! Switch off the instrument and disconnect it from the power supply before replacing the fuse.

4.7 Warranty

The device has been carefully checked and tested by us. However, for a period of one year from the date of delivery, we undertake to remedy any significant defect found in a device or spare part supplied to the extent specified below, and without prejudice to any statutory or other contractual claims, even if the defect was not present on delivery to the customer, provided that no unauthorised work has been done on the device by third parties. This warranty does not cover normal wear and tear, nor does it constitute a guarantee of quality or durability of the device.

The remedying of defects under this warranty shall be carried out, at our discretion, by the replacement or repair of defective parts. Furthermore, spare parts can be supplied for 5 years after delivery of the device. Any warranty claims on the part of the customer beyond the above are hereby excluded, without prejudice to any statutory or other contractual claims. This applies in particular to any compensation claims for damage, consequential damage or costs relating to the defect. Transportation of the device to us and return transportation during this period shall be at the customer's risk.

To assert a claim under this warranty, the device concerned must be sent to us, at the customer's expense and risk, with a detailed description of the defect, and specifying the purchase order number, delivery note number and invoice number.

Our address is: Wankelstraße 60, 50996 Köln, Germany.

Claims under this warranty expire 6 months from assertion of the claim, but not before the end of the warranty period. This warranty and any claims, rights and obligations arising therefrom are subject solely to the material law of the Federal Republic of Germany, to the exclusion of Private International Law and the UN Convention on Contracts for the International Sale of Goods. Our standard terms and conditions of supply and payment apply in addition.

All serious incidents that occur in connection with the device must be reported to the manufacturer and the competent authority of the Member State where the user and/or patient are located.

4.8 Declaration of Conformity

The current Declaration of Conformity form can be found on our website: <http://www.pfmmedical.com/downloads>

Part 5 – Accessories



Cover with handle for pfm Waterbath 1000

REF 041020

- ▶ Material: Black anodised aluminium
- ▶ Protects against contamination



Reflection plate black

REF 041040

- ▶ Material: Black anodised aluminium

Part 6 – Disposal of the pfm Waterbath 1000 after decommissioning

Return and disposal of waste electrical equipment

The WEEE directive 2002/96/EC (WEEE = Waste Electrical and Electronic Equipment) was issued in Europe with the aim of reducing the growing quantity of electronic scrap from discarded electrical and electronic devices and disposing of it in an environmentally friendly manner. In Germany, the directive was integrated in the 2005 Electrical and Electronic Equipment Act (ElektroG), which implemented both the WEEE directive and the RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment).

Histotechnology-devices

As a registered manufacturer (WEEE Reg. No. DE85819911), we take back old histological electrical devices, manufactured by pfm medical gmbh, after they have been decommissioned and ensure that they are disposed of properly. For disposal, we work together with the certified specialist disposal company enretec GmbH, whose disposal facility is also registered with the ear foundation.

Arrange the return

To arrange for the return of your electrical device, please proceed as follows:
Contact us to arrange the return

- ▶ by phone: +49 2236 9641-0
- ▶ by e-mail: [service\[at\]pfmmmedical.com](mailto:service[at]pfmmmedical.com)
- ▶ by mail: pfm medical gmbh, Abteilung Histotechnology, Wankelstraße 60, 50996 Köln, Germany

Prepare the device for transport

Please use only the original packaging and instruct a carrier of your choice to return the device to the following address:

pfm medical gmbh
Abteilung Histotechnology
Wankelstraße 60
50996 Köln
Germany

Costs

The costs of disposal are borne by us as the manufacturer. Unless otherwise agreed, the transport and packaging costs are to be covered by the owner/user of the device.

WARNING

Caution! If the device has come into contact with infectious material and cannot be disinfected or decontaminated, we cannot accept it for disposal.

Contact

Do you have any questions?

Our Customer Solutions Team will be happy to advise you.

 service@pfmmedical.com

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