MILESTONE
HELPING
PATIENTS

HistosMATE

Automatic cleaner

Operator Manual

MM063

Thank you for having selected our system and welcome to the ever growing world club of users for Milestone laboratory instrumentation.
We are sure that you will be completely satisfied with this new tool entering your laboratory.
We invite you to read carefully this operator manual and to keep it in reach for convenient and fast consulting.
For any possible clarification or any request for assistance please contact either our Representative in your country:

Or contact

Milestone s.r.l.
Via Fatebenefratelli, 1/5
24010 Sorisole (BG) Italy
Tel. +39.035.412 8264
Fax +39.035.575498
web site www.milestonemedsrl.com
e-mail medical@milestonesrl.com

Please read the user manual before using the device.

MM063-008 – HistosMATE – Operator Manual
2015-03

SUMMARY

1. INTRODUCTION

1.1. Symbol used

An instruction accompanied by this symbol provides a quite important and require more attention.

An instruction accompanied by this symbol provides a cautionary statement: failure to follow the instruction may endanger the operator or cause damage to the instrument.

An instruction accompanied by this symbol provides a caution against electric shock. Be sure to follow the instruction to prevent accidents resulting from electric shock.

Biohazard: be careful when you execute the procedure marked with this symbol: danger of biohazard contamination.

CE logo: this instrument complies to European Community directives.

Fragile.

WEEE European directive symbol (2002/96/EC):
Electric/electronic device do not throw out in the environment.

Only authorized and qualified SERVICE personnel.

Manufacturer.

1.2. Designated uses

The new HistosMATE unit is an innovative, safe, rapid solution for the efficient cleaning of wax contaminated racks, moulds and forceps.

HistosMATE has been specifically designed to accommodate Pathos, Histos, Logos series of racks as well as the most common conventional histoprocessors racks.

The system and its accessories have been engineered for laboratory use and they can therefore withstand the harshest laboratory conditions.

The Milestone HistosMATE must be operated exclusively with the reagents listed in Compatible reagents (see chapter 1.7).

The instrument is intended for use in histological laboratory (indoor use) only.

Any other use of the instrument is considered improper and may void the warranty provided by the manufacturer.

1.3. Technical specifications

The technical specifications for the main components of the HistosMATE system are described in the following sections.

CODE 65200/SY: Power Supply: 230 VAC – 50/60 Hz – 400W
CODE 65201/SY: Power Supply: 115 VAC – 60 Hz – 400W

Working Temperature: 15°C – 30°C (59°F – 86°F)
Humidity (relative): up to 80%
Maximum altitude: 2000m

Indoor use only.

1.3.1. Cabinet

- Heavy duty industrial grade external chassis.
- Built-in exhaust fan.

1.3.2. LCD touch screen

Monochrome touch screen LCD. Resolution 320x240 3.8".
"Time and Temperature" control Software.

1.3.3. Cavity

Stainless steel.
Resistance heating elements (400 W) controlled by PID technology.
Magnetic stirrer with speed control (200÷600 RPM).
Built-in PT100 Temperature sensor.
Draining tube with quick coupling.

1.4. Transportation and storage conditions

Temperature: -20°C to +60°C.
Humidity: up to 80% (up to 50% at 40°C – 104°F) non-condensing.

Before using HistosMATE (when coming from a storage room), let the unit reach working environmental conditions (at least half an hour).

1.5. Warning information

Should the equipment be used in ways different than those specified by the manufacturer, the warranty provided by the manufacturer may be void.

Main power plugs are considered disconnecting device. Disconnect all plugs from the socket outlet before assembling the system, connection of the accessories and cleaning.

Equipment shall be connected to a main power socket outlet which is accessible and visible by the operator.

All parts of the equipment and all accessories must be supplied only by the manufacturer.

DO NOT OPEN THE CHASSIS. Failure to follow the instruction in the documentation might lead to a reduction of device safety. If the equipment is not working properly, please contact your supplier or the manufacturer.

Do not remove the instrument panels. Only authorized and qualified SERVICE personnel may repair the instrument and access the instrument's internal components.

It is important that normal standards for safety and good laboratory practices are applied. Always use common sense and the best known practice when operating the instrument. Failure to follow the instructions in the documentation might lead to a reduction of device safety.
The Competent Authority owning the instrument has primary responsibility for accident-free operation together with designated personnel who operates SERVICE or repair it.

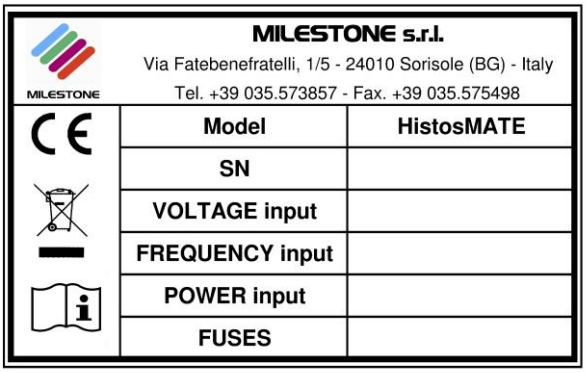
To avoid damage to the instrument, use only the reagents listed in chapter 1.7 "Compatible Reagents". Failure to follow the instructions in the documentation might lead to a reduction of device safety.

Be careful: exhaust reagents are toxic.
Handle with care and follow the local standard regulations.

Use caution when handling hot, warm reagent.

Never install the HistosMATE unit under a fume hood. The presence of acids or caustic reagents might contaminate the air flow used for ventilating the electronic components, exposing them to possible corrosion or shorting of circuits.

1.6. Instrument labeling explanation



For symbols explanation see chapter 1.1.

1.7. Compatible reagents

Regenx® or Diasolv® or MicroClean® or Clear Rite3® or Soltrol® or other xylene substitutive solution, (made of isoparaffins).

Do not use XYLENE, acetone, benzene, or trichlorethane in the instrument. They can seriously damage the unit.

DO NOT USE REAGENTS DIFFERENT FROM THOSE LISTED ABOVE.
In case of doubts please contact: application@milestonemedsrl.com.

It is necessary to put 10 L of cleaning reagent in the HistosMATE cavity.

1.8. Waste disposal of the equipment

In case this system needs to be returned to the manufacturer for any repair, it is necessary to clean and disinfect the unit before return. Non-disinfected devices will not be accepted and you will be contacted to pay the relative disinfection cost.
International health rules require that shipments of biohazard materials are not done in standard packages (risk of sanctions).

Do not remove the side panels of the unit during cleaning operations.

Disconnect the power supply before any operation.
Do not use direct or high-pressure water to clean the instrument.

For safety reason, any operation without the individual protective devices must be avoided.

It is recommended to use enzymatic detergents and polyphenolic based disinfectants or chlorine substitutes to clean and disinfect the instrument. Alternatively use of a solution of 1:10 Bleach (recommended by the CDC for disinfecting) is also allowed to decontaminate the instrument.

For further information, please contact the manufacturer: application@milestonemedsrl.com.

In addition, complying with directive 2002/96/EC of the European Parliament and of the Council of 27 January 2003 on waste electrical and electronic equipment (WEEE), the separate collection environmental managed of equipment is mandatory.

It is necessary to return the used equipment to the distributor or to verify the presence of a local empowered system for collection and disposal of WEEE.
The in-observance of Directive 2002/96/EC or of the local law which acknowledges it can have potential effects on the environment and human health.

This symbol indicates separate collection for electrical and electronic equipment.

If additional requirements on accident prevention and environmental protection exist in the country of operation, this instruction manual must be supplemented by appropriate instructions to ensure compliance to such requirements.

1.9. Waste disposal of reagents

Handle with care and store in a cool dry space using a tightly closed container.
Vapors may collect in empty containers. Treat empty containers as hazardous.
Waste material should be disposed of in an approved incinerator or in a designated landfill site, in compliance with all federal, provincial and local government regulations.
Some reagents can have potential health effects and cause environmental pollution if not correctly disposed.

For further information please refer to the MSDS (Material Safety Data Sheet) provided by your supplier.

2. INSTALLATION

2.1. Space requirements

Unit dimensions:

WIDTH	HEIGHT	DEPTH
300mm (11.81inch)	465mm (18.3 inch)	515mm (20.27inch)

Space dimensions required to locate the Milestone HistosMATE:

500mm (19.68 inch)	1000mm (3 ft-4inch)	700mm (2ft-4inch)

HistosMATE Weight (read carefully):

The weight of the HistosMATE is approximately 35 Kg (77 lbs); at least 2 persons should remove the unit from its box and locate it on the bench.

Never install the HistosMATE unit under a fume hood. The presence of acids or caustic reagents might contaminate the air flow used for ventilating the electronic components, exposing them to possible corrosion or shorting of circuits

2.2. Unpacking and checking list

Check if your HistosMATE part number corresponds to the voltage supply of the laboratory:
HISTOSMATE CODE 65200/SY: 230 VAC – 50/60 Hz – 400W
HISTOSMATE CODE 65201/SY: 115 VAC – 60 Hz – 400W

HistosMATE is delivered in a wood box (43kg – 94lb) with these dimensions:

Depth 65cm (25.6inch)
Width 43cm (17inch)
Height 68cm (26.8inch)

All parts of the equipment and all accessories shall be supplied only by Milestone.

When unpacking, check that all parts correspond to the packing list included in the shipment.
Utmost care must be made during unpacking of the HistosMATE to avoid any scratch or damage to the external coating.

PACKING OF HISTOSMATE

The HistosMATE includes the following items:

1. HistosMATE unit
2. Items indicate in the table below
3. Operator manual

CODE	DESCRIPTION	Q.ty	IMAGE
50036	Power cord for units at 230 Vac 50/60Hz (Schuko)	1	
50391	Power cord for units at 115Vac 60Hz (NEMA 5-15)	1	
50331	Black plastic tube 2.5 m (8 ft) long with metal cable clamp to be used to fix the hose to the exhaust fume pipeline	1	
62497	DrainingTube This tube must be connect to the quick coupling to drain exhausted reagents	1	
65237	Stainless steel basket to automatically remove wax traces from metal moulds and forceps placed inside it	1	
65235	Holder	1	

2.3. Placement

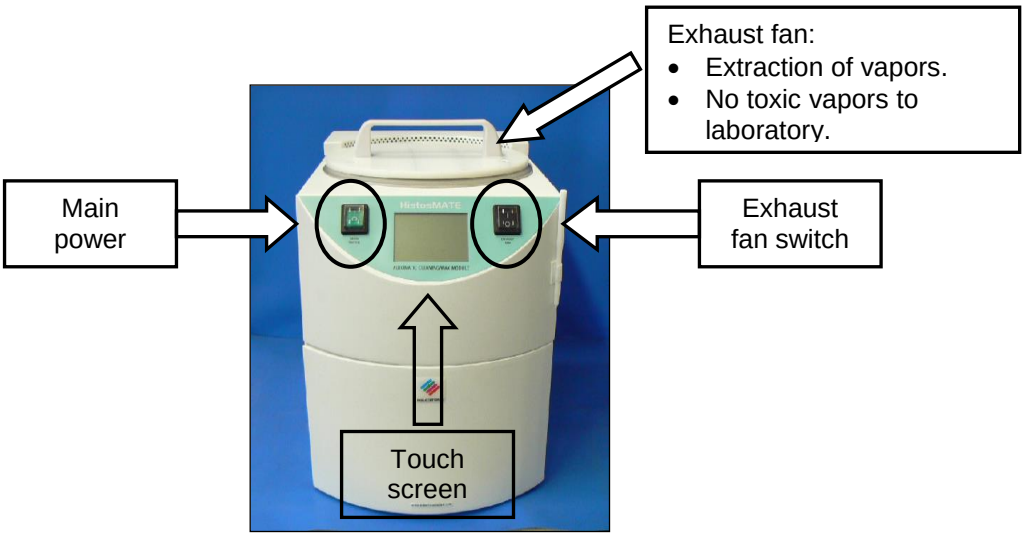
HistosMATE unit can be positioned in its final place of use. Make sure it is firmly placed and the bench is level.

During the setup, the HistosMATE must be disconnected from the main power supply.

A proper location of the HistosMATE is near and connected to any vapors extractor system using the hose supplied. Make sure the unit is not placed against any back surface limiting the air cooling inlet/exhaust.

2.3.1. Unit overview

The picture below shows the front view of the HistosMATE system.
Notice the main power switch, the exhaust fan switch and the touch screen of the HistosMATE.



An overview of the back side of HistosMATE is shown in the following picture.
Notice the open connection for the plastic hose to the exhaust fume extraction.
On the left, there is a connection to the power cord and the main fuses holder.

2.4. Fumes extraction system

DO NOT connect the HistosMATE unit to the main power supply during the installation.

1. Connect the black exhaust tube (CODE 50332) to the exhaust outlet located on the back panel of the unit.

In case of connection to an external fume extraction system, the customer is required to adapt the hose connector. The plastic hose supplied has these characteristics:

- Length: 2.5m(98in)
- External diameter: 55mm(2.15in)
- Internal diameter: 50mm(2in)
- Fan air flow range:23–27m^3/h (cube meter per hour).

The external fume extraction system must be properly installed at all times, according to local regulations on the safety of laboratory in force.

The external fume extraction system must permit an air flux 27m^3/h (cube meter per hour).

2. Use the metal cable clamp (CODE 64757) to fix the hose to the exhaust outlet connection. Use a screw driver to tighten the metal cable clamp.

3. The other end of the exhaust hose is normally connected to any vapors extractor system.

2.5. Power supply

- A ground connection is available in the lab to assure the unit works correctly (yellow/green, green or bare wire). Do not connect a Milestone unit without ground connection. Do not use the blue/white wire (neutral of power line).
- Power supply neutral has to be referred to ground.
- Power supply line wires (their size and distance from the switch board) used in the laboratory are compliant with the label positioned on the back side of our units.
- Plug/socket is visible during the normal use and easily accessible.

Before connecting the plug to the laboratory's socket, check that the power supply voltage of the unit matches the power supply line of the laboratory.
Damages occur when wrong power supplies the instrument.
The power supply must be protected by a residual current circuit breaker with over current protection, residual current 30mA. Power line must have potential earth connection.

CONNECTING CABLES: Never connect or remove cables when power to the unit is switched on, this will avoid risk of damage.

Main plug is considered as disconnecting device
Equipment shall be connected to main socket outlet which is accessible and visible by the operator.
Disconnect main plug from the socket outlet before setting up the system and before cleaning.

Connect the power cord socket in the HistosMATE plug and the power cord plug to main power supply socket.

2.6. Reagents

Complete the set up with reagent, by providing at least:

- 10L of cleaning reagent

The above reagents must be onsite and available at time installation of unit.

3. OPERATE WITH HistosMATE

1. Load the reagent to a level between min and max as shown inside the cavity: it is necessary to put 10 L of cleaning reagent.

Load in the cavity the appropriate reagent for the racks, moulds and forceps cleaning (ex. Regenx® or Diasolv® or MicroClean® or Clear Rite3® or Soltrol® or other xylene substitutive solution, made of isoparaffins).

Do not use XYLENE, acetone, benzene, or trichlorethane in the instrument.

The reagent level must be maintain between the MIN and MAX markers etched inside the cavity.

If the level of the reagent falls below the MIN marker etched, add the new cleaning reagent until the MAX marker etched.

2. Connect the power cord and the plug to power supply socket.

Check if Voltage and Frequency on the back label of the HISTOSMATE correspond to the power supply outlet in your laboratory.

3. Switch on the HistosMATE using the green power switch (bright) located on the left side of the front panel of the unit. Switch the exhaust fan on using the black switch (not bright) located on the right side.

Power switch

Exhaust fan

Milestone recommends to keep always ON the fan when the HEATING is ON or turn on the ventilation 1 minute before removing the holder.

4. Switch on the heating selecting “start heating” button.

5. The HistosMATE unit is now ready to use.

Heating power is auto-tuned by a PID controller. The operator must only set up the desired parameters (Time and Temperature).
The unit will always reproduce the same conditions of temperature in the set times, by automatically adjusting the power level.
The following section shows how to run and modify a cleaning cycle with the HistosMATE software. Use the touch screen pen to select the desired menu.

3.1. LCD touch screen

The HistosMATE unit has a dedicated software, controlled by the LCD “Touch Screen” terminal.

Start up screen

Main screen

At the switch-on of the system the HistosMATE Start Up Screen appears for a few seconds. Then the HistosMATE Main Screen appears. The software advises that the unit is warming up the reagent and indicates also the current temperature. The stirrer automatically agitates the solution.

3.2. Running a cleaning cycle

The following table shows the standard protocol for a cleaning cycle, to be carried out with a xylene substitute made of Isoparaffins (for details see chapter 1.7).

REAGENT	CYCLE TEMPERATURE	CYCLE TIME
ISOPARAFFIN	60°C	7 min

Place the rack (or the stainless steel basket for moulds and forceps – CODE 65237) on the relative holder (CODE 65235) connected to the lid and place it into the warmed solution.

The holder is compatible also for the synergy racks.

Synergy rack for Logos (CODE 66810)

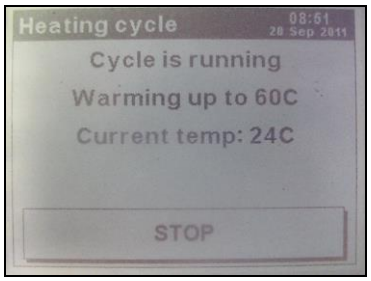
Synergy rack for Pathos Delta (CODE 66811)

If you have a previous model of HistoMATE (different to CODE 65220/SY or CODE 65201/SY) can be updated to the new simply by ordering the new model kit upgrades synergy (CODE 66870) which includes stainless steel basket and relative holder see below image.

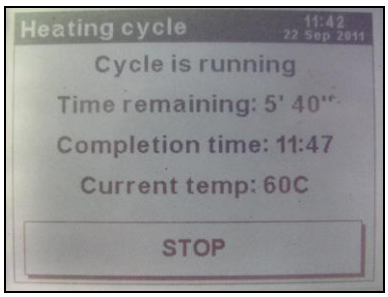
CODE 66870

Run a cleaning cycle:

Select the START CYCLE icon on the touch screen.

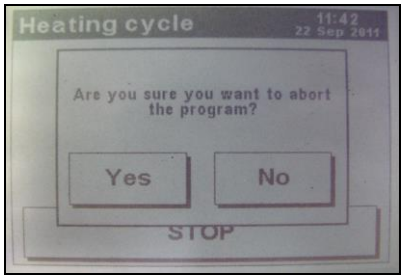


Now the cleaning cycle is running. The software automatically warms up the solution to the Cycle temperature, also in case the temperature of the solution (Current temp) is below the Maintaining temperature.

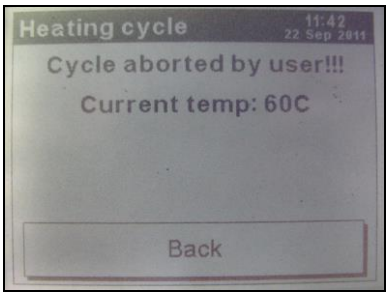


When the temperature of the solution reaches (or has already reached) the cycle temperature, the following screen appears with additional information on the Time remaining up to the end of the cycle, the Completion time and the Current temperature of the cleaning solution.

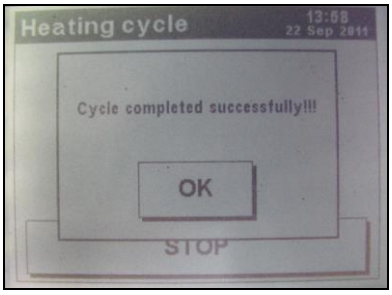
The software allows also interruption of the cycle by pressing the STOP button.



Press YES to confirm the action.



Then press BACK to return to the Main screen.



On completion of the cycle, an audio alarm starts and the following screen appears.

Take the rack (or the stainless steel basket) out of the solution and dry it using normal laboratory wipes. Alternatively, let the solution evaporate from the rack placing it under the fume hood.

Check that the rack is now clean and, if required, repeat the sequence as described above. Afterwards rinse the rack into alcoholic solution.

NOTE: In order to extend the reuse life of the cleaning reagent, it is advised to let the rack drip into a warmed oven (about 64°C) for a few minutes before proceeding with the cleaning procedure.

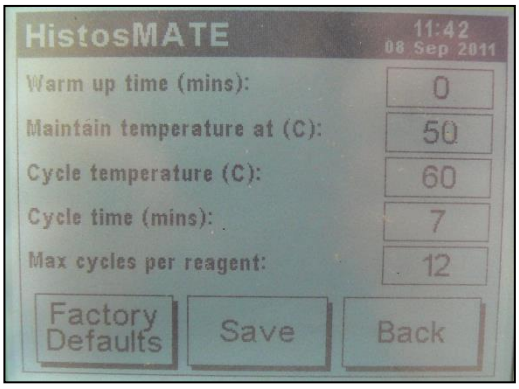
If you want to stop the heating of the solution without switching the unit off, return to the Main screen and press the STOP HEATING icon.

Now the heating is not running.

Milestone recommends leaving the unit off (or eventually stop the heating of the solution) during the night to avoid excessive loss of reagent.

3.3. Owner setting

To view/change the software default settings press the SET VALUES icon and the following screen appears.



In this screen the user can modify:

- Reagent maintaining temperature (Maintain temperature at) (preset value: 50°C-max temperature allowed 65°C).
- Temperature during the cleaning cycle (Cycle temperature) (preset value: 60°C-max temperature allowed 65°C).
- Time duration of the cleaning cycle (Cycle time) (preset value: 7mins).
- Reagent management (Max cycles per reagent) (preset value: 12).

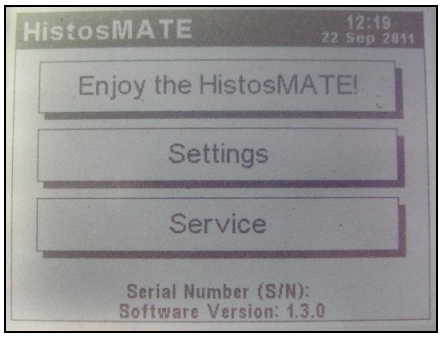
DO NOT MODIFY the Warm up time, but use the factory set parameter.

Milestone suggests using the default settings to perform a correct cleaning cycle.

Press “Factory Defaults” icon to restore the original, factory set parameters.
Press “Back” icon to return to the Main Screen.

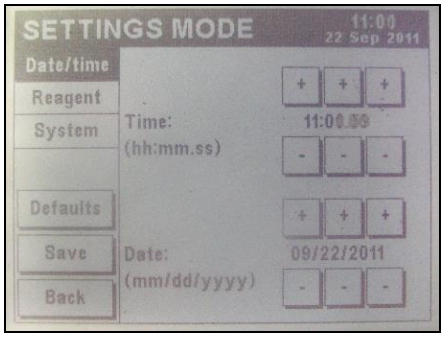
3.4. System settings

Touch the screen during the visualization of the Start Up screen to modify the system settings.

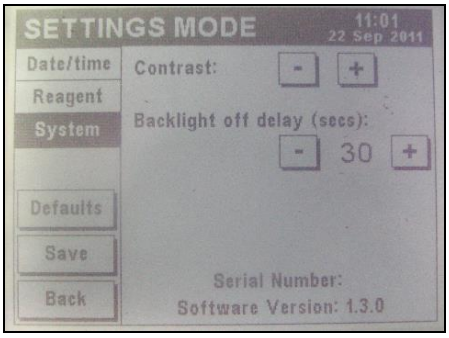


Press the SETTINGS button to open the Settings mode screen. To return to the Main screen press ENJOY THE HISTOSMATE icon.

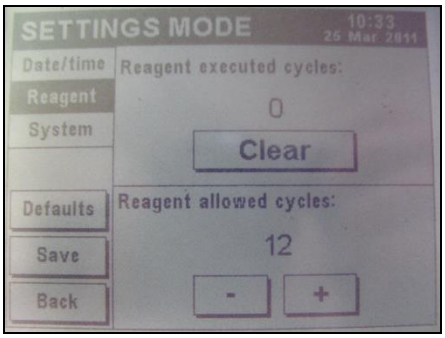
User can:



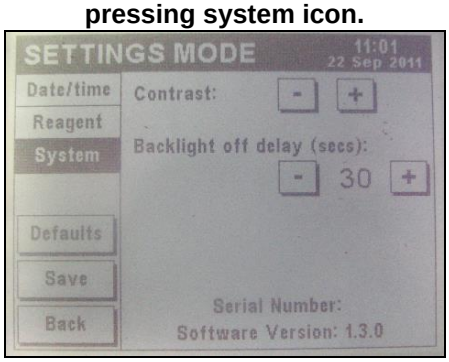
Modify Date/Time.



Change the contrast of the LCD screen by pressing system icon.



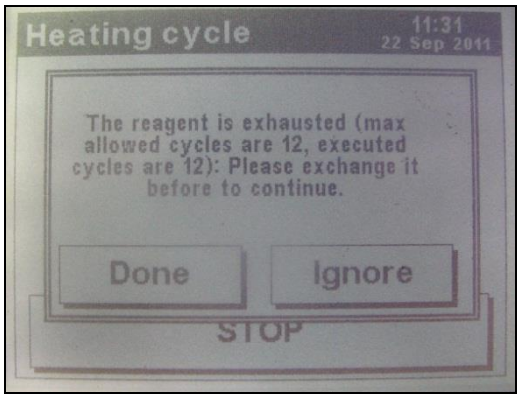
See the reagent executed cycles and the reagent allowed cycles.



Press DEFAULTS icon to reset the system settings, SAVE to confirm any modifications and BACK to return to the Start Up screen.

4. REAGENT MANAGEMENT

If the reagent is expired, an audio alarm starts and the following screen appears.



Select DONE if you change the reagent and the system will reset the counter of the executed cycles. Select IGNORE if you want to run a new cycle with the old reagent.

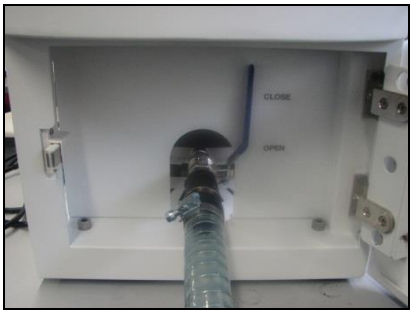
Milestone recommends replacing the old reagent with a new one and press DONE.

DO NOT PRESS "DONE" WITHOUT changing the reagent, to perform a correct cleaning cycle.

4.1. How to change the reagent:

Milestone recommends making sure that the unit is turned ON before draining the exhaust reagent, thus the paraffin remained will be melted.

1)Open the front door of the unit by pressing PUSH label.



2)Insert the draining tube to the connector.

3)Open the exhaust valve, put it in horizontal position and let the reagent drain in an empty container (to be provided by you) suitable to host 10 L of isoparaffins.

At the end, reposition the exhaust valve vertically.
Now the new reagent can be loaded inside the unit.

Milestone recommends switching the unit OFF if you don't immediately insert the new reagent inside the unit or press STOP HEATING icon.

5. MAINTEINANCE

Maintenance of HistosMATE is carried out at two levels:

The first is at laboratory level: a simple routine maintenance can prevent the likelihood of more serious problems. Minimal routine maintenance is required by laboratory personnel that use HistosMATE. The following procedure is recommended to ensure optimal performance of HistosMATE.

The second level of maintenance is technically more detailed and is beyond the scope of normal laboratory personnel. The unit requires once a year a technical preventive maintenance to maintain the high performance and prevent any malfunctionality.

5.1. Laboratory personnel

Minimal routine maintenance is required by laboratory personnel that use the HistosMATE. The following daily actions are recommended to ensure optimal performance of the HistosMATE.

- Ensure the HistosMATE is generally kept clean after each use, but do not use abrasives.
- Check the reagents and change them as follows:
  - REAGENT: Xylene substitutes made of Isoparaffins
  - CYCLES ALLOWED: 12

Please refer to chapter 4.1 for “How to change the reagent”.

CLEANING CAVITY Periodically inspect and clean cavity. Do not use aggressive cleaning detergents.

5.2. Authorized service personnel

The service manual information is for use by authorized service personnel when carrying out repairs, and is not intended for use by laboratory personnel. Issued as a separate service manual.

DO NOT OPEN THE SIDE PANEL.
If the equipment is not working properly, please contact the local representative or manufacturer.

6. TROUBLESHOOTING

The following table provides the HistosMATE operator with possible causes in the event a problem develops with the unit.

PROBLEM	DIAGNOSIS
The unit does not switch on	Check the power cord is connected If the problem persists, call Service technician

CE

Milestone Srl - via Fatebenefratelli 1/5 - 24010 Sorisole (BG) - Italy
Phone +39 035 4128264 - Fax +39 035 575498
e-mail: medical@milestonesrl.com - web: www.milestonemedsrl.com