



O P E R A T I N G  
M A N U A L

**slee** solutions  
for  
pathology

STAINING SYSTEMS  
**Cromatec I / II**

FLEXIBLE STAINING SYSTEMS  
WITH HIGHEST THROUGHPUT

DESIGN &  
MANUFACTURING  
MADE IN GERMANY



Dear Customer,

thank you very much for your confidence in SLEE products!

Before you start operating the device, please read the operating instructions carefully to familiarize yourself with the proper operation and functions. The device should only be operated by specially trained and instructed staff. The specified safety measures as well as the regulations and hygiene standards of the respective laboratories must be respected.

Enjoy working with your new device!

Your team from SLEE medical GmbH

**Please note:**

Some of the images in this manual may show special equipment and / or accessories that are subject to a charge. The image may differ slightly from the product. Errors excepted.

We always try to keep our documents up-to-date and free of errors. However, should you notice any mistakes, we would be grateful if you could provide us with feedback. Comments on the actual content are also welcome at any time. Simply e-mail us at [marketing@slee.de](mailto:marketing@slee.de).

The information, numerical data and notes contained in this document represent the current state of scientific knowledge and state-of-the-art technology as we understand it following thorough investigation in this field. SLEE medical GmbH is under no obligation to update the present manual periodically and on an ongoing basis according to the latest technical developments, nor to provide our customers with additional copies, updates etc. of this document. To the extent permitted in accordance with the national legal system as applicable in each individual case, we shall not be held liable for erroneous statements, drawings, technical illustrations etc. contained in this document. In particular, no liability whatsoever is accepted for any financial loss or consequential damage caused by or related to compliance with statements or other information in this document. Statements, drawings, illustrations and other information regarding the contents or technical details are not to be considered warranted characteristics of our products. These are determined only by the contract provisions agreed between ourselves and our customers. SLEE medical GmbH reserves the right to change technical specifications as well as manufacturing processes without prior notice.

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# 1 INTRODUCTION

This manual shall help you handle the device. Please read the manual completely and follow the advice. Acquaint yourself with the control elements and their functionality by studying the figures. This way, adequate use of the device is ensured.

## 1.1 Used symbols and their meanings

	<p>Danger warnings are marked by a red framed triangle.</p>
	<p>Dangers, warnings and cautions are marked by this symbol.</p>
	<p>Warnings regarding flammability are marked with a yellow triangle, showing a flame.</p>
	<p>Hot surfaces are marked by this symbol. Avoid direct contact to prevent risk of burning.</p>
	<p>Special instructions regarding the operation of the device are marked by this symbol.</p>

## 1.2 Intended use

The Cromatec I / II is an automated stainer and is made for the purpose of staining tissue specimens in histology and pathology laboratories only. The device may be operated only according to the instructions contained in this manual. Any other use of the Cromatec I / II is considered improper.

The conditions for operation, maintenance and service mentioned in this instruction manual must be strictly observed.



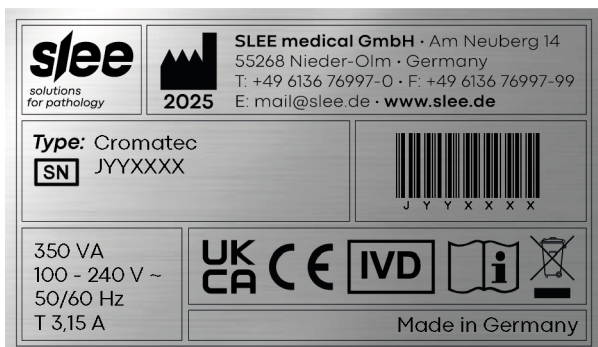
To prevent damage to the device and specimens, only use accessories and spare parts which have been approved by SLEE medical GmbH.

## 1.3 Authorized operators









The Cromatec must be used only by those persons who have been authorized by the owner. In his working area, the operator is responsible with regard to third persons. The owner must give the operator access to this instruction manual and make sure that the operator has read and understood its contents.

## 1.4 Device type

All information provided in this manual applies only to the device type indicated on the title page. A name plate indicating the device serial number is attached to the rear panel of the device.






### Identification label symbols

	Year of manufacturing
<b>Rating</b>	It indicates the various voltages at which the instrument can work (by varying the connection in the internal transformer) <b>another label, in the proximity of the main power cable socket, indicates the voltage at which the instrument is connected and at which it must work.</b>
	Manufacturer address
	CE mark
	UKCA - UK Conformity Assessed
	In Vitro Diagnostic Device
	Caution! Please read the accompanying documentation
	Please read the instructions for the use
	Do not throw on domestic garbage, please follow the local rules for special waste recycling and treatment

## 1.5 Safety Instructions for working with the Cromatec I / II and reagents

When working with the Cromatec I / II, please pay particular attention to the used reagent's characteristics regarding flammability and further hazards. Read the manual carefully before working with the Cromatec I / II and reagents for the first time. Keep the manual near and easily accessible to the device. Consult the manual in case of obscurities.

	<p>Many reagents' fluids and vapors are flammable. If you are not sure about using a reagent, please contact the manufacturer.</p>
	<p>Always wear protective clothes (e.g. laboratory coat, gloves, safety glasses) to prevent accidental contact with reagents!</p> <p>Do not eat, drink or otherwise consume reagents and/or reagent vapors! Do not eat, drink, or smoke within the surrounding area of the device!</p> <p>In case of accidental eating or drinking of, or skin contact with a reagent or its vapors, immediately consult the correspondent safety data sheet and follow the instructions stated in the corresponding sections!</p> <p>Make sure the exhaust air decontamination system is working before starting to work with the Cromatec and reagents!</p> <p>Ensure that the device is cleaned and maintained according to the schedule and advice given in the respective chapters!</p> <p>If the Cromatec is not in use, the water supply must be switched off at the tap independently. If the device is defective due to non-compliance, the warranty will be void.</p>
	<p>If you have trouble understanding the instructions, if you have questions, or are not sure about the safety, please consult your sales representative first!</p>

**An incorrect operation may stop or interrupt tissue processing. Make sure that the device is not interfered with or changed by unauthorized personnel during operation.**

An incorrect operation may stop or interrupt tissue processing. (If power is turned off by unauthorized personnel, the dyeing process may be interrupted, and dyeing problems may occur.) Design the work environment so that only operators with expertise can use the machine. (As a precaution, also consider the use of external alarms, etc.)

**Do not bring open flames near the device.**

The device uses organic solvents that can ignite when exposed to fire.

**Never allow foreign objects to enter the device.**

The ingress of water, metal, paper or other foreign objects into the air inlets (to the fan, etc.) may result in fire, electric shock, operator injury, equipment failure, etc. If foreign objects have entered the device, switch off the device immediately and contact the technical service department or a local representative of SLEE medical GmbH.

**Do not operate the device while wearing metal objects on the body.**

Body-worn wires (pins, jewelry, clothing, etc. made of metal) may come into contact with the device and cause an electric shock.

**Never block the ventilation openings or air inlets on the device.**

Never block the ventilation openings (air inlets) by setting them up against a wall or objects, and do not use the unit in a poorly ventilated place or with the dust cover still attached. This can lead to heat build-up in the device and a drop in its performance and also cause fires, accidents, failures, etc. due to abnormal overheating.

**Check the power cord, other cables and the power outlet regularly for damage and dust accumulation.**

Foreign objects and dust accumulation on the wall outlet can cause fires. Clean the mains socket at regular intervals.

**Make sure that no tissue gets into the drying station and still sticks with flammable solvent.**

If stored flammable solvents are heated in the drying station and evaporate, this can cause fires or explosions.

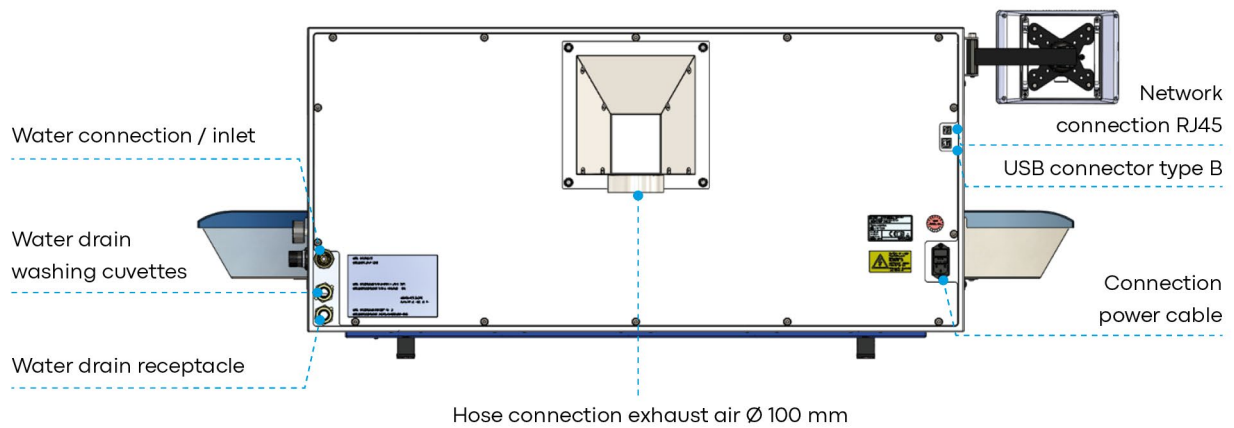
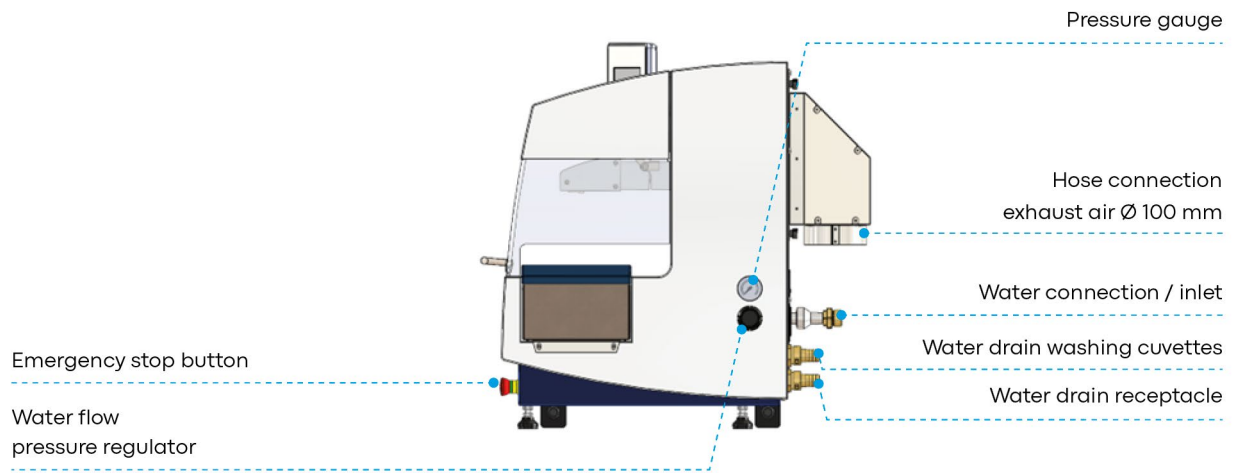
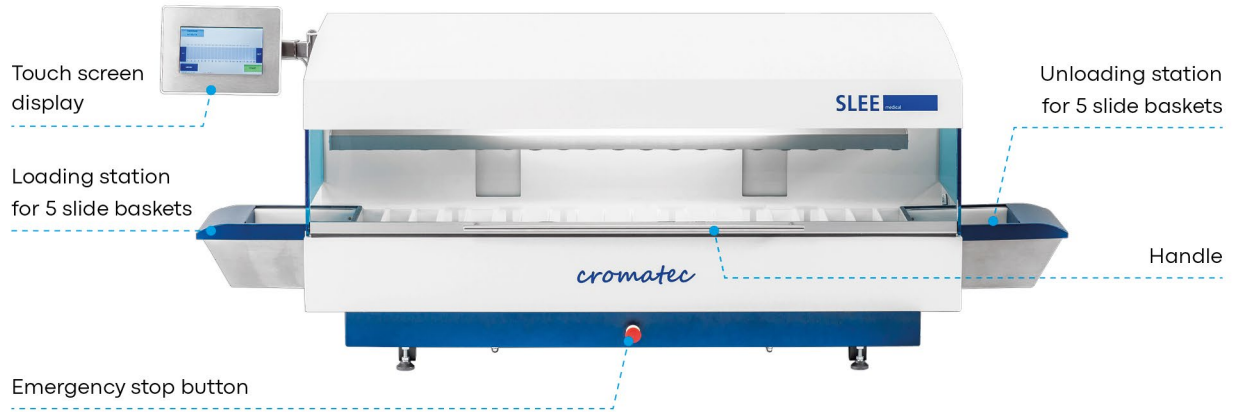
**Do not place the device in a place that is used as a living area.**

If a common room is used, an exhaust system is required. Provide protection against electrostatic discharge at the installation site.

**Install the device indoors. Do not place the unit in a location exposed to direct sunlight, snow or rain.**

This product is designed for indoor use; do not use it outdoors. UV radiation and high temperatures can cause damage to the device. Never use the device when it is exposed to snow or rain, as this could result in electric shock or short circuit.

## 2 OVERVIEW DEVICE



### 3 COMPONENTS

The Slee staining system Cromatec I / II is provided with the following standard components:

Item-No.	Description	Cromatec I	Cromatec II
41000750	Heating cuvette / drying station, adjustable from 30 °C to 70 °C, 1 pcs.		•
41000767	Filter pad for heating cuvette, for collecting dripping wax, 1 pcs.		•
41000782	Extension cable for drying station, 1 pcs.		•
41000566	Cover plate, 2 pcs.	•	•
41000017	Staining cuvette, 20 pcs., POM (Polyoxymethylene, white)	•	•
41000410	Washing cuvette complete with tube and connector, 6 pcs., POM (Polyoxymethylene, white)	•	•
41000584	Insert tub assembled, 1 pcs.	•	•
41000270	Carrier for basket	•	•
38500051	Slide basket, 6 pcs.	•	•
41000655	Inlet hose, 1 pcs.	•	•
41000657	Drain hose à 2 m, 2 pcs.	•	•
33010428	Hose clamp (mounted), 2 pcs.	•	•
41000654	Reducer $\frac{3}{4}$ x $\frac{1}{2}$ inch, 1 pcs.	•	•
41000558	Transport handle, 4 pcs.	•	•
-	Mains cable	•	•
-	Instruction manual	•	•

**Please note:** The images may differ slightly from the product. The images may show accessories that are not included.

## 4 SPECIFICATIONS

### General

Nominal Voltage	100 – 240 V AC +/- 10 %
Nominal frequency	50 / 60 Hz
Max. power consumption	350 VA
Max. heat emission	350 J/s
IEC 1010 classification	Protective class 1; Pollution degree 2; Overvoltage installation category II
Fuses	2 x T 3,15 A
Interfaces	USB, RJ 45
Operating temperature range	+10 to +35 °C
Operating humidity	max. rel. 80 % non-condensing
Storage temperature range	+5 to +55 °C
Storage humidity	max. rel. 80 % non-condensing
Battery running time	4 h (the heating station is switched off in battery mode)
Exhaust air volume	Minimum air volume approx. 200 m <sup>3</sup> /h, required pressure difference of approx. 100 Pascal (Pa), nominal diameter for hose connection on the back is 100 mm

### Dimensions and weight

Dimensions (W x D X H)	1.560 mm x 640 mm x 620 mm
Weight unpacked (without accessories)	120 kg

### Capacity

	Cromatec I	Cromatec II
Specimen slide throughput	Up to 1.800 slides/h*	
Loading capacity	Up to 20 slide baskets simultaneously	
Slide basket capacity	30 slides	
Total number of stations	20	19 + 1 heating / drying station
Number of heating / drying stations	-	1
Temperature heating stations	-	30 – 70 °C
Number of washing stations	Max. 6	
Reagent / Washing cuvettes volume	400 ml	
Water flow regulation for washing stations	0,5 to 2,0 l/min	
Load / Unload stations	2 pcs., 5 slide baskets / station	
Programs	20 programs, up to 20 steps each	
Incubation time setting	5 sec. up to 59 min, 59 sec.	

\*depending on staining protocol

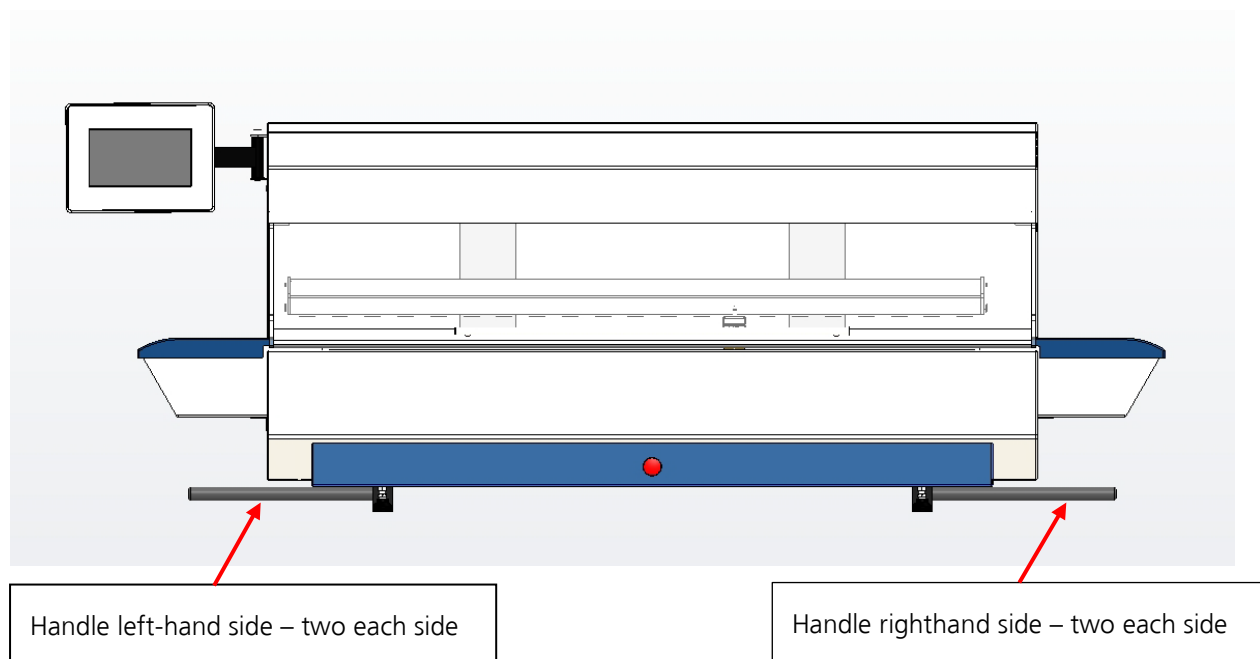
## 5 SETTING UP THE DEVICE

### 5.1 Installation site requirements – first time

#### Requirements for the installation site:

- The device may only be used indoors.
- Stable, precisely horizontal laboratory table with a uniform surface of 1.80 m and a depth of 0.80 m, with a load capacity of 120 kg!
- The minimum distance between the device and the wall or other devices should be at least 10 cm to ensure adequate ventilation. Also make sure that there are no flammable objects in the area heated by the unit.
- Tap water connection of maximum 2.50 m and wastewater pipe of 2.00 m from the corresponding input / output on the rear wall of the device.
- If the device is to be operated with an exhaust air hose, a fume cupboard with a maximum distance of 3.50 m from the device is required. Alternative: Operation with activated carbon filter.
- Sufficient space of min. 0.90 m above the bench to easily open / close the device cover.
- Stable ambient temperature between +10 ° C and +35 °C
- Relative humidity of maximum 80 %, non-condensing.
- Do not place any equipment nearby that could cause vibration.
- The device must not be exposed to direct sunlight.

Lift the device by carrying the handles (see picture below). Four people are needed to lift and / or carry the device as the device weighs approximately 120 kg in total.



## 5.2 Tap water supply connection

Install the enclosed inlet hose, which is equipped with a safety aqua stop, on the top screw connection (water inlet) (see illustration).



Always connect the water inlet hose!



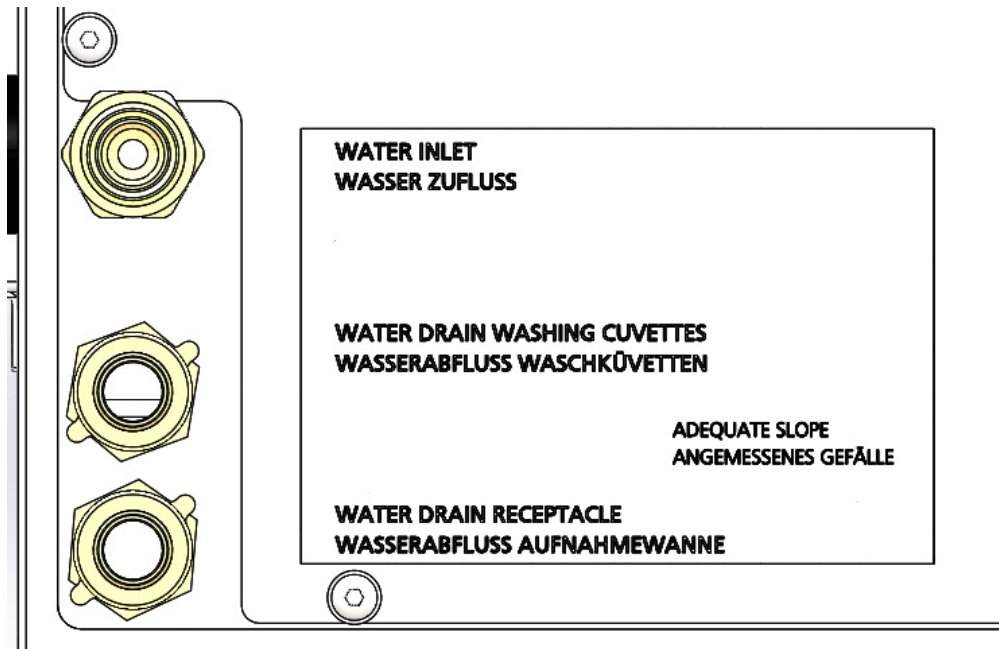
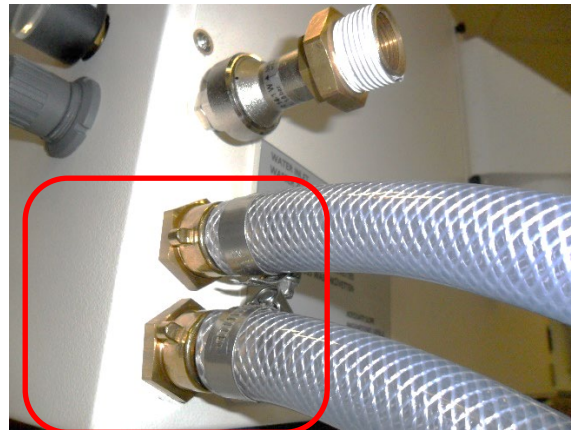
Make sure that a water pressure of 1 bar min. is available.

If the pressure does not comply with the requirement, the device will not work properly!



### 5.3 Waste water hose connection

Connect the waste hoses to the wastewater connections. Please note that water can escape in the upper drain hose, but in the lower only in an exceptional case.



	<p>Please do not bend the hoses and ensure an adequate slope.</p> <p>The two drains on the rear of the unit must never be brought together.</p> <p>The lower drain is to be used only for cleaning purposes to rinse and clean the cuvette trough. Connect as required and provide sufficient slope.</p> <p>The upper drain is only for the maximum of 6 water baths and must be connected constantly with sufficient slope.</p>
--	--

## 5.4 Electrical connection

The electronic connection is located at the rear of the unit.

Connect the mains cable to the mains power supply socket.



The device must be connected to a grounded mains power outlet socket. Make sure to use the appropriate mains cable for the local voltage supply.



## 5.5 Connection of air evacuation (optional)

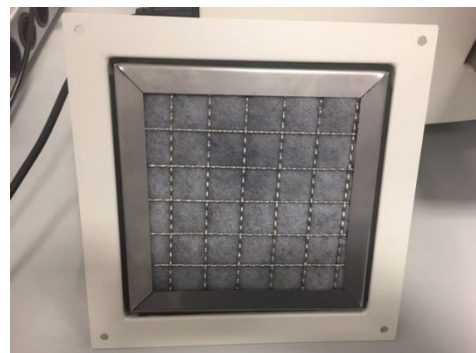
For the connection to an external air evacuation please contact the local Slee service.

## 5.6 Inserting / Changing the activated carbon filter



The Cromatec will be delivered with the filter already installed.

1. For changing the filter, unscrew the 4 screws at the panel at the rear of the device.
2. Take out the filter and replace it with a new one.
3. Connect the filter housing to the rear panel again.
4. Set filter change in the menu.



## 5.7 Fold transport arm up/down

The transport arm can be folded up for better access to the cuvettes.

To do this, lift the lock and then lift the transport arm. While holding the transport arm in the upper position, slide the lock down again.

To bring the transport arm back into the operating position, lift the release and bring the transport arm into a horizontal position.



**Important:**

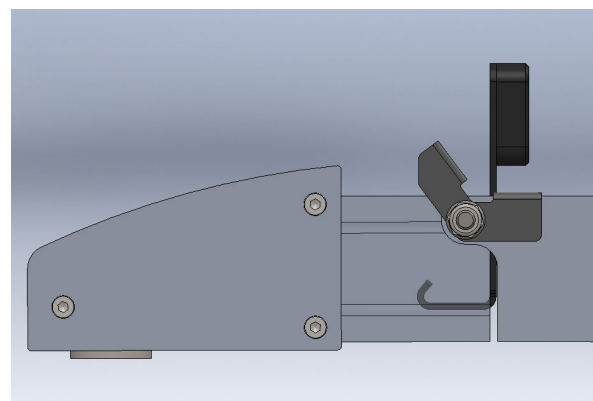
**It is not permitted to close the hood or start a program while the transport arm is folded up.**



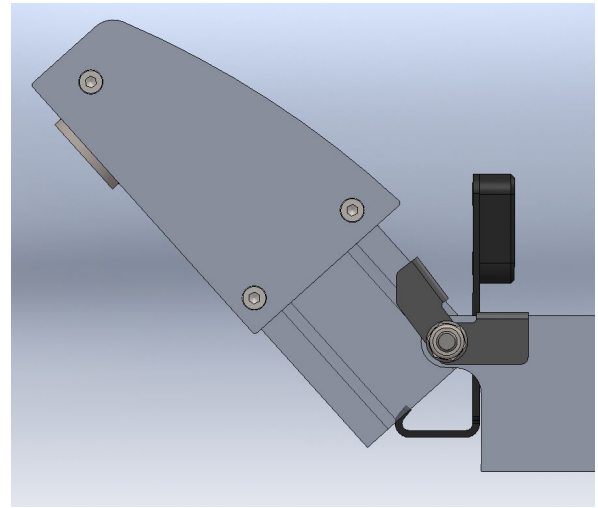
## 5.8 Magnetic arm lock

The magnetic arm safety device prevents crushing or similar injuries.

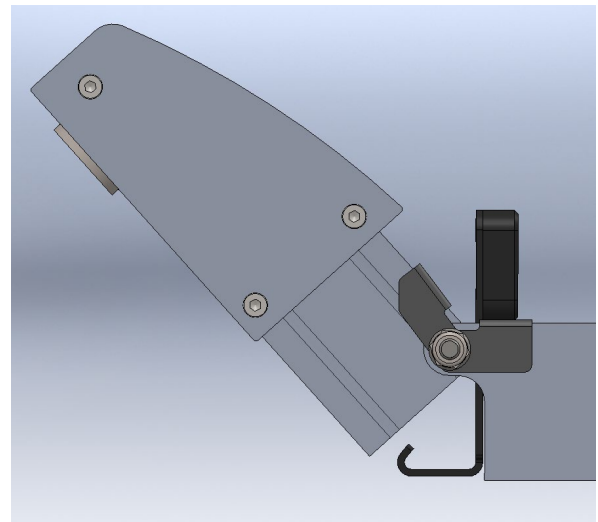
The magnetic arm is down.



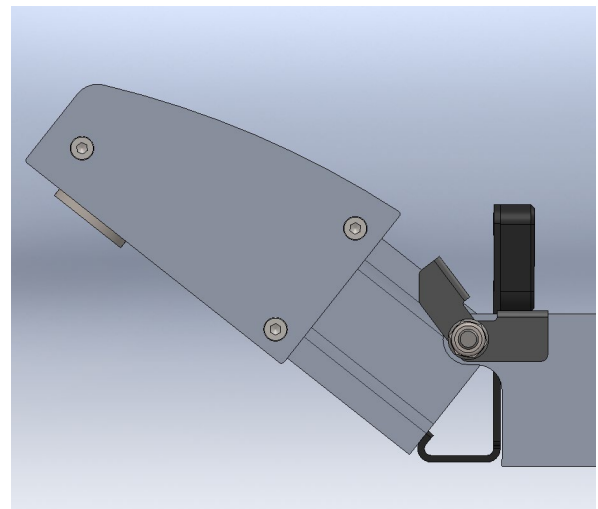
The magnetic arm is raised, the magnetic arm lock “falls” down.



The magnetic arm lock is in position.



The magnetic arm safety device prevents the magnetic arm from suddenly folding down and causing crushing or similar injuries.



## 5.9 Leveling the device

- Once all accessories are installed move the device to its final position.
- The easiest way to find the right level is using a spirit level.
- The right level will be achieved by adjusting the device feet.



## 5.10 Inserting the cuvettes

There are three different cuvette types:

- Reagent cuvettes
- Running water cuvettes
- Heating cuvette / drying station (only Cromatec II)

### Reagent cuvette



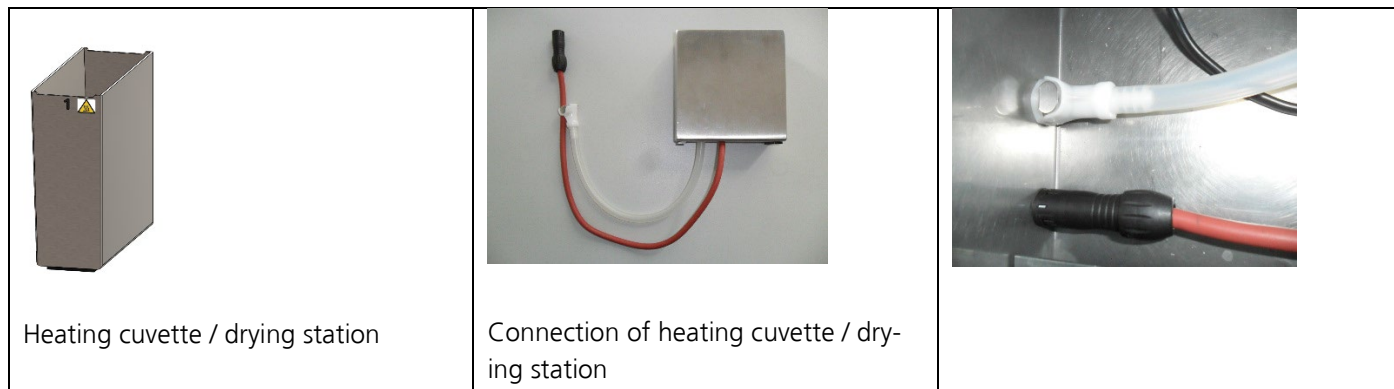
The reagent cuvette can simply be placed at any station.

### Washing cuvette



The washing cuvette can simply be clicked into the water tube at the bottom of the station. The position can be freely selected.

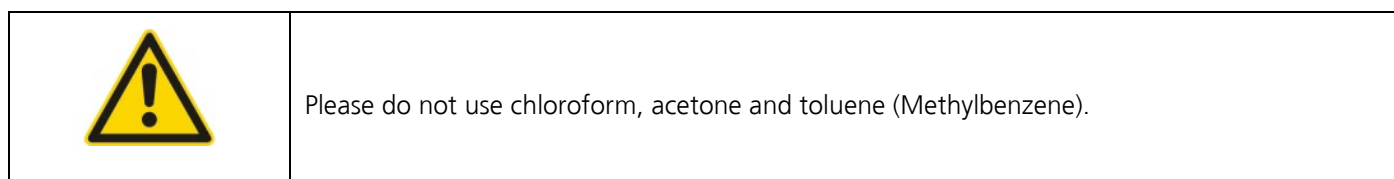
## 5.11 Inserting the heating cuvette / drying station - only Cromatec II



The heating cuvette is only available once in the device, as a heating cuvette / drying station in station 1, or as a heating cuvette / drying station in station 20. Only the plastic cuvette in station 1 or 20 is replaced by the heating cuvette or drying station. The heating station in station 1 the power supply and air supply are connected directly at the bottom left of the tub. For dry station in station 20, the power supply and the air supply are connected each with an extension in the bottom left of the tub. When placing the power supply and the air supply, it is important to ensure proper installation. For power connection, the white mark on the plug must face up.

### **This following step is very important to obey:**








In station 1 as hot air station, the figure 1 on the housing facing to the user. In station 20 as drying station, the figure 20 must face the user, so the hot air station must be turned 180 degrees.



## 5.12 Preparation and loading

Position reagent cuvettes outside the device onto a plane and clean working bench.

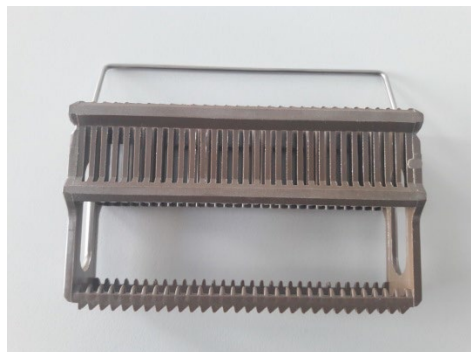
Fill the reagent cuvettes with the intended reagents up to the filling mark on the inside.

	<p>Under no circumstances must the heating and drying stations be filled with solvents such as alcohol or Xylene. When solvents heat, a highly explosive mixture builds up! Caution!</p>
	<p>Caution when handling hot heating and drying stations! The heating and drying stations become very hot when the heating function is activated! Risk of injury!!</p>
	<p>Use a face shield or safety glasses, in accordance with Good Laboratory Practice.</p>
	<p>Wear gloves, in accordance with Good Laboratory Practice.</p>
	<p><b>The following media may be used in the Cromatec:</b></p> <ul style="list-style-type: none"> <li>• Water</li> <li>• Ethanol</li> <li>• Methanol</li> <li>• Xylene</li> <li>• Chloroethene</li> <li>• H&amp;E staining solutions Hematoxylin and Eosin</li> <li>• Dilute hydrochloric acid (up to about 10 %)</li> </ul> <p>Xylene substitutes must be checked because the chemical compounds are currently not available.</p>
	<p><b>The following media must not be used in the Cromatec:</b></p> <ul style="list-style-type: none"> <li>• Phosphoric acid (H<sub>3</sub>PO<sub>4</sub>)</li> <li>• Hydrochloric acid (HCl in a concentration of more than 10 %)</li> <li>• Nitric acid (HNO<sub>3</sub>)</li> <li>• Sulfuric acid (H<sub>2</sub>SO<sub>4</sub>)</li> <li>• Chloroform (CHCl<sub>3</sub>)</li> <li>• Toluene (Methylbenzene, C<sub>7</sub>H<sub>8</sub>)</li> <li>• Acetone (C<sub>3</sub>H<sub>6</sub>O)</li> </ul> <p><b>Other media must be checked in advance!</b></p>
	<p><b>Material safety data sheets are available from the reagent's distributor.</b></p> <p>Please make sure that the reagent you wish to apply complies with the Cromatec before using it. The material of the Cromatec cuvettes is POM (Polyoxymethylene, white).</p>

### 5.13 Inserting the slide baskets

The slide basket carrier system consists of two parts:

- The slide basket for 30 slides
- The basket carrier to connect to the magnet system

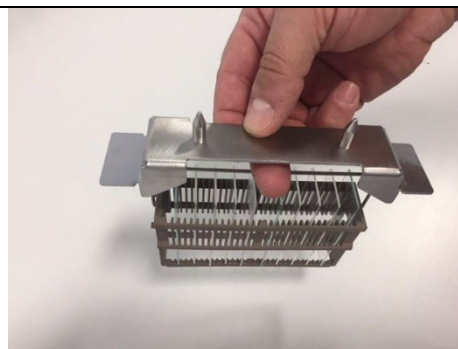




slide basket



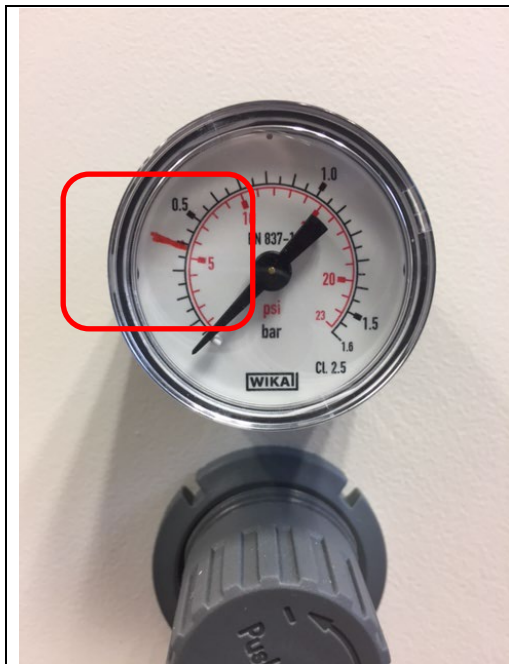
basket carrier

To make sure the slide basket is not falling out of the transport system, you can hold it with your finger as shown in the picture.



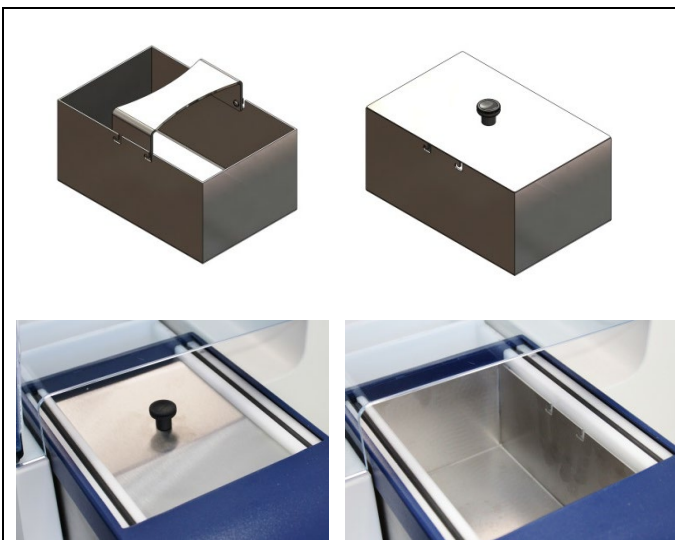
	<p>The transport system must be clean at all times to make sure the magnets are taking the full slide baskets. Please do not use the device with just the transport system but always with a basket inserted.</p>
	<p>Please pay attention to an even load.</p>

### 5.14 Setting the water pressure for running water station



The red marking indicates the maximum flow pressure during operation.

### 5.15 Store samples in Xylene at the end of the process



At the end of the process, the baskets end up in the unloading station. The tray in the unloading station should be filled with Xylene to preserve the samples.

When the process is completed, the baskets should be removed from the tray.

To avoid the evaporation of Xylene (at the end of the process or overnight), the tray should be covered with a lid.

The bow handle may only be used to remove the tray from the unloading station.



Do not use the lid during a running process since it would block the line.

## 6 OPERATION

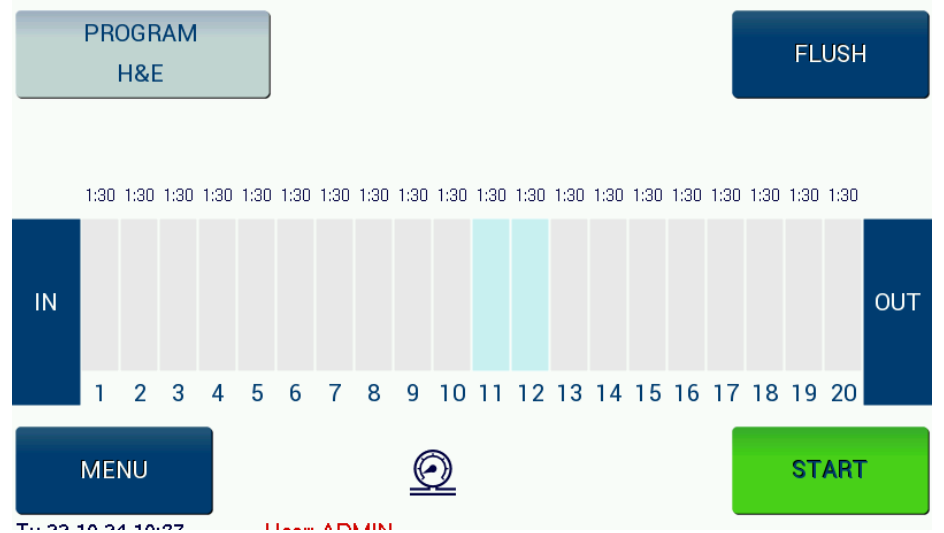
### 6.1 Switching on the device

Switch on the device at the main switch at the rear panel of the device.



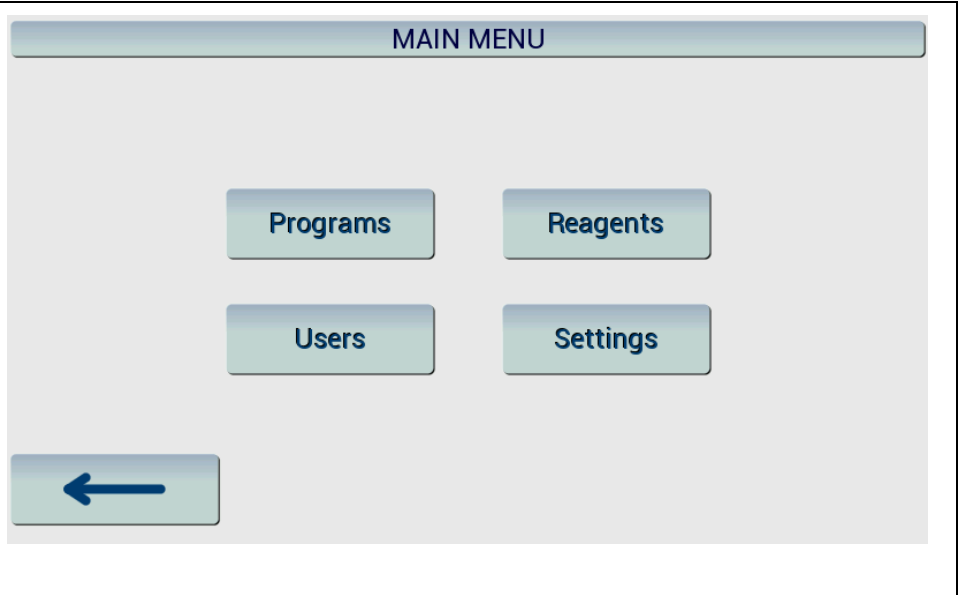
### 6.2 Main menu – home screen

After switching on the device for the first time, the system starts booting and the following display is shown:

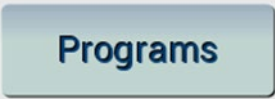
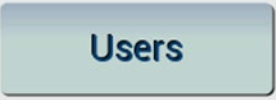
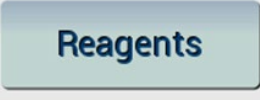
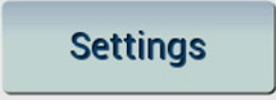


### 6.3 Programs

Please press "Menu" on the home screen to enter the main menu.

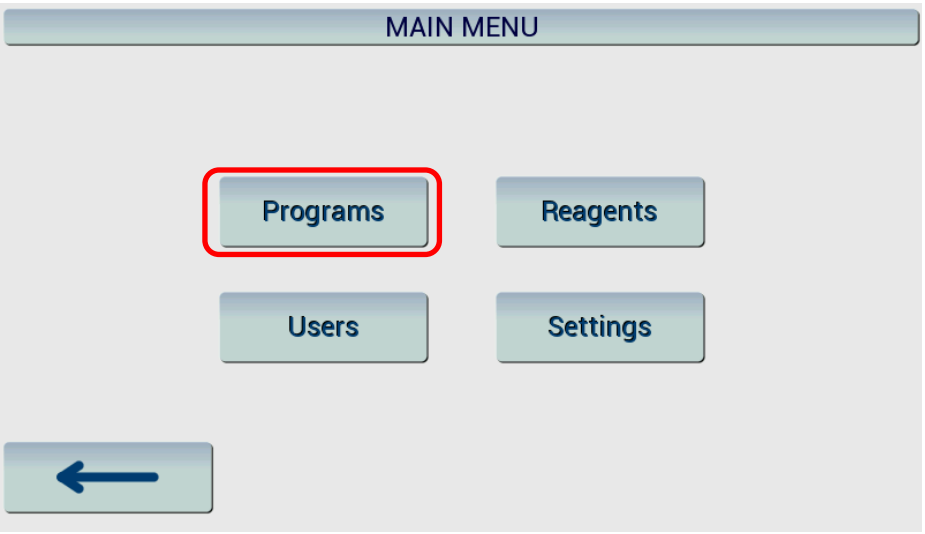





From this status all functions are started.

	The "Programs" button is for selection and changing of programs.
	The "Users" button is to set and change user data
	The "Reagents" button is for managing the reagents.
	The "Settings" button is for general settings.

### 6.3.1 Edit a new or existing program

Please follow the below instructions to save a new program or to edit an existing program.

<p>Please press "Programs" to find the list of programs or to select a new one.</p>	
	

	<p>With the magnifier you can edit an existing program.</p>
	<p>With the button "new" you can program a new program.</p>

After pressing "New" in the "program selection" menu you see the following:

PROGRAM DETAILS

Shortname	HE1	Change
Name	HE1	Change
Driptime	5	Change
Total duration	0:15:00	Steps
RMS	<input type="radio"/> OFF	

Abort Clear Save as new Save

While pressing "Change" behind "Shortname" you can insert the requested details ("Shortname" is the name of the program to be seen in the overview):

Please confirm every step with the "OK" button and to return to the menu "Program details".

Enter Shortname:

q w e r t y u i o p 7 8 9  
a s d f g h j k l % 4 5 6  
z x c v b n m , . - 1 2 3  
^ 0 ( )  
HE| <-  
Abort OK

While pressing "Change" behind "Name" you can insert the requested details ("Name" is the long version of the name of the program to be seen in the overview):

**PROGRAM DETAILS**

Shortname: HE1 Change

Name: HE1 Change

Driptime: 5 Change

Total duration: 0:15:00 Steps

RMS:  OFF

Abort Clear Save as new Save

Please confirm every step with the "OK" button and to return to the menu "program details".

Enter Name:

q w e r t y u i o p 7 8 9

a s d f g h j k l % 4 5 6

z x c v b n m , . - 1 2 3

^ [ ] 0 ( )

| <-

Abort OK

You can change the drip-off time of the basket pressing "Change" behind "Driponff time".

The screenshot shows the 'PROGRAM DETAILS' screen with the following fields and controls:

- Shortname: HE1 (Change button)
- Name: HE1 (Change button)
- Driponff time: 5 (Change button)
- Total duration: 0:15:00 (Steps button)
- RMS: OFF (toggle switch)

At the bottom, there are four buttons: Abort, Clear, Save as new, and Save. The Save button is highlighted with a red box.

You can select from 0 – 250 sec. Please confirm every step with the "OK" button and to return to the menu "program details".

The screenshot shows the 'PROGRAM DETAILS' screen with a numeric keypad overlay for the 'Driponff time' field. The keypad has buttons for digits 0-9, a backspace key (<-), and an OK button. The OK button is highlighted with a red box.

The background shows the 'PROGRAM DETAILS' screen with the following fields and controls:

- Shortname: HE1 (Change button)
- Name: HE1 (Change button)
- Driponff time: 5 (Change button)
- Total duration: 0:15:00 (Steps button)
- RMS: OFF (toggle switch)

At the bottom, there are four buttons: Abort, Clear, Save as new, and Save. The Save button is highlighted with a red box.

While pressing "Steps" behind "Total duration" you can select the step time (min:sec) and reagent.

**PROGRAM DETAILS**

Shortname	HE1	<b>Change</b>
Name	HE1	<b>Change</b>
Driponff time	5	<b>Change</b>
Total duration	0:15:00	<b>Steps</b>
RMS	<input type="checkbox"/> OFF	

Please press "Change" behind "Reagent" to select the reagent out of the below list.

**HE: STEP 1**

Reagent	AQUA	<b>Change</b>
Duration	0:30	<b>Change</b>

**HE: STEP 1**

Reagent	AQUA	<b>Change</b>
Duration	0:30	<b>Change</b>

<input type="button" value="AQUA"/>	AQUA	<input type="button" value="↑"/>
<input type="button" value="AQUA"/>	AQUA	
<input type="button" value="AQUA"/>	AQUA	
<input type="button" value="AQUA"/>	AQUA	
<input type="button" value="AquaDest"/>	Distilled water	
<input type="button" value="EMPTY"/>	Empty cuvette	
<input type="button" value="ETH100"/>	Ethanol 100%	
<input type="button" value="ETH50"/>	Ethanol 50%	<input type="button" value="↓"/>

Please press "Change" behind "Duration" to select the incubation time.

HE: STEP 1

Reagent: AQUA [Change]

Duration: 0:30 [Change]

[Delete] [←] [→] [Insert]

[Abort] [OK]

Please confirm your selection by pressing the OK button.

HE: STEP 1

Exposure time: 0:30

[7] [8] [9]

[4] [5] [6]

[1] [2] [3]

[0] [->]

[Abort] [OK]

Please repeat the step for every station (bath).

HE: PROGRAM STEPS

No.	Reagent	Duration	RMS	RQ	Show
1	Empty cuvette	0:30	OFF		[Show]
2	Empty cuvette	0:30	OFF		[Show]
3	Empty cuvette	0:30	OFF		[Show]
4	Empty cuvette	0:30	OFF		[Show]
5	Empty cuvette	0:30	OFF		[Show]
6	Empty cuvette	0:30	OFF		[Show]
7	Empty cuvette	0:30	OFF		[Show]

[←] [↑] [↓]

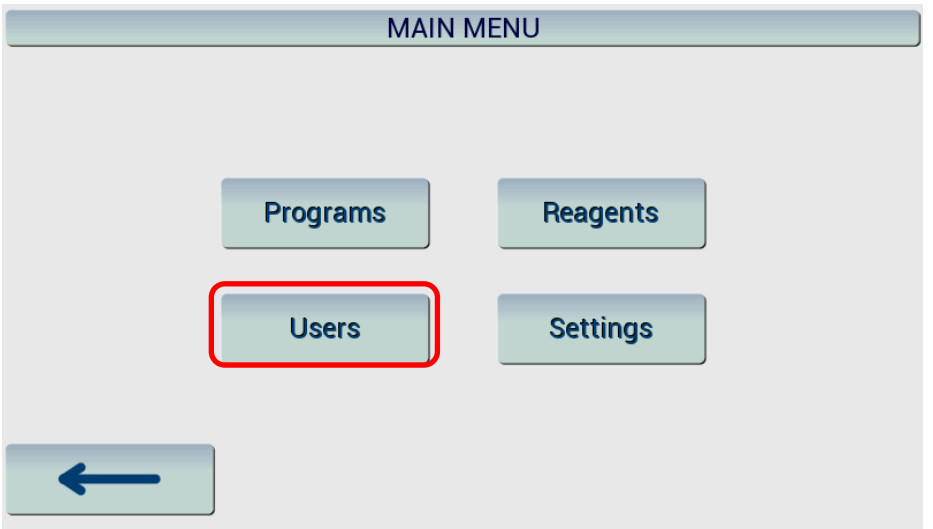
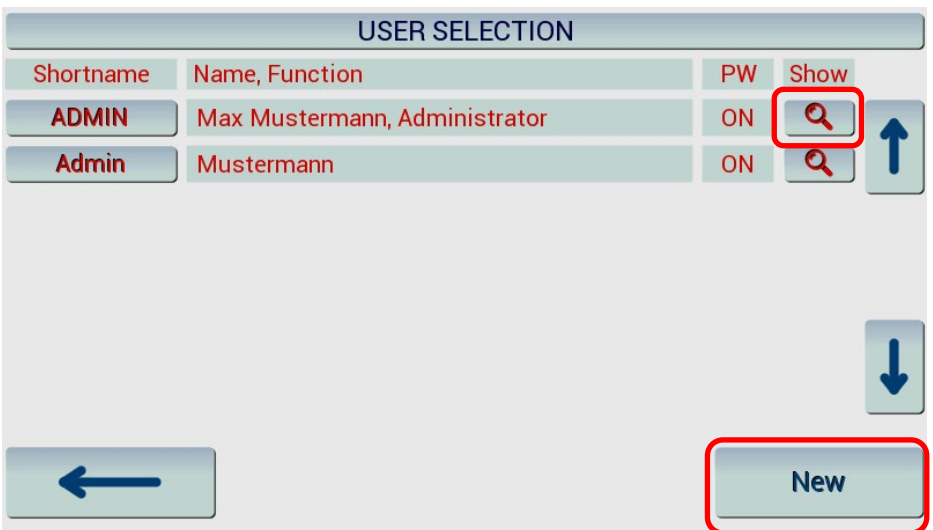
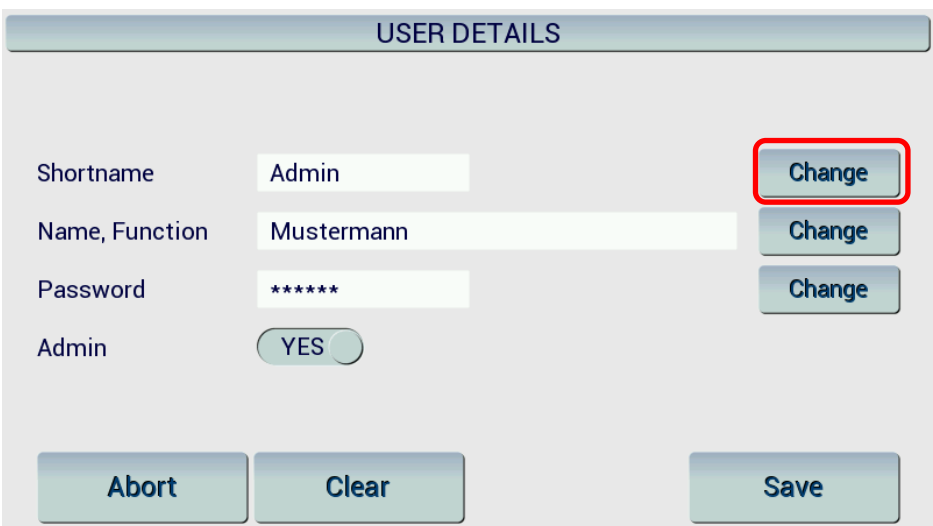


Please note that the Cromatec I / II can only work step by step. No station can be skipped. If a station has no reagent, it has to be marked as empty.

## 6.4 Users

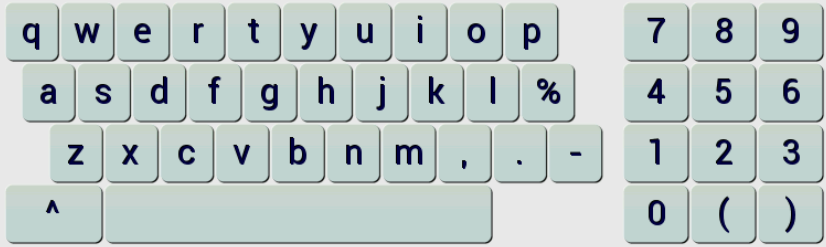
### 6.4.1 Edit a new or existing user

Please follow the below instructions to save a new user or to edit an existing user.

<p>If you want to add or select a new user, please press "Users" in main menu.</p>													
<p>With the magnifier you can change the values of the user. If you want to add a user, please press "New".</p>	 <table border="1" data-bbox="552 920 1473 1066"> <thead> <tr> <th>Shortname</th> <th>Name, Function</th> <th>PW</th> <th>Show</th> </tr> </thead> <tbody> <tr> <td>ADMIN</td> <td>Max Mustermann, Administrator</td> <td>ON</td> <td></td> </tr> <tr> <td>Admin</td> <td>Mustermann</td> <td>ON</td> <td></td> </tr> </tbody> </table>	Shortname	Name, Function	PW	Show	ADMIN	Max Mustermann, Administrator	ON		Admin	Mustermann	ON	
Shortname	Name, Function	PW	Show										
ADMIN	Max Mustermann, Administrator	ON											
Admin	Mustermann	ON											
<p>Press "Change" behind "Shortname" to enter the Shortname of the user.</p>													

Please confirm with "OK" and to return to menu user details.

Enter Shortname:



Admin|

Abort OK

Press "change" behind "Name, Function" to enter the Name and Function or Department of the user.

USER DETAILS

Shortname Admin Change

Name, Function Mustermann Change

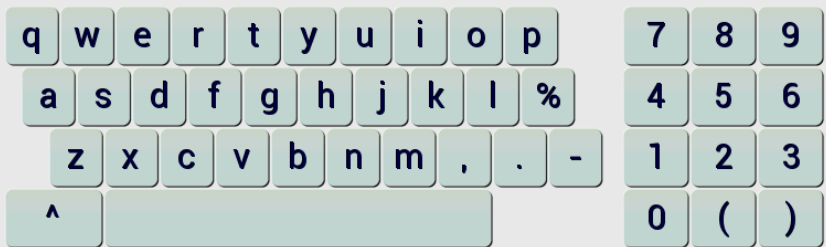
Password \*\*\*\*\* Change

Admin YES

Abort Clear Save

Please confirm with "OK" to return to menu user details.

Enter Name and Function:



Mustermann|

Abort OK

Press "change" behind "Password" to change the password. If <none> is selected, there is no password active.

**USER DETAILS**

Shortname: Admin

Name, Function: Mustermann

Password: \*\*\*\*\*

Admin:  YES

Please confirm with "OK" to return to menu user details.

Enter new password:

q w e r t y u i o p 7 8 9

a s d f g h j k l % 4 5 6

z x c v b n m , . - 1 2 3

^ [ ] 0 ( )

\*\*\*\* |

Please confirm everything with "save" and to return to menu user selection.

**USER DETAILS**

Shortname: Admin




Name, Function: Mustermann



Password: \*\*\*\*\*

Admin:  YES

With the arrow you can return to the main menu.

The screenshot displays a web interface titled "USER SELECTION". It features a table with the following columns: Shortname, Name, Function, PW, and Show. Two users are listed: "ADMIN" (Max Mustermann, Administrator) and "Admin" (Mustermann). Each user entry has a search icon and a vertical arrow icon. At the bottom left, a blue arrow button pointing left is highlighted with a red border. At the bottom right, there is a "New" button.

Shortname	Name, Function	PW	Show
ADMIN	Max Mustermann, Administrator	ON	 
Admin	Mustermann	ON	

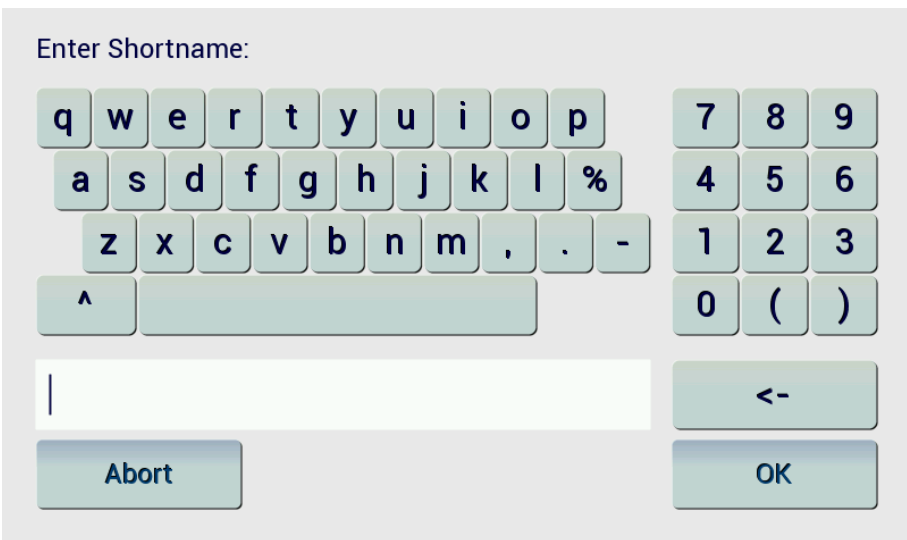

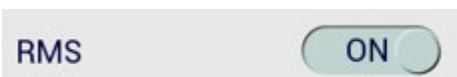
## 6.5 Reagents


### 6.5.1 Edit or create a new reagent

Please follow the below instructions to save a new reagent or to edit an existing reagent.

Please note that a registered reagent can only be used once in the respective protocol. If there are several reagents with the same name (e.g., Xylene), it must be created multiple times according to its use.

<p>If you want to add or select a new reagent, please press "Reagents" in main menu.</p>																																									
<p>With the magnifier you can adjust an existing reagent or with "New" you can add a new one.</p>	<table border="1"> <thead> <tr> <th>Shortname</th> <th>Name</th> <th>RMS</th> <th>RQ</th> <th>Show</th> </tr> </thead> <tbody> <tr> <td>HTX</td> <td>HTX-Weigert</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>Haemalm</td> <td>Haemalm</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>HAEMA(1)</td> <td>Haematoxylin (1)</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>HAEMA(2)</td> <td>Haematoxylin (2)</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>HOTAIR</td> <td>Hot air station</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>PROP(1)</td> <td>Isopropanol (1)</td> <td>OFF</td> <td></td> <td></td> </tr> <tr> <td>PROP(2)</td> <td>Isopropanol (2)</td> <td>OFF</td> <td></td> <td></td> </tr> </tbody> </table>	Shortname	Name	RMS	RQ	Show	HTX	HTX-Weigert	OFF			Haemalm	Haemalm	OFF			HAEMA(1)	Haematoxylin (1)	OFF			HAEMA(2)	Haematoxylin (2)	OFF			HOTAIR	Hot air station	OFF			PROP(1)	Isopropanol (1)	OFF			PROP(2)	Isopropanol (2)	OFF		
Shortname	Name	RMS	RQ	Show																																					
HTX	HTX-Weigert	OFF																																							
Haemalm	Haemalm	OFF																																							
HAEMA(1)	Haematoxylin (1)	OFF																																							
HAEMA(2)	Haematoxylin (2)	OFF																																							
HOTAIR	Hot air station	OFF																																							
PROP(1)	Isopropanol (1)	OFF																																							
PROP(2)	Isopropanol (2)	OFF																																							
<p>Please press "Change" to make any changes.</p>																																									

<p>Enter "Shortname", confirm with "OK".</p>	
<p>Enter "Name", confirm with "OK".</p>	
<p>Choose "RMS" on or off.</p>	

	<p>RMS stands for Reagent Management and shows visually on the main screen to what extent a reagent has already been used. Furthermore, the upper and maximum uses can be defined. When the reagent has been replaced, simply press the "Replace" button and the counter starts again.</p>
---	--

	<div style="border: 1px solid #ccc; padding: 10px;"> <p style="text-align: center; background-color: #e0e0e0; margin: -1px -1px 1px -1px;"><b>REAGENT DETAILS</b></p> <p>Shortname <input type="text"/> <span style="float: right;">Change</span></p> <p>Name <input type="text"/> <span style="float: right;">Change</span></p> <p>RMS <input type="checkbox"/> OFF</p> <p>Max. Days <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Max. Runs <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Replaced <input type="text" value="&lt;unknown&gt;"/> <span style="float: right;">Replace</span></p> <p style="text-align: center;"> <span style="margin-right: 20px;">Abort</span> <span style="margin-right: 20px;">Clear</span> <span>Save</span> </p> </div>												
	<div style="border: 1px solid #ccc; padding: 10px; background-color: #f0f0f0;"> <p style="text-align: center; background-color: #e0e0e0; margin: -1px -1px 1px -1px;"><b>REAGENT DETAILS</b></p> <p>Shortname <input type="text"/> <span style="float: right;">Change</span></p> <p>Name <input type="text"/> <span style="float: right;">Change</span></p> <p>RMS <input type="checkbox"/> OFF</p> <p>Max. Days <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Max. Runs <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Replaced <input type="text" value="&lt;unknown&gt;"/> <span style="float: right;">Replace</span></p> <p style="text-align: center;"> <span style="margin-right: 20px;">Abort</span> <span style="margin-right: 20px;">Clear</span> <span>Save</span> </p> <div style="position: absolute; top: 50px; left: 50px; border: 1px solid #ccc; padding: 5px; background-color: #fff;"> <p style="text-align: center;">Max. Days</p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>0</td><td>&lt;-</td><td></td></tr> </table> <p style="text-align: center; margin-top: 10px;"><input type="text" value="10"/></p> <p style="text-align: center;"> <span style="margin-right: 20px;">Abort</span> <span>OK</span> </p> </div> </div>	7	8	9	4	5	6	1	2	3	0	<-	
7	8	9											
4	5	6											
1	2	3											
0	<-												
	<div style="border: 1px solid #ccc; padding: 10px; background-color: #f0f0f0;"> <p style="text-align: center; background-color: #e0e0e0; margin: -1px -1px 1px -1px;"><b>REAGENT DETAILS</b></p> <p>Shortname <input type="text"/> <span style="float: right;">Change</span></p> <p>Name <input type="text"/> <span style="float: right;">Change</span></p> <p>RMS <input type="checkbox"/> OFF</p> <p>Max. Days <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Max. Runs <input type="text" value="10"/> Used: 0 - 100% remaining <span style="float: right;">Change</span></p> <p>Replaced <input type="text" value="&lt;unknown&gt;"/> <span style="float: right;">Replace</span></p> <p style="text-align: center;"> <span style="margin-right: 20px;">Abort</span> <span style="margin-right: 20px;">Clear</span> <span>Save</span> </p> <div style="position: absolute; top: 50px; left: 50px; border: 1px solid #ccc; padding: 5px; background-color: #fff;"> <p style="text-align: center;">Max. Runs</p> <table border="1" style="width: 100%; text-align: center;"> <tr><td>7</td><td>8</td><td>9</td></tr> <tr><td>4</td><td>5</td><td>6</td></tr> <tr><td>1</td><td>2</td><td>3</td></tr> <tr><td>0</td><td>&lt;-</td><td></td></tr> </table> <p style="text-align: center; margin-top: 10px;"><input type="text" value="10"/></p> <p style="text-align: center;"> <span style="margin-right: 20px;">Abort</span> <span>OK</span> </p> </div> </div>	7	8	9	4	5	6	1	2	3	0	<-	
7	8	9											
4	5	6											
1	2	3											
0	<-												

## 6.5.2 Edit / select hot air station – only Cromatec II

LIST OF REAGENTS				
Shortname	Name	RMS	RQ	Show
HTX	HTX-Weigert	OFF		
Haemalm	Haemalm	OFF		
HAEMA(1)	Haematoxylin (1)	OFF		
HAEMA(2)	Haematoxylin (2)	OFF		
HOTAIR	Hot air station	OFF		
PROP(1)	Isopropanol (1)	OFF		
PROP(2)	Isopropanol (2)	OFF		

Navigation:

---

REAGENT DETAILS	
Shortname	HOTAIR
Name	Hot air station
RMS	<input type="radio"/> OFF
Max. Days	0 Used: 0 - 0% remaining
Max. Runs	0 Used: 0 - 0% remaining
Replaced	<unknown>



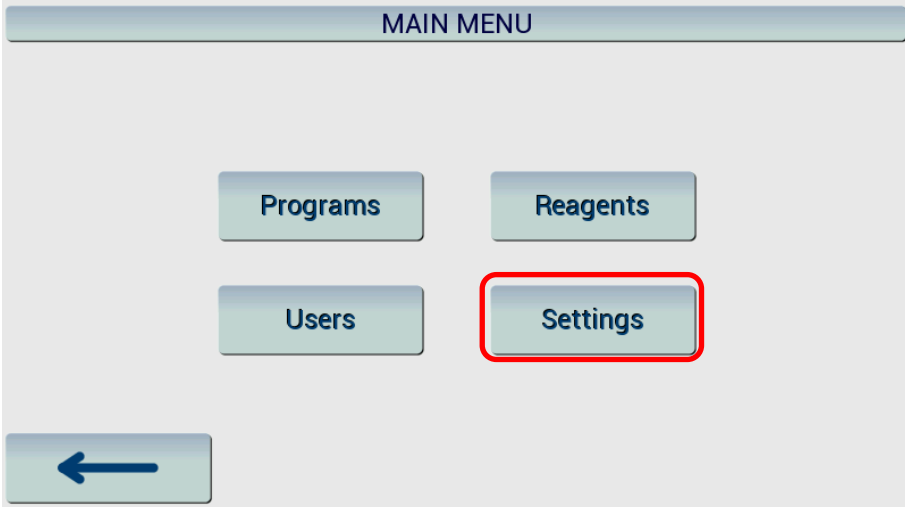
Please note that the option "Hot air station" is preinstalled (if option has been chosen) and no changes can be done in the reagent details.

"Drying station" can only be selected as station 1 or 20. The agitation is then switched off.

## 6.6 Settings

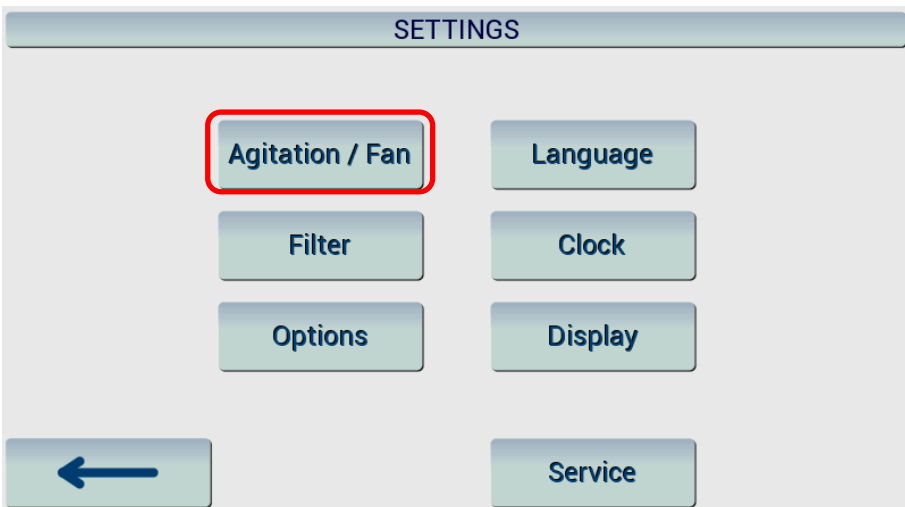
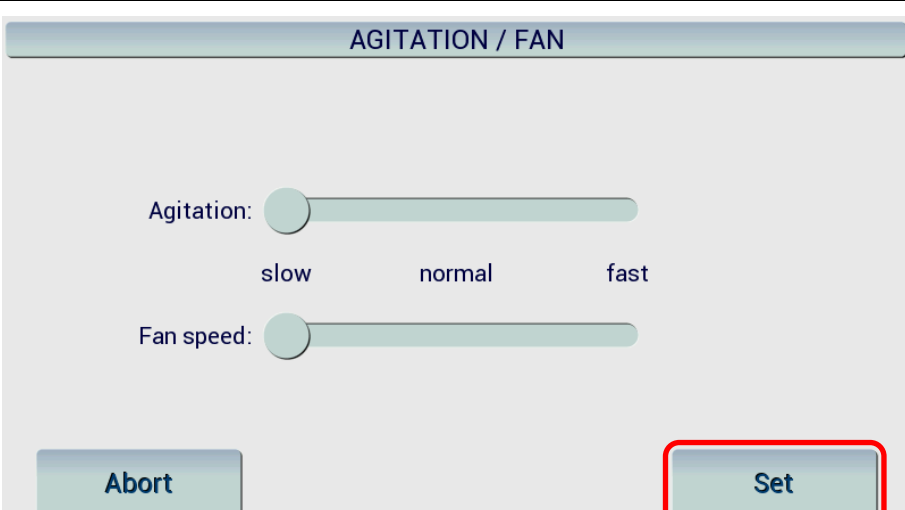
### 6.6.1 Settings of the Cromatec

Please follow the instructions below to edit and save settings.

<p>If you want to change the settings of the Cromatec please press "Settings" in main menu.</p>	
---	--

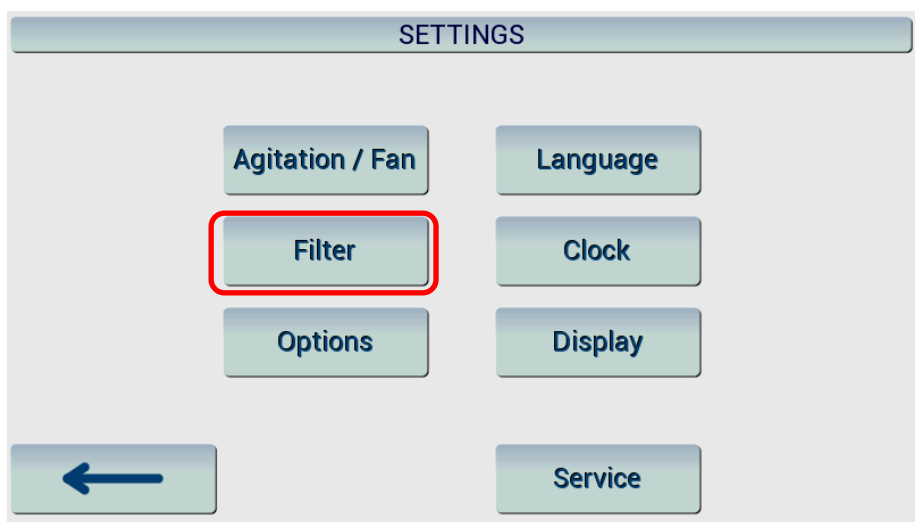
### 6.6.2 Agitation / Fan

To change the settings for agitation and fan please select "Agitation / Fan" in the "Settings" menu.

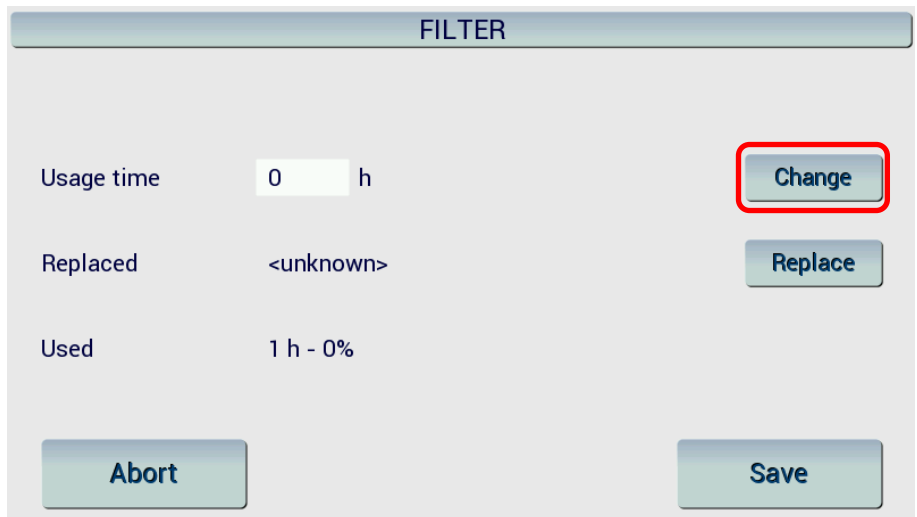
<p>If you want to change the settings of the Cromatec please press "Settings" in main menu.</p>	
<p>The agitation and fan speed can be changed in the menu. You can select between slow, normal and fast. Please confirm your settings by pushing "Set".</p>	

### 6.6.3 Filter

To change the settings for the filter please select "Filter" in the Settings menu.



If you want to change the filter usage time please select "Change". Please adjust the values as follows.



A value of 1000 hrs is default setting. You can select values from 1h to 9999 hrs. Please confirm your settings by pressing "OK".



If you have replaced the filter, please press "Replace". The value shown under "Used" will be set to 0. For filter exchange please refer to the respective chapter.

The screenshot shows a 'FILTER' settings screen with the following data and controls:

Parameter	Value	Action
Usage time	1000 h	Change
Replaced	18.06.16 - 01:58	Replace
Used	0 h - 0%	

At the bottom of the screen, there are two buttons: 'Abort' on the left and 'Save' on the right. The 'Replace' button is highlighted with a red border.

Please save your settings by pressing "Save".

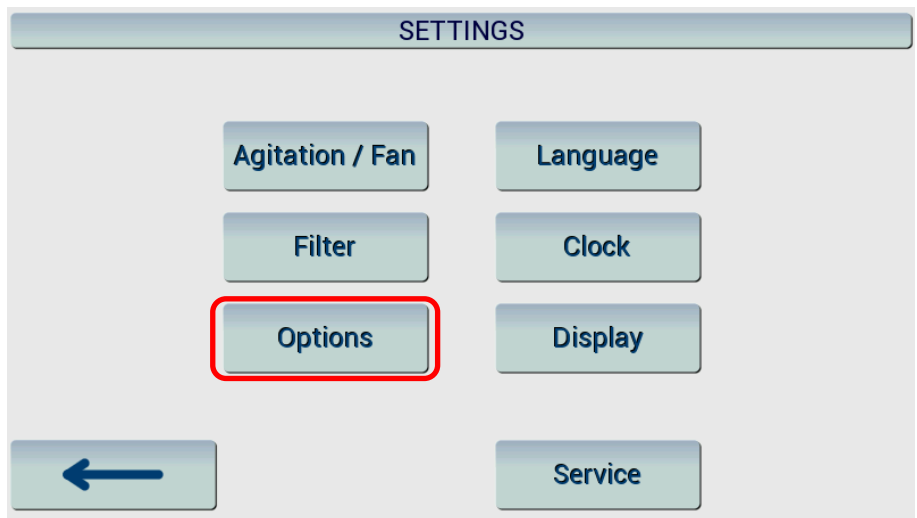
The screenshot shows the same 'FILTER' settings screen as above, but with the 'Save' button highlighted in red. The data and other controls remain the same.

Parameter	Value	Action
Usage time	1000 h	Change
Replaced	18.06.16 - 01:58	Replace
Used	0 h - 0%	

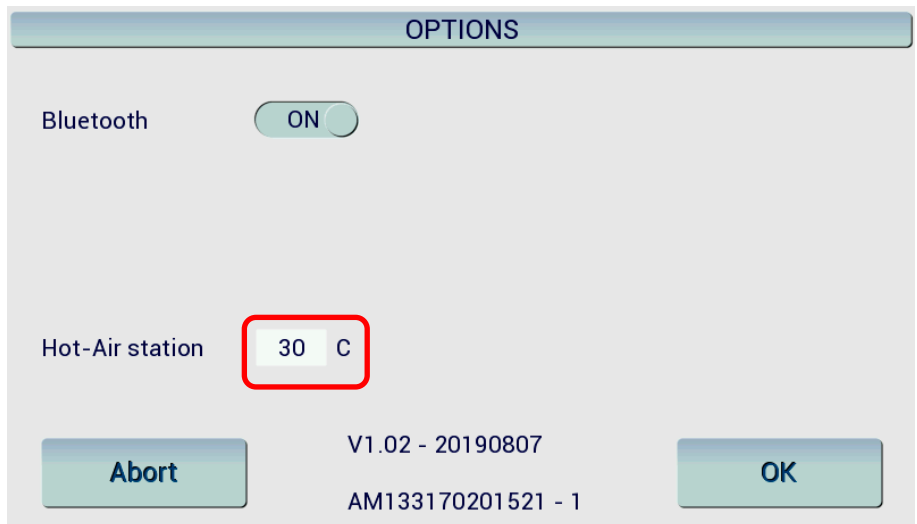
At the bottom of the screen, there are two buttons: 'Abort' on the left and 'Save' on the right. The 'Save' button is highlighted with a red border.

### 6.6.4 Options – only Cromatec II

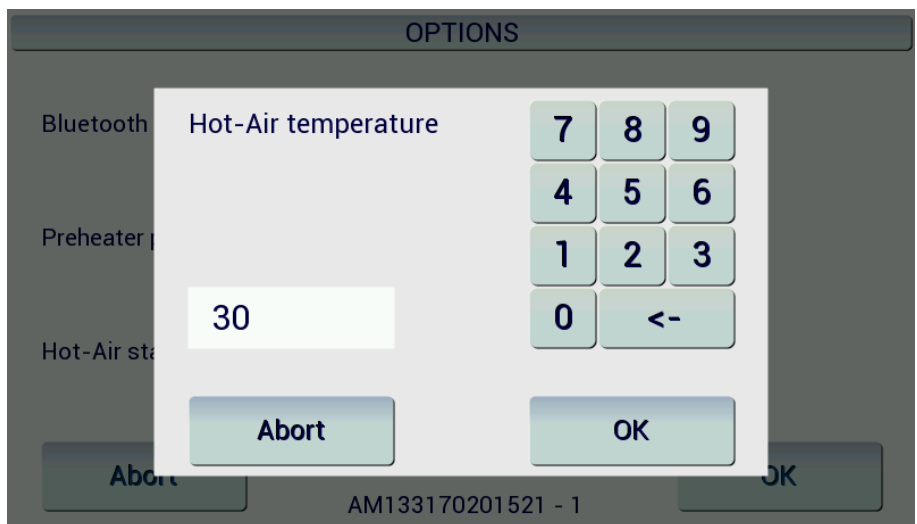
To change the settings for the temperature of hot air station please select "Options" in the Settings menu.



The hot-air station temperature can be selected between 30 °C and 70 °C.



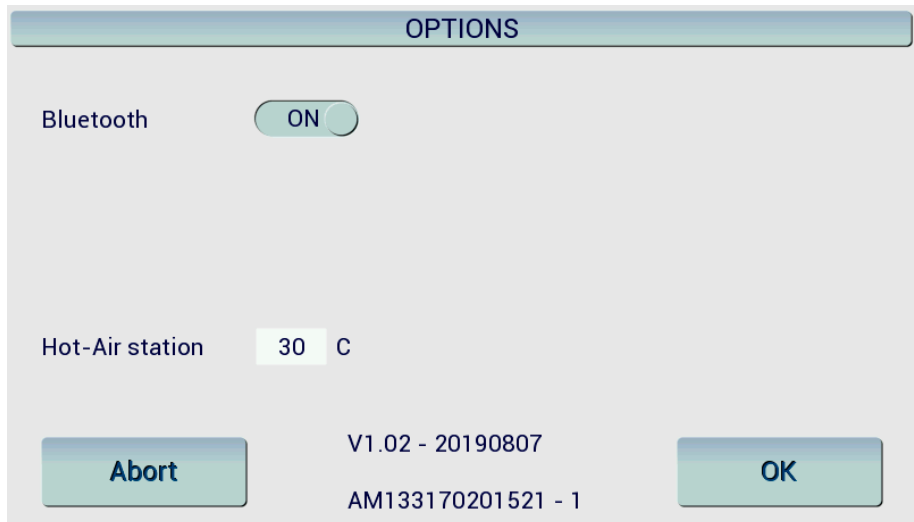
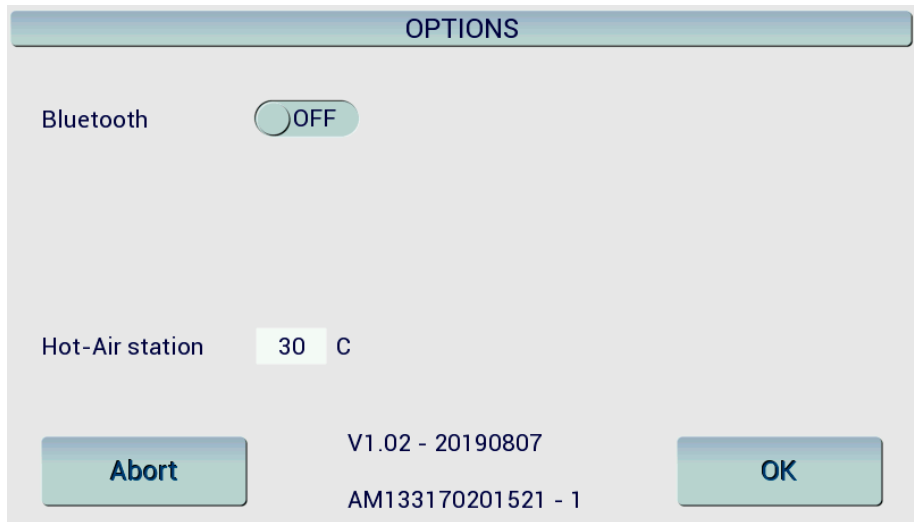
Please set the temperature and confirm with "OK".





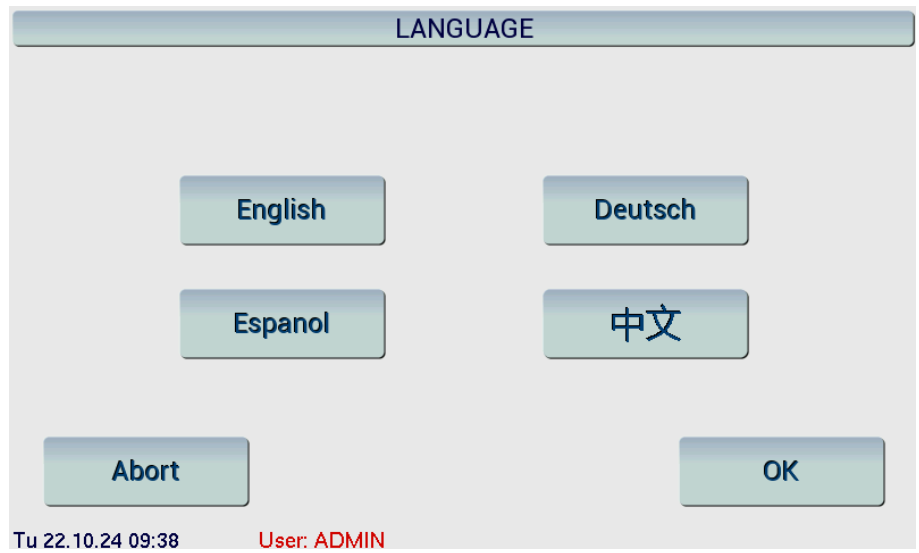
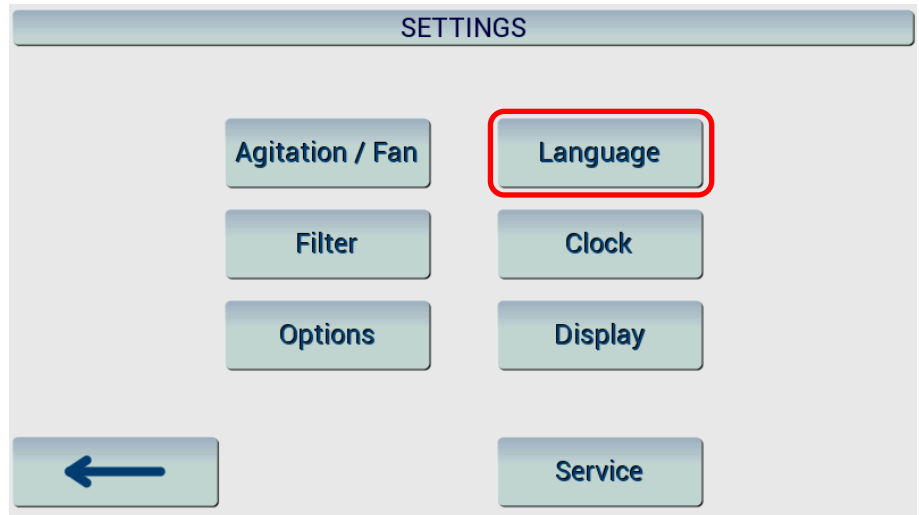
The melting of the paraffin on the samples depends on the temperature, number of glass slides in the slide baskets, and sample thickness. In addition, the heating cuvette needs a certain amount of time to warm up, which is automatically controlled by a small waiting time via the software. When using the heating cuvette, the program does not start until the set temperature has been reached.

The Bluetooth function can also be switched on and off here.



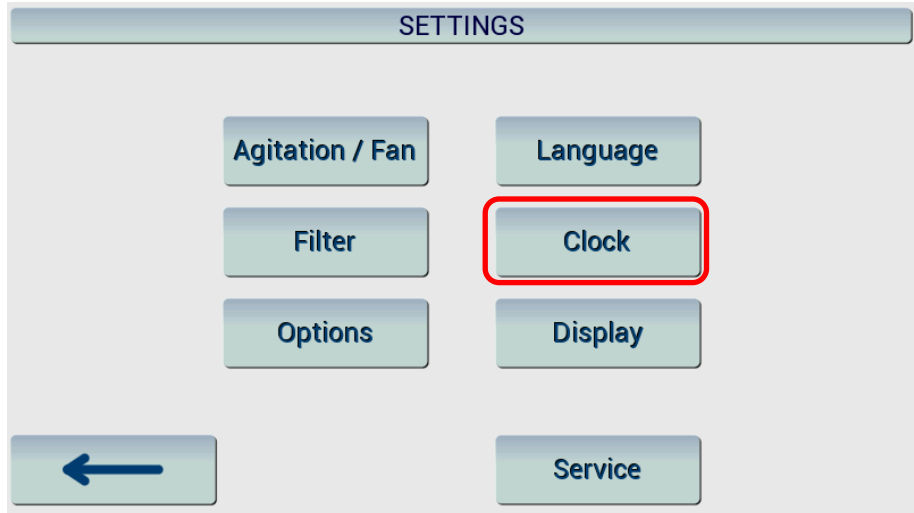
## 6.6.5 Language

To change the settings for the language options please select "Language" in the Settings menu.



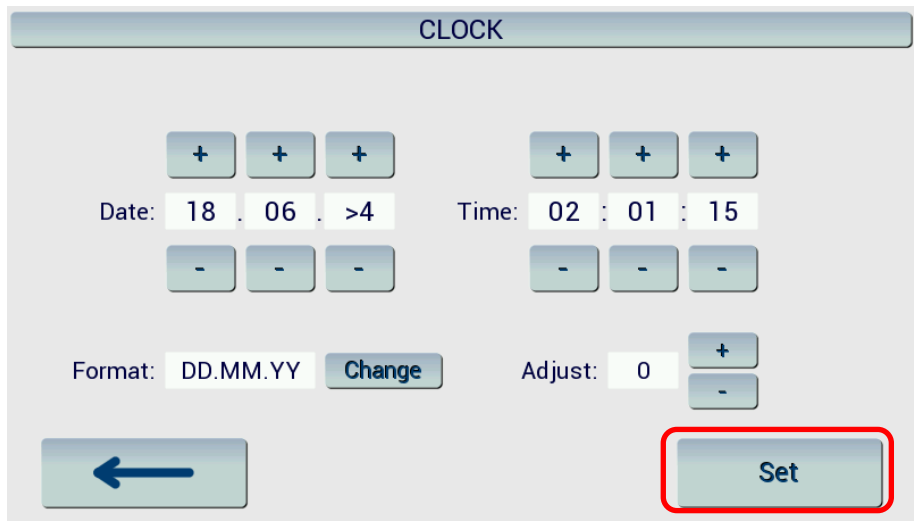
### 6.6.6 Time and date

To change the settings for time and date please select "Clock" in the Settings menu.



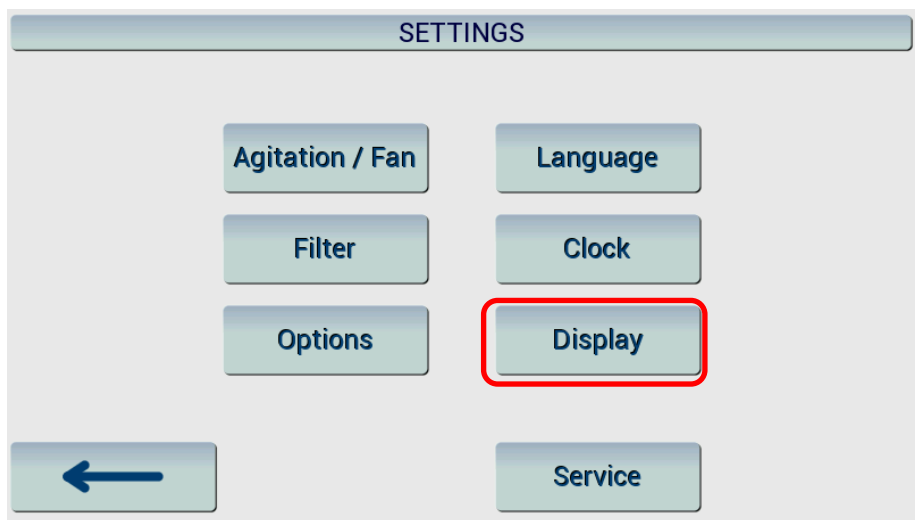
With + and – you can select the actual time and date. If you want to change the format of date, please press "Change". Possible formats are: DD.MM.YY and MM.DD.YY. With "Adjust" you can select differences between summer and wintertime.

After that please press "SET" for saving these settings and to return to settings menu and to main menu.

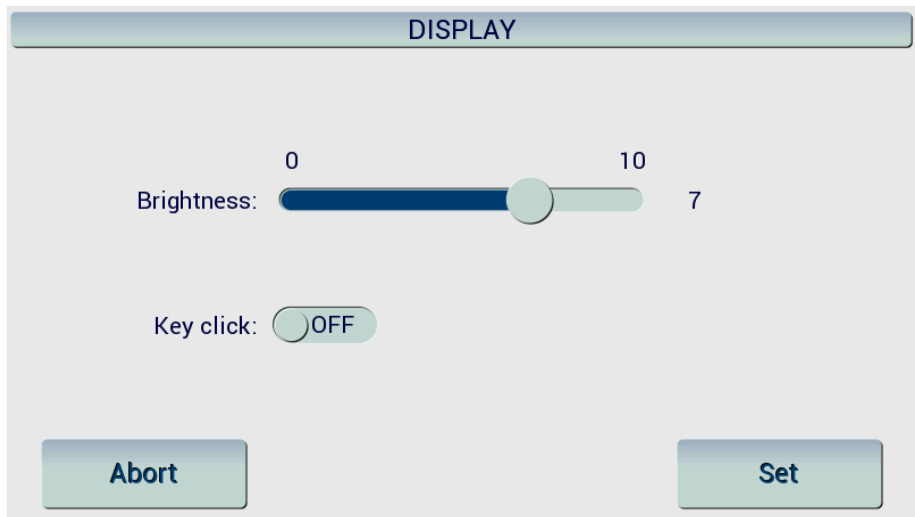


## 6.6.7 Display

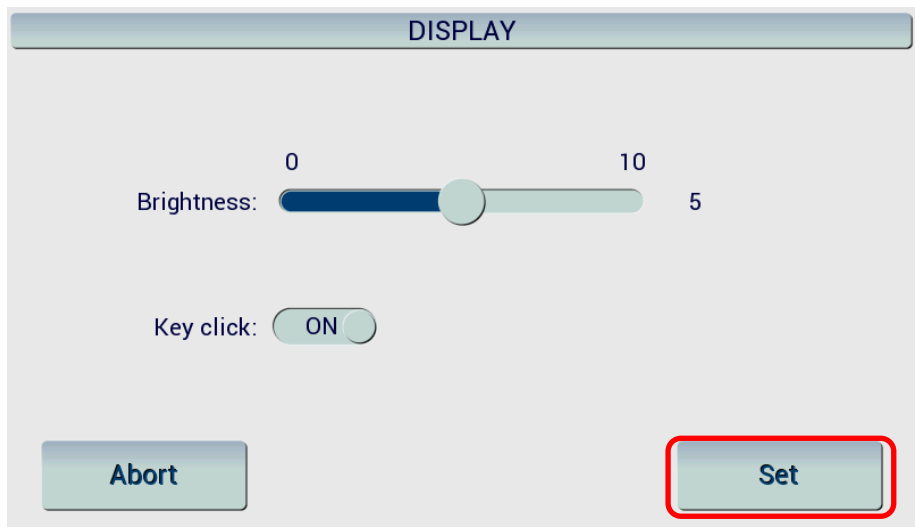
To change the settings for the display please select "Display" in the Settings menu.



You can select the display brightness from 0 to 10. With the button "Key click" you switch on / off the key tones:

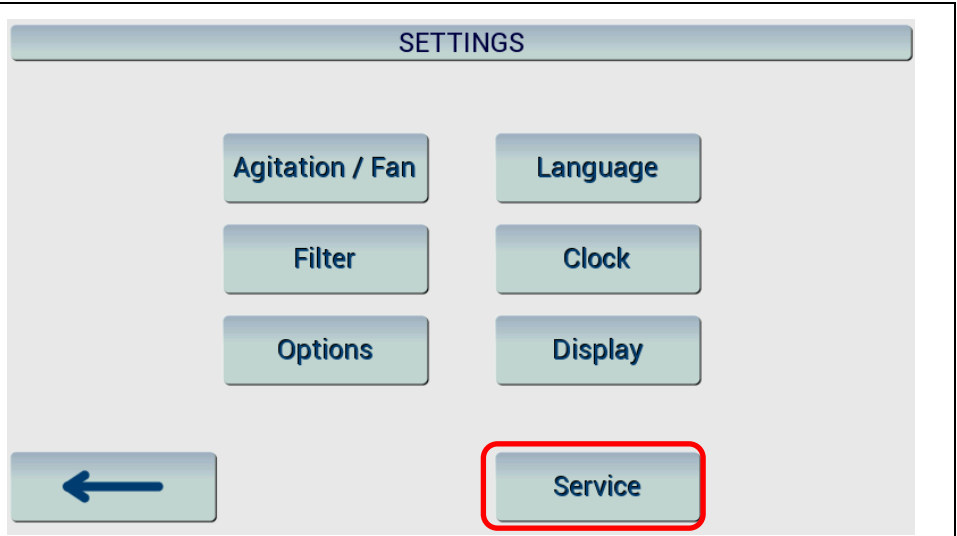


Please confirm your selection with "Set".

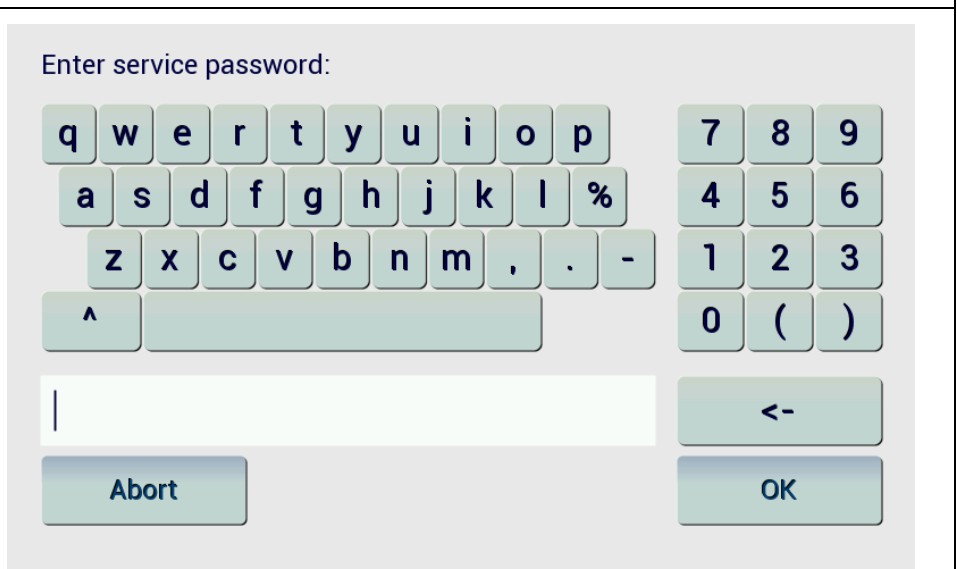


### 6.6.8 Service

To change the Service settings please select "Service" in the Settings menu.



Service settings are password protected!



## 6.7 Run a staining program

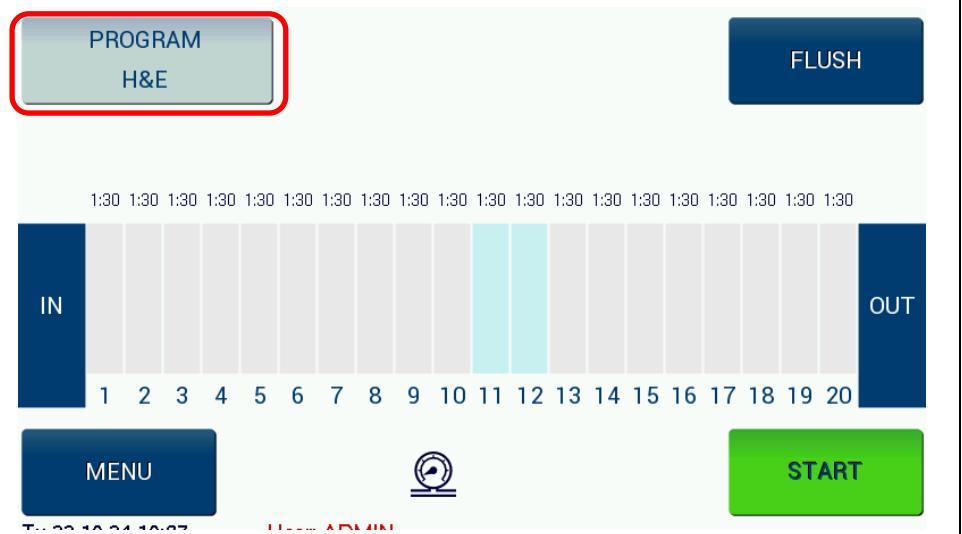
### 6.7.1 4.7.1 Place slide baskets in the loading station

Please put the slide baskets you want to stain into the loading station. You can place up to 5 slide baskets into the loading station.



### 6.7.2 Select the program you want to stain

You can select the program you want to stain by pressing the current program.



You will be taken to the Program Selection menu. Just click on the short name to choose the program.

Shortname	Name	Duration	RMS	RQ	Show
HE1	HE1	0h:15min	OFF		

Once selected you will be back at the overview screen and the selected program is visible.

PROGRAM H&E

FLUSH

1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30 1:30

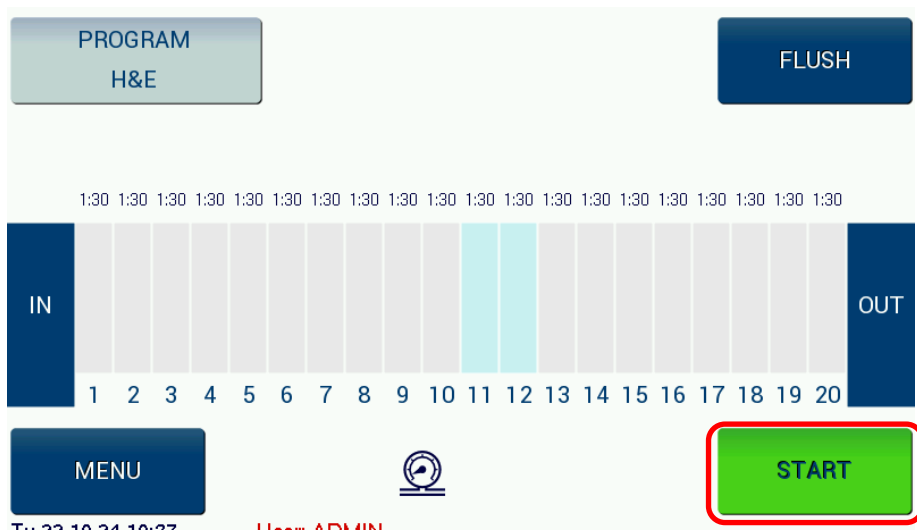
IN 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OUT

MENU START

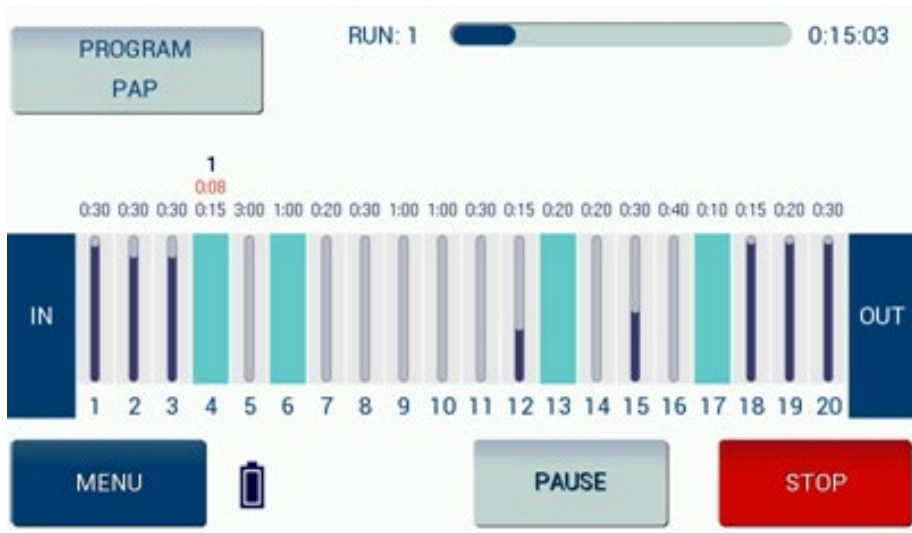
Tu 23 10:34 10:27 User: ADMIN

### 6.7.3 Start the program

You start the program by pressing the "Start" button.



Sample program – in this case PAP staining:



Bath 1 - 3	30 seconds	reagent
Bath 4	15 seconds	water (rinse)
Bath 5	3 minutes	reagent
Bath 6	1 minute	water (rinse)
Bath 7	20 seconds	reagent
Bath 8	30 seconds	reagent
Bath 9	1 minute	reagent
Bath 10	1 minute	reagent
Bath 11	30 seconds	reagent
Bath 12	15 seconds	reagent
Bath 13	20 seconds	water (rinse)
Bath 14	20 seconds	reagent
Bath 15	30 seconds	reagent
Bath 16	40 seconds	reagent
Bath 17	10 seconds	water (rinse)
Bath 18	15 seconds	reagent
Bath 19	20 seconds	reagent
Bath 20	30 seconds	reagent

Blue Bars show the "consumption" of reagents (ReagentManagementSystem).

Above mentioned example shows a first run. Slide basket is in bath no. 4, remaining time is 8 seconds.

Program with hot air station:

manual: PROGRAM STEPS					
No.	Reagent	Duration	RMS	RQ	Show
1	Hot air station	0:00	OFF		
2	Empty cuvette	<auto>	OFF		
3	Empty cuvette	<auto>	OFF		
4	Empty cuvette	<auto>	OFF		
5	Empty cuvette	<auto>	OFF		
6	Empty cuvette	<auto>	OFF		
7	Empty cuvette	<auto>	OFF		

Navigation buttons: Left arrow, Up arrow, Down arrow.

Hot air station temperature too cold (blue):

PROGRAM manual

FLUSH

IN 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OUT

MENU START

F=00:00 10:00:44 U=... ADMIN

Hot air station temperature too warm (red):

PROGRAM manual

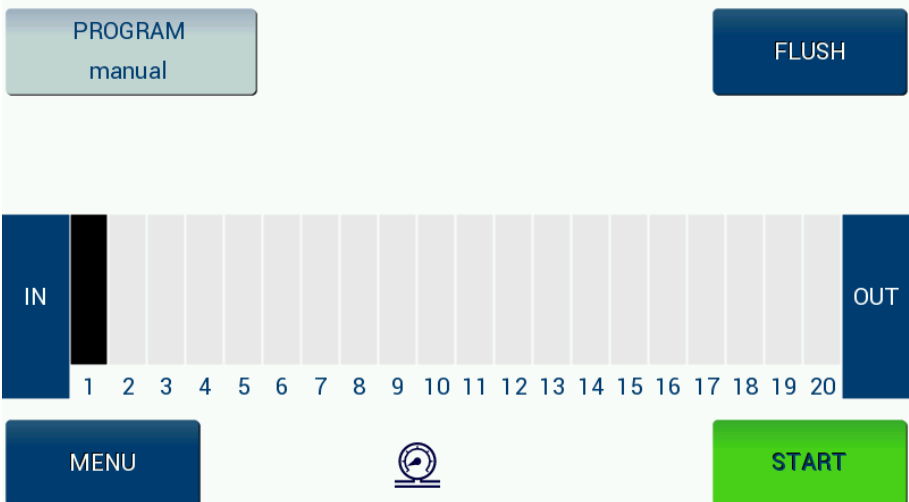
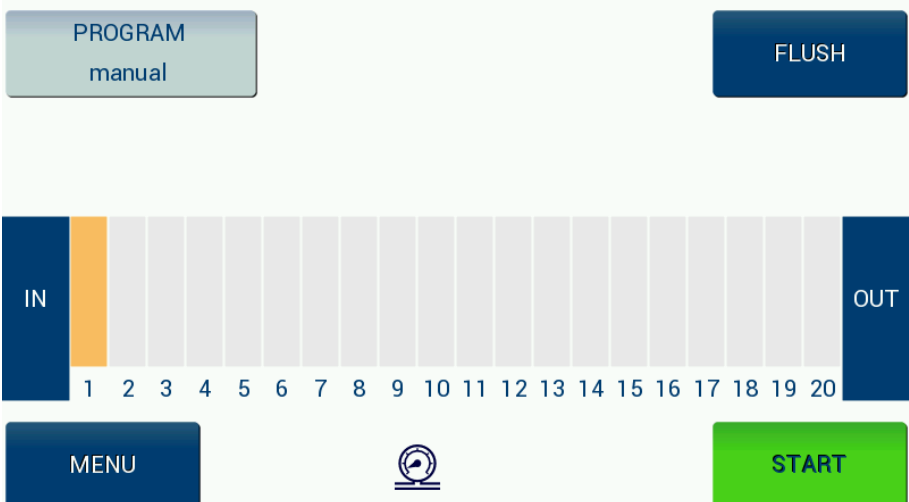
FLUSH

0:05




IN 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OUT

MENU START

F=00:00 10:00:40 U=... ADMIN

<p>Hot air station error (black):</p>	
<p>Hot air station set temperature reached (orange):</p>	

### 6.7.4 Symbols during program

	<p>In mains operation, the battery is shown in grey until it is fully charged. Then the icon disappears.</p> <p>In floating operation, the battery icon shows the level, dark blue with sufficient residual charge and red below 25%.</p> <p>When switching off (in the buffer mode) a signal tone sounds.</p> <p>No new samples are recorded in floating operation.</p> <p>After the end of program (or crash) in floating operation, the signal tone sounds also, then then the unit switches itself off.</p>
	<p>Monitoring filter runtime, change display. End of term with icon on the main screen display, PopUp with change notice, both at program startup.</p>
	<p>Water pressure low.</p>

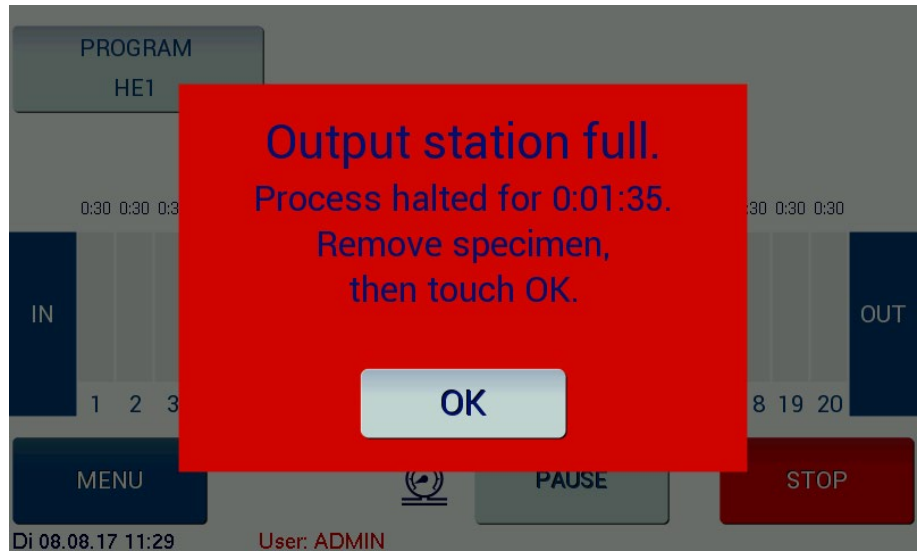
## 6.7.5 End of program

After the program is finished, slide baskets are placed in the unload station (capacity 5 slide baskets).

The device indicates this by a sound signal.



In case the unload station is full, the device shows the following warning message:

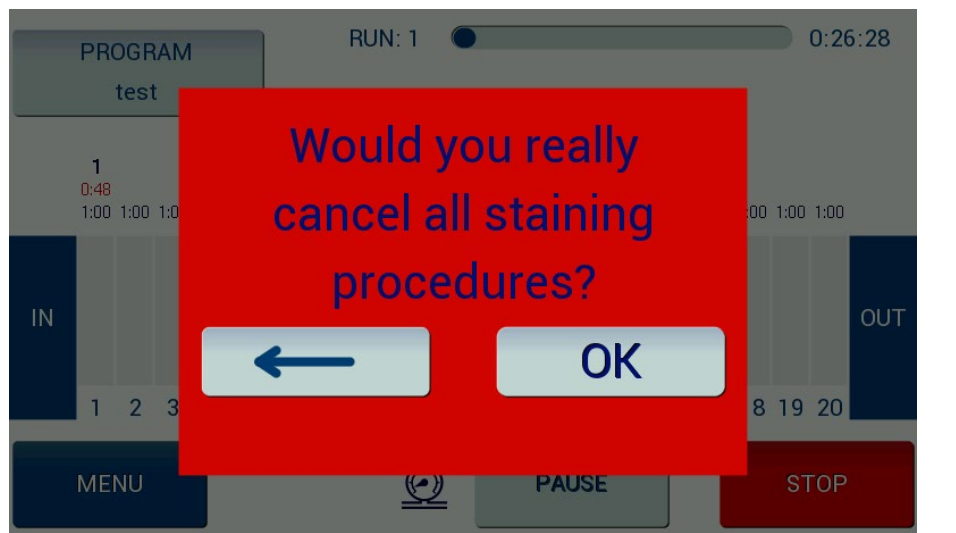


### 6.7.6 Stop a running program

If you want to stop a running program, press the "Stop" button.:



The following message will appear. Press "OK" and the program will stop. You have to take out the slide baskets manually.

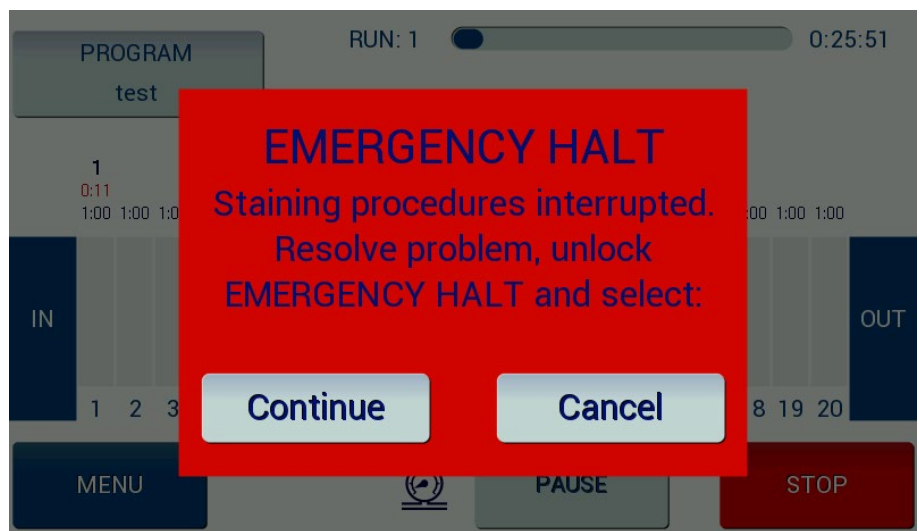


### 6.7.7 Emergency stop

In case of an emergency, the operation function of the Cromatec can be switched off by pressing the emergency stop button located at the lower front of the device.



To continue the program, release the emergency stop button (turn the emergency stop button one quarter of a turn clockwise) and confirm the alarm message.



## 7 COPY MY DATA SOFTWARE

### 7.1 Purpose of the software

The purpose of the software is, among other things, to create a backup copy of the reagents and programs stored in the Cromatec. This is recommended before each service of the device. The reagents and programs can also be manually adjusted in the software and transferred back to the device.

### 7.2 GUI description


Reagents	Show all reagents of the current file (table form)
Programs	Show all programs of the current file (table form)
Device	Selection of the interface for data transfer between the computer and Cromatec
Export to device	Exporting data from Copy My Data to Cromatec <b>! Caution ! Loading a new file onto the Cromatec deletes all current reagents and programs on the Cromatec!</b>
Load	Opening a file from the computer's memory
Save	Saving a file on the computer
Clear	Delete the current file from Copy My Data
Print	Printout of the current file

### 7.3 Start-up - create a new security file


Log in to the Cromatec as an administrator. Connect the Cromatec to your computer using a USB cable (USB-A to USB-B required). Open the "Copy my Data" software. Select an interface in the "Device" menu. Import the reagents and programs from your Cromatec into the software using the "Import from Device" button. Save the reagents and programs locally on your computer as a backup file using the "Save" button.

### 7.4 Load an existing security file onto the Cromatec

Log in to the Cromatec as an administrator. Connect the Cromatec to your computer using a USB cable (USB-A to USB-B required). Open the "Copy my Data" software. Select an interface in the "Device" menu. Open a locally saved security file using the "Load" button. Press the "Export to Device" button to load the file onto the Cromatec.

	<p><b>! Caution ! Loading a new file onto the Cromatec deletes all current reagents and programs on the Cromatec!</b></p>
---	---

### 7.5 Download the Copy My Data software



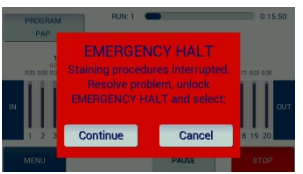
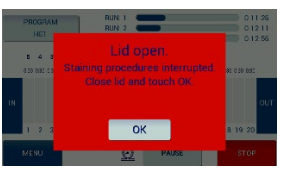
	<p>Download the Copy My Data software here: <a href="https://we.tl/t-WeqLmJ0qem">https://we.tl/t-WeqLmJ0qem</a></p>
---	---





## 8 ERRORS


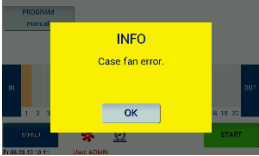
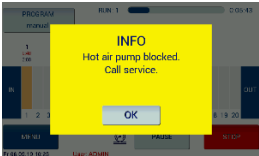
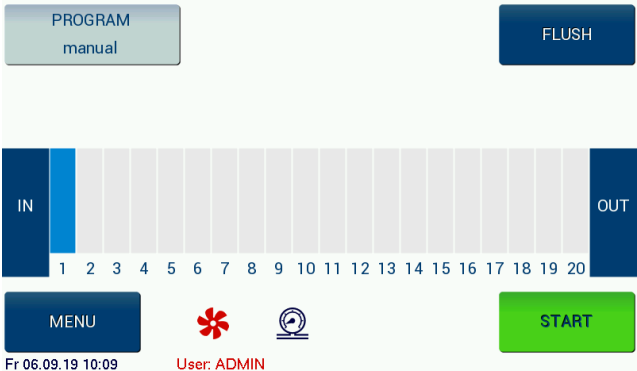
### 8.1 Notes

Any failure occurring during the operation of the Cromatec is indicated by an alarm sound and message, shown on the display. Please refer to the trouble shooting list.

### 8.2 PopUp messages in normal operation

<p>After pressing STOP: Red PopUp "Would you really cancel all staining procedures?"</p>	 <p>Press "OK" to confirm or go back.</p>
<p>After confirming of cancellation: Red Info PopUp</p>	 <p>Wait while staining is being stopped.</p>
<p>After confirming of "PAUSE"</p>	<p>Staining procedures interrupted since hh:mm:ss Terminate PAUSE with "OK".</p>
<p>After pressing Emergency button: Red PopUp „EMERGENCY STOP“</p>	 <p>Staining procedures interrupted. Resolve problem, unlock EMERGENCY HALT and select: [Continue] [Cancel]</p>
<p>After canceling by "Cancel" after emergency stop: Red PopUp "EMERGENCY STOP"</p>	<p>Manually remove specimen, then touch "OK". [OK]</p>
<p>After opening the hood: Red PopUp „Lid open“</p>	 <p>Staining procedures interrupted. Close lid and touch "OK". [OK]</p>


<p>Flow of the filter running time: Yellow PopUp "INFO"</p>	<p>Filter usage time expired, please replace. [OK]</p>
<p>Expiration of reagent: Yellow PopUp "INFO"</p>	 <p>At least one reagent expired, please replace. [OK]</p>
<p>At start attempt despite emergency stop: Yellow PopUp "EMERGENCY HALT"</p>	<p>Resolve problem, unlock EMERGENCY HALT and select: [OK]</p>
<p>When starting with open hood: Yellow PopUp "Lid open"</p>	 <p>Close lid and touch "OK". [OK]</p>
<p>At start-up with water requirement and without pressure: Yellow PopUp "INFO"</p>	 <p>Program requires water, but pressure is too low. [OK]</p>
<p>At initial attempt with almost empty battery: Yellow PopUp "INFO"</p>	 <p>Battery voltage too low, charge before starting. [OK]</p>

<p>In case of starting a program with a sample basket still attached to the arm: Yellow PopUp (State after prior emergency stop) "INFO"</p>	 <p>Specimen found at transport arm. Please remove. [OK]</p>
<p>On start with expired filter running time: Yellow PopUp "INFO"</p>	<p>Filter usage time expired please replace. [OK] (Start nevertheless possible)</p>
<p>When starting with reagents that have expired: Yellow PopUp "INFO"</p>	<p>At least one reagent expired, please replace. [OK] (Start nevertheless possible)</p>
<p>When fan error occurs while hot air station is in use, hot air station will be switched off for safety reasons. Call service.</p>	
<p>Hot air station is not working anymore. Call service.</p>	
<p>In addition to the yellow pop up, the red fan icon will show up. Call service.</p>	

### 8.3 Error messages in normal operation

<p><b>Motor Error: Red PopUp</b> "MOTOR ERROR"</p>	<p>Staining procedures interrupted since hh:mm:ss [Retry] [Cancel]</p> <p>Messages: Overcurrent horizontal Overcurrent vertical Timeout horizontal Timeout vertical</p>
<p><b>Failure of magnetic control: Red PopUp</b> "MAGNET ERROR"</p>	<p>Specimen transport impossible Manually remove specimen and call service</p> <p><b>Note:</b> <b>No OK-Button -&gt; present program will be cancelled!</b></p>
<p><b>Downstream pressure: Red PopUp</b> "ERROR"</p>	<p>Water pressure too low. [OK]</p>
<p><b>Leakage: Red PopUp</b> "ERROR"</p>	<p>Water leakage detected. -- places see below. -- [OK]</p> <p>Places: (container) (enclosure) (container and enclosure)</p>
<p><b>No more samples in the enema during the admission test: Yellow PopUp</b> "INFO"</p>	<p>No specimen found in input station. [OK]</p>
<p><b>Other holders in the system when attempting to take sample holders: Yellow PopUp</b> "INFO"</p>	<p>Specimen found in stations 1-20. Please remove. [OK]</p>
<p><b>Output station full: Red PopUp</b> "Output station full"</p>	<p>Process hold for hh:mm:ss. Remove specimen, then touch OK. [OK]</p>

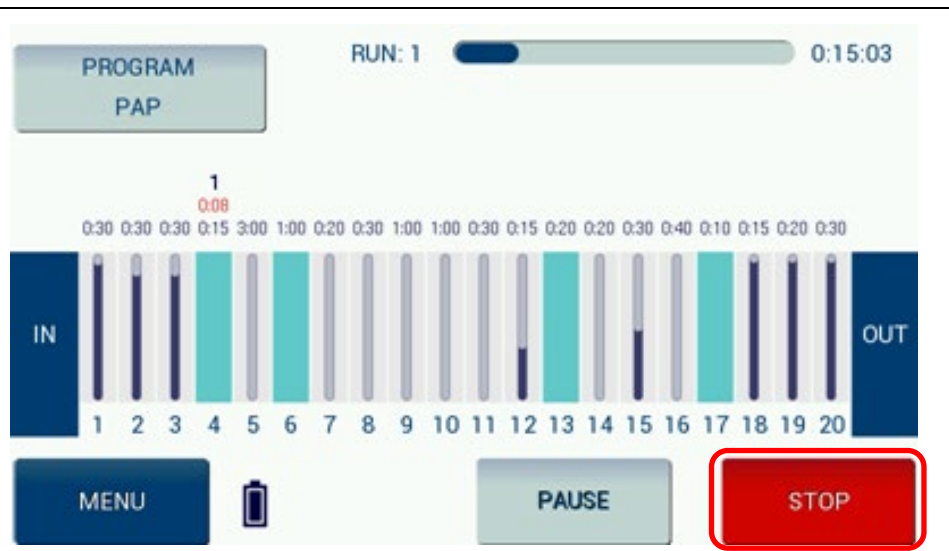
<b>Slide basket magnetically stuck to the arm:</b> <b>Red PopUp</b> „ERROR“	Slide basket sticking at n1 n2 n3 (Station number) Remove, then touch OK. [OK]
<b>Slide basket lost (while lowering):</b> <b>Red PopUp</b> „ERROR“	Slide basket lost at n1 n2 n3 (station no.) Correct, then touch OK. [OK]
<b>Slide basket magnetically stuck or lost (combination 8+9):</b> <b>Red PopUp</b> „ERROR“	Slide basket sticking at n1 n2 n3 (station no.) Slide basket lost at n4 n5 n6 (station no.) Correct, then touch OK. [OK]
<b>Unexpected samples in the unit (detected during lowering):</b> <b>Red PopUp</b> „ERROR“	Alien specimen found at n1 n2 n3 (station no.) Correct, then touch OK. [OK]
<b>Fail-safe sensor in run-in station (continuous signal):</b> <b>Red PopUp</b> „ERROR“	Input station sensor failure. [OK]
<b>Invalid internal state:</b> <b>Red PopUp</b> „SYSTEM ERROR“	Invalid internal state. Touch OK and shutdown. [OK]
<b>Display not working or not connected correctly</b>	Lights are flashing

	<p>Never use deformed baskets. A damaged basket can stop the staining process.</p> <p>Fill the baths up to the mark. Check the filling level daily.</p>
---	---

## 8.4 Power failure

The Cromatec has a built-in battery to allow the unit to work even in case of power failure. In case of a power failure the display shows the following symbol:

The operation is continued using the emergency power supply. As the battery gets loaded during operation, a fully loaded device can be operated using the battery. However, new slide baskets shall not be placed during indicated battery operation.



During battery operation light and ventilation are switched off.  
Cromatec II: The heating element is also switched of.

If the power comes back, the battery symbol disappears and the device turns back to regular operation, including light and ventilation. No action from the user is needed.

## 8.5 Hood

When the hood is opened, the device stops immediately, and the following Red PopUp window is shown.



The Cromatec I / II will not perform any staining program while the lid is open. When the lid is opened, the ventilation will automatically be increased.

## 9 CLEANING

### 9.1 General cleaning advice

The Cromatec I / II has a solvent resistant surface area according to the requirements of histological laboratories so that easy cleaning can be done without problems. Only the display should be cleaned with a damp cloth.



Before starting the cleaning, please turn off the device. Dispose of used reagents according to the laboratory regulations in force in your country.

Do not use alcohol, detergents containing alcohol (window cleaner!), abrasive cleaning powders, solvents containing acetone or Xylene.

#### Inner side of the Cromatec I / II:

Please remove the cuvettes and clean the stainless-steel inner panels carefully with a regular cleaner.

#### Transport system:

Be careful with the lower side, where the magnets are located. In normal operation it should be sufficient to wipe with a moist cloth.

#### Outside surfaces:

Please clean the outside surfaces with a mild detergent and subsequently wipe down with a moist cloth. For the window, use a moist cloth.

#### Display:

Please use a commercial screen cleaner for cleaning the touch screen.

#### Cuvettes:

It is also possible to clean the staining cuvettes in a regular dish washer.

#### Tub under cuvettes:

Use a damp cloth if fluid was spilled. Then clean with a mild detergent. If necessary, use a stainless-steel cleaner.

Please respect the chemical remains in the tub and their harmful influences on the environment.

#### Inlet/Outlet hose:

Please check the wastewater drain hose for accumulated dirt weekly, particularly for algae. Clean whenever necessary.

To avoid built-up of slime and glibber, rinse the hose with diluted citric acid or alcohol weekly.

## 9.2 Tips for dealing with the notorious hemalaun slime

Hemalaun slime can be really annoying. The problem is usually a mixture of dried hematin (oxidized hematoxylin), metal salts (e.g., alum), and possibly protein residues or tissue particles that coagulate and form slimy residues.

### What can help?

#### 1. Citric acid or acetic acid (diluted):

- Allow 5 – 10 % citric acid solution or vinegar essence heavily diluted (1:5 to 1:10 with water) to take effect (15 – 30 min).
- These acids dissolve metal salts and break down the dye complex.
- Effect: Liquefies the slime, making it easy to rinse off.

#### 2. Alcohol + a little ammonia:

- Apply 70 – 96 % ethanol or isopropanol with a splash of ammonia solution (1 – 2 %) and leave to take effect.
- Effect: Dissolves proteins, decolorizes residues, degreases — good for pipes!
- Do not use too concentrated or too hot, otherwise it will coagulate even more.

#### 3. Enzyme cleaner (laboratory detergent or cleaner for coffee machines):

- For example, RBS 35, Neodisher, Alconox, or even a good biological dishwashing detergent can be used.
- Effect: Enzymatically breaks down organic residues — even in hard-to-reach places.
- Application time: At least 30 minutes, preferably overnight.

#### 4. For pipes (e.g., drainage or hose systems):

- Pour in hot water + citric acid or enzyme cleaner.
- Leave to soak (several hours or overnight).
- Then rinse thoroughly with hot water.



#### Tip:

If you regularly experience problems with hemalaun slime, you can rinse once a week with diluted citric acid or alcohol.

This prevents the mucus from building up in the first place.



**Please always follow the cleaning and application instructions provided by the cleaning agent manufacturer, especially regarding material compatibility!**



#### 9.4 Optimized H&E program

Station	Reagent	Time
1	Xylol	1,30
2	Isopropanol	1,30
3	Isopropanol	1,30
4	96 % Ethanol	1,30
5	96 % Ethanol	1,30
6	Water	1,30
7	Hemalum	1,30
8	Hemalum	1,30
9	Water	1,30
10	Glacial acetic acid	1,30
11	Running Water	1,30
12	Running Water	1,30
13	96 % Ethanol	1,30
14	96 % Ethanol	1,30
15	Eosin	1,30
16	96 % Ethanol	1,30
17	96 % Ethanol	1,30
18	Isopropanol	1,30
19	Isopropanol	1,30
20	Xylol	1,30

## 10 OPTIONAL ACCESSORIES

### Cromatec I / II

Description	Item-No.
Staining cuvette (plastic), 400 ml for reagent	41000017
Staining cuvette (stainless steel), 400 ml for reagent	41210017
Staining cuvette set 8 pcs. (stainless steel), 400 ml for reagent each	41210018
Rinse water cuvette (plastic), 400 ml	41000410
Cover (stainless steel) for staining or rinse water cuvette	41230587
Basket (plastic) for 30 standard slides incl. clip	41000420
Carrier for basket	41000504
Exchange carbon filter	41000020
Adapter clip SAKURA to process SAKURA baskets (20 slides) in Cromatec	41000900
Adapter clip EpreDia / Shandon to process ShandonVaristain Gemini baskets in Cromatec	41220504
Input rack insert for LEICA cover slipper to process Cromatec baskets (30 slides) in LEICA CV 5030	41000901
Further adapters available	upon request

## 11 SERVICE

Internal components should only be serviced by technicians authorized by SLEE medical GmbH.

If technical service or spare parts are necessary, please contact your local SLEE medical GmbH distributor. Please have the following information available:

- Complete contact details
- Type of device and serial number
- Place of device and name of user
- Purpose of service call
- Delivery date of the unit

If it is necessary to return the device, it must be cleaned and disinfected before delivery. It must be returned in its original package, to avoid transport damage.

If the device or parts thereof are sent back in a dirty or non-disinfected condition, SLEE medical GmbH reserves the right to return the parts to the debit of the customer without carrying out repairs or maintenance.

## 12 WARRANTY

SLEE medical GmbH guarantees that the product delivered has been subjected to a comprehensive quality control procedure, and that the product is faultless and complies with all technical specifications and/or agreed characteristics warranted.

SLEE medical GmbH guarantees that the device is manufactured under an ISO 9001:2015 and ISO 13485:2016 quality management system.

Unauthorized modification or repair by third party persons will void the warranty.

Only original SLEE spare parts must be used.

Guarantee claims can be put forward only if the device is used according to this manual and for the purpose described.

Mistakes and errors which occur because of improper use cannot be accepted.

## 13 DISPOSAL

The device or parts of the device must be disposed of according to existing local applicable regulations.



Do not expose the device to regular domestic or industry waste. It contains electrical parts that can be dangerous to the environment!

**Notes**



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