

# IndiMag<sup>®</sup> 2

## User Manual

Magnetic bead-based nucleic acid extractor

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IN950048



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# 1 Safety information

The following chapter provides the information on safe handling of the IndiMag 2. Read the safety information carefully to ensure safe operation of the instrument and to maintain the instrument in a safe condition.

## 1.1 Safety and warning symbols

The following symbols are used on the IndiMag 2 instrument and / or in the User Guide.



Catalog number



Serial number



Date of manufacture



Legal manufacturer



Temperature tolerance



Handbook



Warning



Warning: Risk of damage to the instrument or other equipment



Warning: Risk of injury to the user



Warning: Optical radiation



Warning: Danger of crushing



Warning: Electric shock hazard



Warning: Biological hazard



Warning: Hazardous chemicals



Warning: Burn hazard, hot surface



Information / Notice



Caution: Risk of damage to the instrument



WEEE mark for Europe





TÜV SÜD marking for Technical Inspection Association conformity



CE marking for conformity in EU and further markets

The following terms, color-coded to describe different levels of safety hazard, are used in the IndiMag 2 User Manual.



<b>WARNING</b>	
	Indicates a hazard that <i>can</i> lead to death or serious injury if not avoided.

<b>NOTICE</b>	
	Indicates a danger that cannot result in any physical impairment. Thus, the possibility of damage to property is in focus with this degree of danger.



## 1.2 Proper use

- Only use the IndiMag 2 according to this manual.
- Follow all safety instructions printed on or attached to the instrument.
- Improper use may cause personal injuries or damage to the instrument.
- Only qualified personnel who have been appropriately trained should use the instrument.
- Instrument servicing must only be performed by specialists authorized by INDICAL.
- Do not use the instrument in hazardous environments for which it has not been designed.

<b>WARNING</b>	
	Bypassing or putting safety devices out of operation is strictly prohibited and constitutes improper use.
	Housing parts and covers must be closed during operation and may only be opened to eliminate malfunctions.

## 1.3 Electrical safety

Observe all general safety precautions that apply to electrical instruments:

- Disconnect the mains cable from the power outlet before servicing.
- Do not open the housing of the instrument.
- The mains cable must be connected to a line power outlet that has a protective conductor (earth / ground).
- Do not touch any switches or mains cables with wet hands.
- Do not use the instrument outside of the specified power conditions.

### WARNING




#### **Electric shock hazard!**


Maintenance and repair work may only be carried out when the unit is disconnected from the power supply and the front power switch stops glowing!

## 1.4 Chemical safety

Material safety data sheets for the INDICAL extraction kit materials are available and can be requested from [compliance@indical.com](mailto:compliance@indical.com).

Used consumables must be disposed of in accordance with all national, federal and local health and safety regulations and laws.

WARNING	
	<p><b>Warning: Hazardous chemicals</b></p> <p>Some chemicals used in the associated extraction kits may be hazardous or may become hazardous. Always wear eye protection, gloves and a lab coat.</p>



NOTICE	
	<p><b>Caution: Risk of damage to the instrument</b></p> <p>Avoid spilling chemicals or other liquids onto or into the IndiMag 2. Damage caused by liquid spillage will void the warranty.</p>

## 1.5 Biological hazard safety

The IndiMag 2 instrument and associated purification kits do not contain biohazardous materials. However, samples processed on the IndiMag 2 contain biological materials that may contain infectious agents. Handle, store and dispose of samples and reagents containing biological materials as potentially biohazardous. Wear personal protective equipment and disposable powder-free gloves when handling reagents or samples, and wash hands thoroughly thereafter.

Handle samples with care to avoid contaminating the IndiMag 2 and workspace. In the event of contamination, clean and decontaminate the affected area and the instrument.

Always follow safe laboratory procedures as detailed in publications such as Biosafety in Microbiological and Biomedical Laboratories, from the Centers for Disease Control and Prevention and the National Institutes of Health (<https://www.cdc.gov/labs/bmbi.html>).

WARNING	
	<b>Warning: Biological hazard</b> Use caution when loading or removing infectious samples into or from the IndiMag 2. Handle biological samples as if they may contain potentially infectious agents.
	<b>Warning: Risk of contamination</b> Contain and clean contamination from spilled samples immediately.

## 1.6 Waste disposal

This chapter provides information about disposal of waste electrical and electronic equipment by users.

### 1.6.1 WEEE (Waste Electrical and Electronic Equipment)

The crossed-out wheeled bin symbol (see below) indicates that this product must not be disposed of with other waste; it must be taken to an approved treatment facility or to a designated collection point for recycling, according to local laws and regulations.

The separate collection and recycling of waste electronic equipment at the time of disposal helps to conserve natural resources and ensures that the product is recycled in a manner that protects human health and the environment.




### 1.6.2 REACH notice

The IndiMag 2 contains a lithium button cell for the real-time clock. This must be disposed of separately.

## 1.7 Warranty terms

Unintended use and unauthorised modifications to the unit and its components void the manufacturer's liability for any resulting damage.

The manufacturer's warranty/guarantee expires.

NOTICE	
	Only original spare parts and plastics approved or verified by INDICAL must be used!

## 2 Introduction – Intended use

The IndiMag 2 is an automated extraction system for the isolation of high-quality nucleic acids from biological samples. The IndiMag 2 is versatile, easy-to-use, and operates with no liquid aspiration or dispensation.

This user manual is written for end users. It contains all the necessary information for effective and safe handling of the IndiMag 2. It is recommended to read the user manual entirely and in detail before using the instrument. Pay particular attention to the safety information before operating the IndiMag 2. The instructions and safety information in the user manual must be followed to ensure safe operation of the instrument and to maintain the instrument in a safe working condition. The advice provided in this user manual is intended to supplement, not supersede, the regular safety requirements prevailing in the country the instrument is being installed.

The unit may only be operated by trained personnel. Any other use is considered improper. The manufacturer is not liable for any damage resulting from improper use; the risk for this is borne solely by the user / operator.

### 3 Principle

The IndiMag 2 automates magnetic-bead-based isolation of high-quality nucleic acids from up to 48 samples per run. This technology combines the speed and efficiency of automated magnetic rod processing with the convenient handling of magnetic particles.

The purification procedure is designed to ensure convenient, reproducible DNA / RNA extraction from biological samples. During the procedure, samples are lysed, releasing nucleic acids to bind to the silica surface of the magnetic particles. DNA and RNA bound to the magnetic particles are then efficiently washed in up to four wash steps. Finally, the nucleic acids are eluted, and magnetic particles removed by a magnet rod (Figure 1).

The IndiMag 2 is an open platform, designed for use with dedicated purification kits and labware from INDICAL. Refer to the product manual corresponding to an extraction kit of interest for more details (<https://www.indical.com/handbooks>).

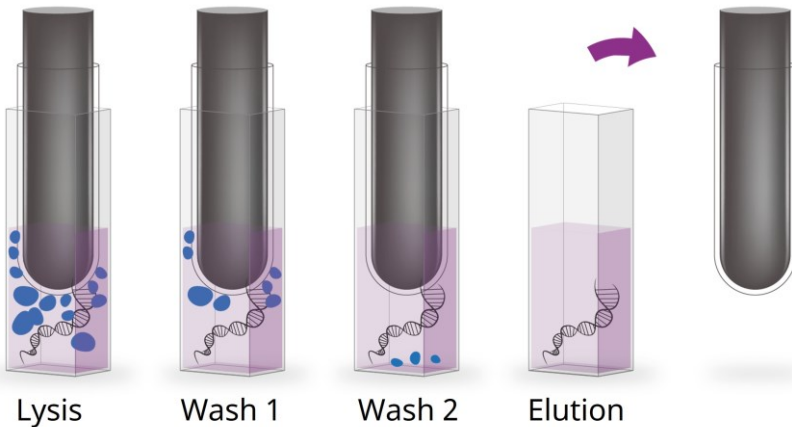


Figure 1. Overview of the IndiMag 2 nucleic acid purification steps.



## 4 Product overview

The scope of delivery includes:

- IndiMag 2
- Accessories box:
  - Mains connection cable (EU version)
  - 2x IndiMag 2 Centrifuge Adapter
  - 2x Lysis rack
- IndiCards:
  - Consumables Setup
  - Installation guide
  - Firmware Setup
  - Safety Sheet

# 5 Instrument overview

The following chapter provides an overview of the instrument's hardware. Relevant components of the instrument and their functions are listed in the chapters below.

## 5.1 External hardware overview

The housing of the IndiMag 2 consists of several distinct components shown in Figure 2. Components that merit further mention due to their hazardous nature are additionally described in chapters 5.1.1 and 5.1.2.

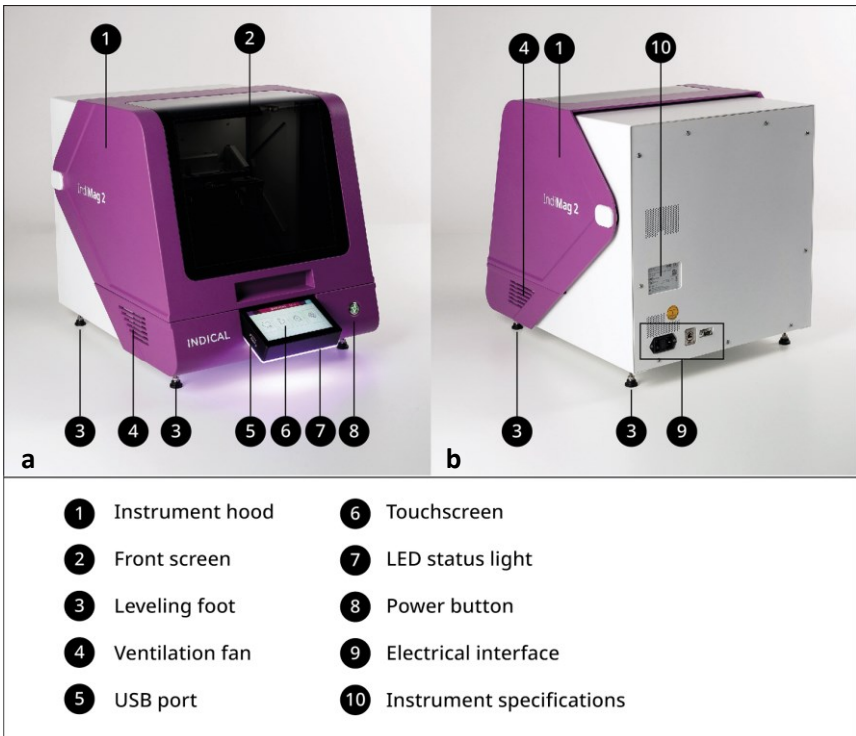


Figure 2. External hardware overview: Front view (a) and back view (b).

## 5.1.1 Instrument hood

The instrument hood (Figure 3) includes sensors that determine whether the hood is open or closed.

The instrument hood must be closed for the firmware and hardware to initialize and for a run to proceed.

Opening the front hood while the IndiMag 2 is performing a run will cause the instrument to pause.



Figure 3. Instrument hood including hinges and stoppers (sensors not shown).

### WARNING



Bypassing or putting safety devices out of operation is strictly prohibited and constitutes improper use.

## 5.1.2 Electrical interfaces

The electrical interfaces can be found in the bottom left corner on the back of the IndiMag 2. The electrical interfaces of the IndiMag 2 consist of several distinct components presented in Figure 4.

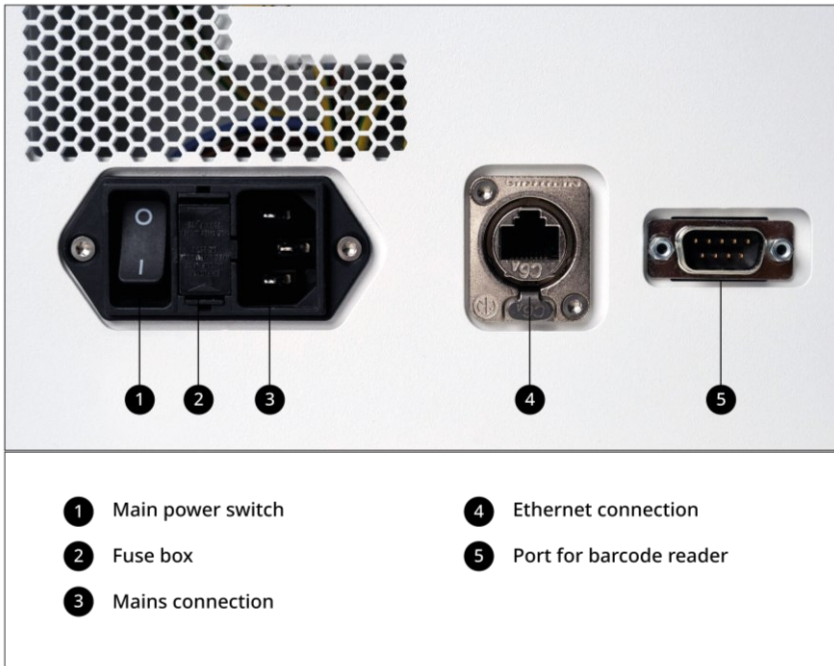


Figure 4. Electrical interfaces.

The ethernet connection (Base 10/100 T) and the port for barcode reader (RS232) are currently not yet functional, but will be available with future software updates. Please contact INDICAL for further information regarding availability ([support@indical.com](mailto:support@indical.com)).

**WARNING**



**Electric shock hazard!**

Maintenance and repair work may only be carried out when the unit is disconnected from the power supply and the instrument is fully powered down.

## 5.2 Internal hardware overview

The internal hardware of the IndiMag 2 consists of several distinct components presented in Figure 5. The following chapter provides their overview. Components that merit further mention due to their hazardous nature are additionally described in chapters 5.2.1 through 5.2.3 (pages 23 – 26).

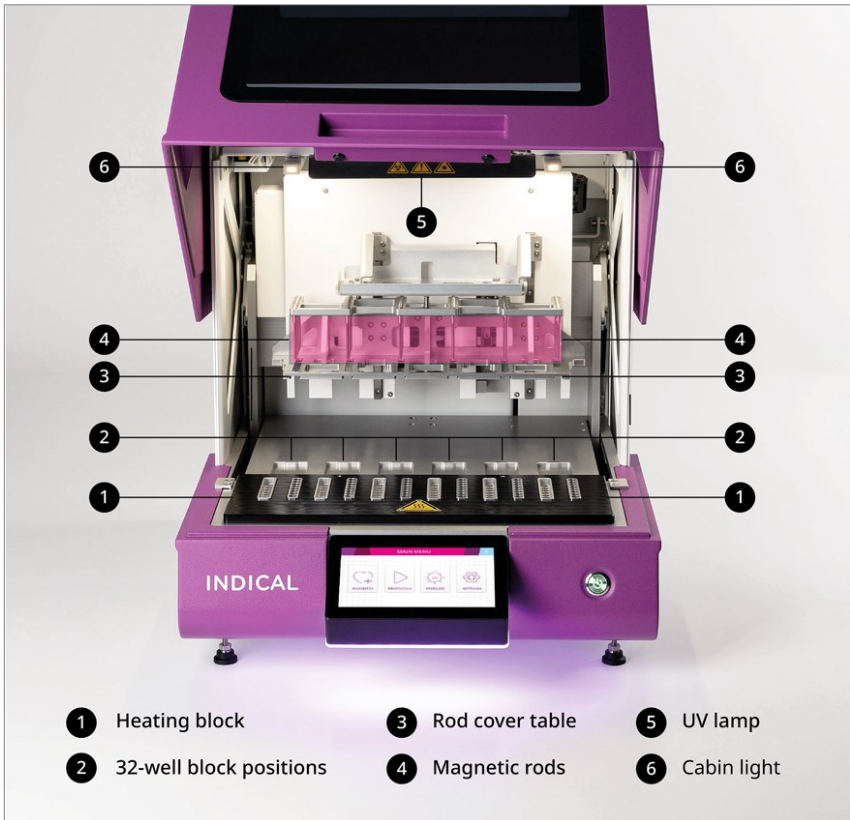



Figure 5. Internal hardware overview.

## 5.2.1 Heating block

The heating block contains designated positions for lysis and elution strips to enable effective heating and cooling of samples during the extraction process (Figure 6). Temperatures between 4°C and 100°C can be set.



Figure 6. Heating block.

WARNING	
	<p><b>Burn hazard; Hot surface!</b> Even after a process run the heating block can be hot! Handle with care.</p>

## 5.2.2 Magnet rods and magnet rod cover table

The magnet rod and the rod cover tables form the mobile part of the IndiMag 2 (Figure 7). The safety mechanism in the instrument hood ensures the mobile parts remain stationary when the hood is open.

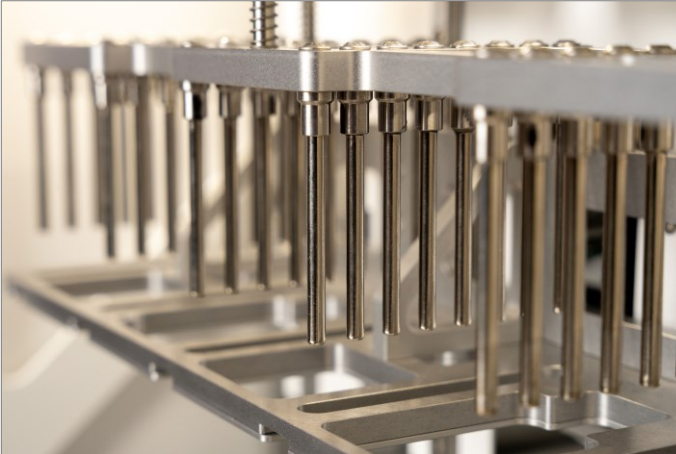


Figure 7. Magnet rods and magnet rod cover table.

### WARNING



#### **Danger of crushing!**

Reaching into the unit during operation can lead to injuries.



## 5.2.3 UV lamp

The IndiMag 2 contains a UV lamp, which provides efficient decontamination and helps prevent sample cross-contamination (Figure 8). For increased safety, magnetic hood sensors ensure that the UV lamp can only operate when the instrument hood is closed.

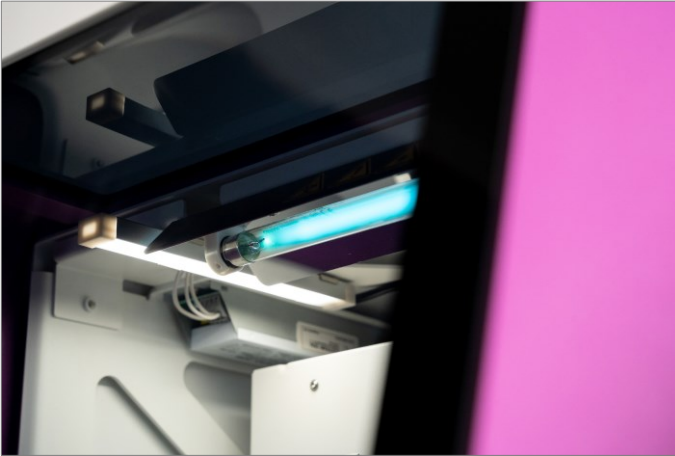


Figure 8. UV lamp.

### WARNING



**Warning: Optical radiation!**

Do not damage or remove the front screen.  
Do not disable the magnetic hood sensors.

## 5.3 Consumables overview

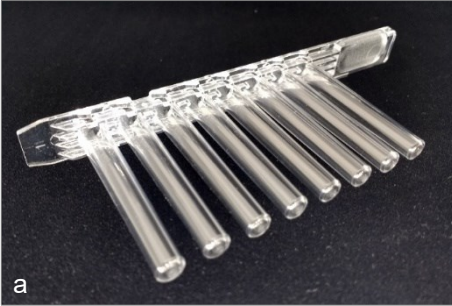
### 5.3.1 Consumables to be used with the IndiMag 2

With sustainability and efficiency as its core values, the IndiMag 2 consumables facilitate flexible and efficient nucleic acid extraction procedures. There are several types of consumables available for the IndiMag 2 extraction, such as lysis strips, 32-well blocks and elution strips, each with a dedicated position in the instrument (Figures 9 - 12).

Furthermore, two types of racks are available to facilitate preprocessing in lysis strips (Figure 13) and storage of elution strips (Figure 14).

For ordering information, please refer to chapter 11 (page 88).

## Rod covers



The specially designed rod cover protects the magnets during the extraction. Bending the tip combs of the rod covers must be avoided to ensure proper instrument operation.



The rod covers should be fully inserted into the designated slots in the rod cover table. The IndiMag 2 functions with up to six rod covers. At least one rod cover must be inserted for the extraction to begin.

Figure 9. Rod covers (a) and their dedicated positions in the instrument (b).

## 32-well blocks / IndiMag 48 PW8-Sample Blocks



The 32-well block enables simultaneous extraction of 8 samples. Processing volumes between 100  $\mu$ l and 1000  $\mu$ l are allowed. If the processing volume limits are not followed, adequate performance cannot be guaranteed, and cross-contamination may occur.

**Note:** Only use 32-well blocks provided by INDICAL; other plasticware may not be compatible with the IndiMag 2 and could cause unexpected problems or invalidity of warranty.



The instrument functions with up to six inserted 32-well blocks. Place the 32-well blocks into their dedicated positions in the IndiMag 2. The ridges on the sides of the blocks facilitate their correct orientation during extraction.

**Note:** No heating and/or cooling step can be performed with this block.

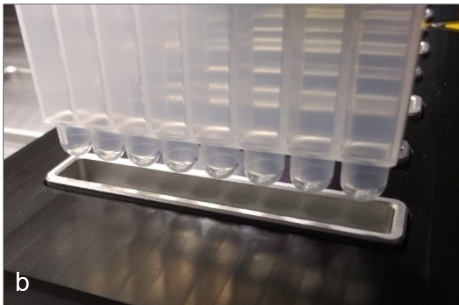
Figure 10. 32-well blocks (a) and their dedicated positions in the instrument (b).

## Lysis strip



The lysis strip enables simultaneous lysis of 8 samples. Processing volumes between 100  $\mu$ l and 1000  $\mu$ l are allowed. If the processing volume limits are not followed, adequate performance cannot be guaranteed, and cross-contamination may occur.

**Note:** Only use lysis strips provided by INDICAL; other plasticware may not be compatible with the IndiMag 2 and could cause unexpected problems.



The instrument functions with up to six inserted lysis strips. Place the lysis strips into their dedicated positions on the heating block. The ridges on the sides of the strips facilitate their correct orientation during extraction and must face left.

**Note:** Heating and/or cooling of lysis strips is optional.

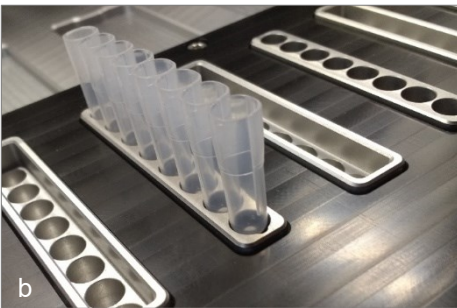
Figure 11. Lysis strips (a) and their dedicated positions in the instrument (b).

## Elution strip



The elution strip enables simultaneous elution of 8 samples. Processing volumes between 50  $\mu\text{l}$  and 200  $\mu\text{l}$  are allowed. If the processing volume limits are not followed, adequate performance cannot be guaranteed, and cross-contamination may occur.

**Note:** Only use elution strips provided by INDICAL; other plasticware may not be compatible with the IndiMag 2 and could cause unexpected problems.



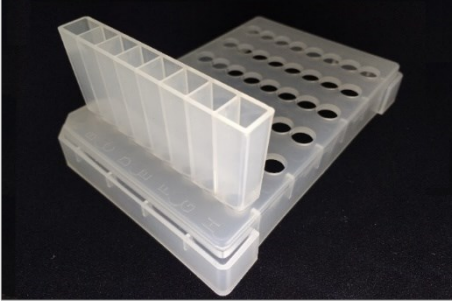
The instrument functions with up to six inserted elution strips.

Place the elution strips into their dedicated positions on the heating block. The ridges on the sides of the strips facilitate their correct orientation during extraction and must face down.

**Note:** Heating and/or cooling of elution strips is optional.

Figure 12. Elution strips (a) and their dedicated positions in the instrument (b).

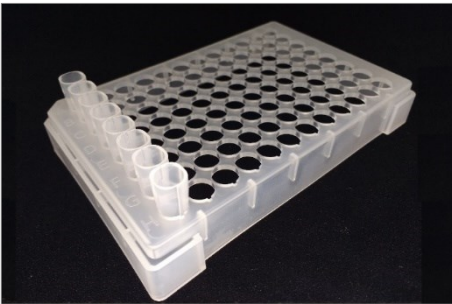
## Lysis rack



To facilitate preprocessing, the use of lysis racks is advised. The lysis rack holds up to six lysis strips. The orientation of the lysis strips is fixed and aligns with the orientation of the lysis strips inside the IndiMag 2. The lysis strips must be positioned so that the ridges face left.

Figure 13. Lysis rack.

## Elution storage rack



For convenient storage, the use of elution storage racks is advised. The elution storage rack holds up to twelve elution strips in place for storage. The orientation of the elution strip is fixed and aligns with the orientation of the elution strips inside the IndiMag 2.

The elution strips must be positioned so that the ridges face down. Adhesive foil can be used to close the elution strips for storage (e.g., Sarstedt, Cat. No. 95.1995 or VWR, Cat. No. 391-1256 (European Cat. No.) / Cat. No. 60941-074 (North American Cat. No.)).

Figure 14. Elution storage rack.

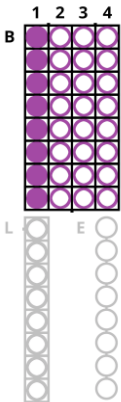
## 5.3.2 Modular use of consumables

The IndiMag 2 allows for modular use of the consumables. Different combinations of consumables enable different benefits during extraction.

Figure 15 demonstrates the different layouts with variable consumable combinations which are possible on the IndiMag 2, as well as highlights the benefits (and drawbacks) of each combination.



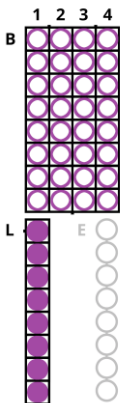
**Layout:       -/Block/-**



This layout is for performing lysis, two wash steps and the elution step in the 32-well block.

**Note:** No heating and/or cooling step can be set when using this layout.

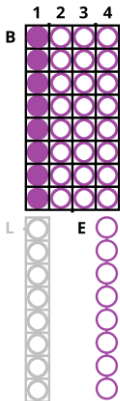
**Layout: Lysis/Block/-**



This layout is for performing lysis in the lysis strip. Up to three wash steps and one elution step will be accomplished in the 32-well block.

**Note:** No heating and/or cooling step can be set in the 32-well block. Heating and/or cooling of the lysis step is optional.

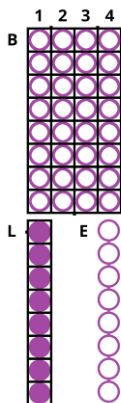
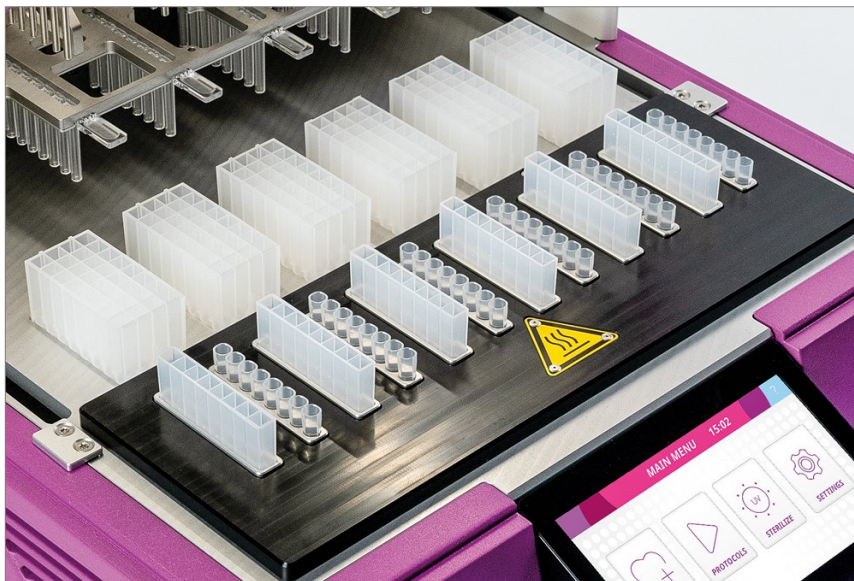
Layout:       -/Block/Elution



This layout is for performing lysis and up to three wash steps in the 32-well block. The elution step will occur in the elution strip.

**Note:** No heating and/or cooling step can be set in the 32-well block. Heating and/or cooling of the elution is optional.

## Layout: Lysis/Block/Elution



This layout is for performing lysis in the lysis strip, up to four wash steps in the 32-well block, and elution in the elution strip.

**Note:** Heating and/or cooling steps can be set on lysis and elution.

Figure 15. Modular use of consumables.

## 6 Instrument setup

The following chapters provide a detailed step-by-step procedure for transportation, unpacking and installation of the IndiMag 2.

### 6.1 Transportation

The IndiMag 2 is shipped in a specially designed cardboard transport box on a wooden pallet. All items needed to set up the instruments are included (Figure 16).

Upon receipt, check the outside packaging for any evidence of damage. In case of damage, contact INDICAL immediately.



Figure 16. Delivery package component overview.



## WARNING



If the unit is not transported properly, this can lead to personal and serious injury.

- Only move the unit in an upright position. Do not tilt the unit.
- Only lift the unit as far off the ground as necessary.
- Wear personal protective equipment.

## 6.2 Site requirements

The IndiMag 2 requires a clean level surface with minimum dimensions of 65 cm in width, 75 cm in height and 75 cm in depth. The installation site should be free of vibrations, strong magnetic fields, direct sunlight or UV light, drafts, excessive moisture, excessive dust, and large temperature fluctuations. The instrument is for indoor use only.

Maintain a minimum clearance of 5 cm to each side of the IndiMag 2. Do not block any airflow beneath the unit. Slits and openings that ensure the instrument ventilation must not be covered.

The IndiMag 2 is not designed for use in an explosive atmosphere.

## 6.3 Unpacking

Before unpacking the IndiMag 2, move the package containing the instrument to the installation site. Please note that transport must be carried out by qualified personnel and that at least two people must lift and carry the unit together (Figure 17).

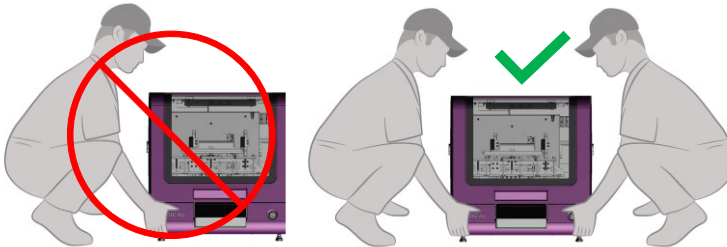





Figure 17. Correct lifting and carrying of the device.

WARNING	
	Danger of crushing when transporting the unit.
	If the unit is not transported properly, this can lead to personal and serious injury. <ul style="list-style-type: none"><li>• Only move the unit in an upright position. Do not tilt the unit.</li><li>• Only lift the unit as far off the ground as necessary.</li></ul>
	Use personal protective equipment (safety shoes, gloves).

To unpack, follow the instructions below:

1. Remove the lid from the box (Figure 17).
2. Remove the accessories box.
3. Remove the upper protective foam and plastic bag.
4. Remove the cardboard sleeve from the instrument.

**Note:** It is recommended to retain the packaging.

5. Together with another person, lift the device carefully from the pallet and place it on a benchtop.
6. Maintain a minimum clearance of 5 cm to each side of the IndiMag 2. Do not block any airflow beneath the unit. Slits and openings that ensure the instrument ventilation must not be covered.
7. Remove the transport locks as illustrated in Figure 18a and b. Press the button on the locking pins and pull out simultaneously.
8. Store the transport locks inside the instrument as illustrated in Figure 18c, as they will be needed for any future transport of the instrument. Press the button on the locking pins and simultaneously push into designated slots.



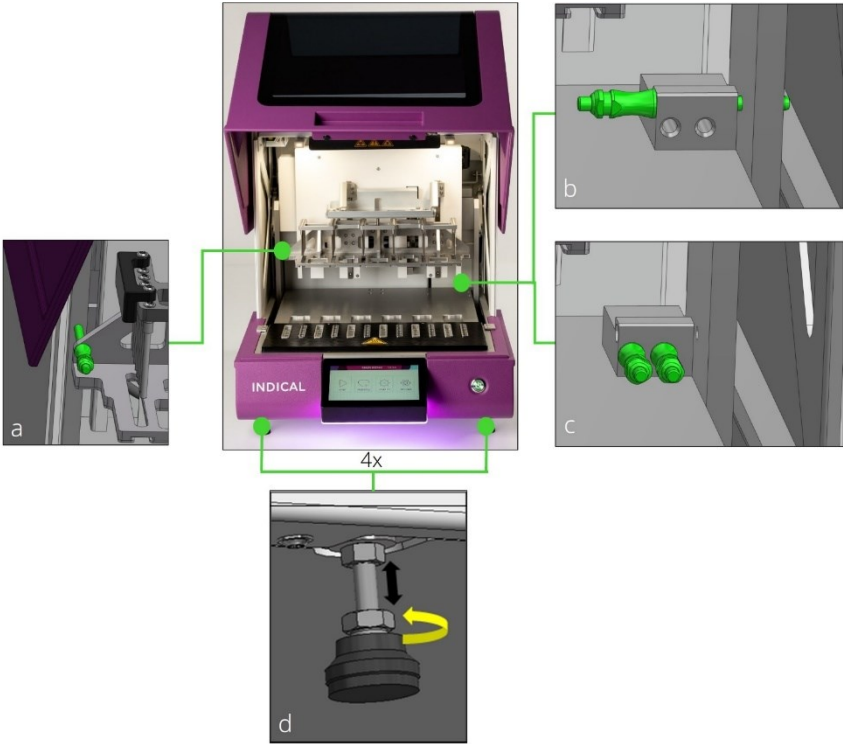


Figure 18. Positions of transport locks (a, b), storage of transport locks (c) and levelling of instrument feet (d).

## 6.4 Levelling

During installation, the unit is aligned on the benchtop and levelled in height with the help of the four levelling feet (Figure 18d).

Using the appropriate spanner, adjust the four feet to level the instrument on your installation site.


Level the instrument in a way that the bottom of the instrument resides at least 2.5 cm above the installation surface. Use a spirit level to check the alignment.

Required tools:

- 12 mm and 10 mm spanner (not provided)
- Spirit level (not provided)

## 6.5 Installation

Before operating the IndiMag 2, check whether the transport locks have been removed. Afterwards, connect the mains cable and switch on the instrument.

NOTICE	
	Ensure that all installation and supply connections of the unit are freely accessible after installation.

### 6.5.1 Connecting – power

Insert the mains cable (provided in the accessories box) into mains connection located on the back of the machine (Figure 4, page 20). If using an alternative cable not provided in the accessories box, an IEC mains cable shorter than 3 m must be used (IEC connection IEC-60320 C13).

Plug the cable into the electrical socket. A dedicated 100-240 V / AC (600 W) protected socket must be used for the electrical connection.

## 6.5.2 Switching on / off

Following installation and removal of transport locks, the IndiMag 2 can be operated. Before operating the machine for the first time, ensure that the instrument has been acclimatized to room temperature.

Furthermore, ensure the IndiMag 2 is connected to a power outlet.

Turn on the main power switch on the back of the machine („I“ position). The front power button will light up red. Press and hold the front power button for 2-3 seconds until it turns green and the IndiMag 2 turns on.

To switch the IndiMag off, press and hold the front power button for 2-3 seconds until it turns red and the IndiMag 2 turns off. To fully switch off the IndiMag 2, ensure that the main power switch on the back of the machine is turned off („O“ position). The front power button will stop glowing a few seconds after turning off the main power switch.

## 6.6 Re-packing the instrument for transport

Prior to transporting the IndiMag 2, the instrument must be prepared as follows. The instrument must be cleaned and decontaminated before shipment (compare chapter 7.5, pages 54 - 55).

1. Go to „SETTINGS“ and choose „prepare for transport“ option.
2. Re-install the transport locks by placing them in positions shown in Figure 18a and b.
3. Switch off the machine, turn off the main power switch and unplug the mains cable.
4. Make sure any consumables have been removed from the instrument.
5. Pack the machine in its original packaging in the reverse order as described in chapter 6.3 (pages 39 - 41). For weight specifications, dimensions including packaging, and transport conditions see chapter 10 (page 87).

## 7 Firmware interface











Upon switching on the machine, the firmware interface will become accessible on the interactive screen.

The following chapter describes the different interface functionalities and options they provide. The firmware version is displayed at all times in the bottom right corner of the interface.

## 7.1 Symbols

Symbols, listed in Table 1 along with their functions, are used throughout the different chapters of the user interface.

Table 1. List of user interface symbols and their functions.

Icon	Meaning	Function
	Home	Returns to the main menu
	Start / play	Starts procedure
	Pause	Pauses progress
	Accept data	Accepts changed data
	Delete data	Deletes changed data / deletes protocol
	Save	Saves progress / setting
	Back	Goes back one screen
	Rename	Renames protocol
	Help	Provides help and directions
	Exit/ Abort	Aborts progress without saving it

## 7.2 Main menu

The main menu is the starting point of the user interface. From there all other firmware functions can be accessed (Figure 19). Table 2 provides an overview of the icons and functions behind them. The main menu can always be reached by pressing the „home“ icon.

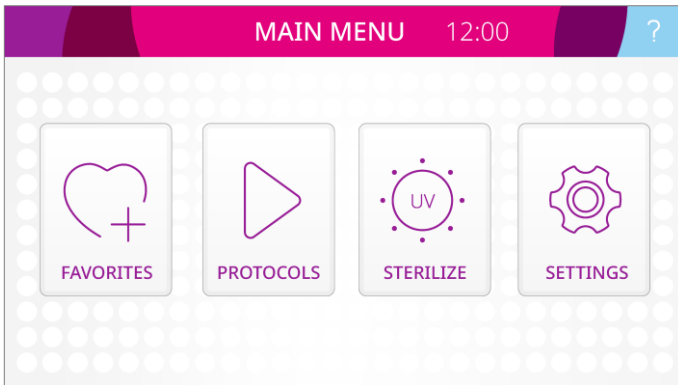
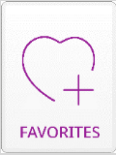





Figure 19. Main menu.



Table 2. Main menu overview.

Icon	Name	Functions
	Favorite Protocol Overview	Most used protocols can be easily accessed from the „FAVORITES“ icon.
	Protocol Overview	Saved extraction protocols can be accessed and run via the „start / play“ icon (PROTOCOLS).
	UV Sterilization	UV sterilization parameters can be accessed, set, and run from the „STERILIZE“ icon.
	Settings	Device settings, language settings, time settings, protocol editor, as well as protocol import / export, firmware update, reset device and service and maintenance options can be accessed via the „SETTINGS“ icon.

## 7.3 Protocols – Protocol overview

From the „start / play“ icon (PROTOCOLS) in the main menu, the saved extraction protocols can be accessed and run (Figure 20).

The IndiMag 2 instrument is provided with preinstalled protocols corresponding to a variety of INDICAL extraction kits and different layouts of consumables. To navigate the protocol overview, the scroll bar is used.

For designing and editing your own protocol, refer to chapter 8 (pages 60 - 75).

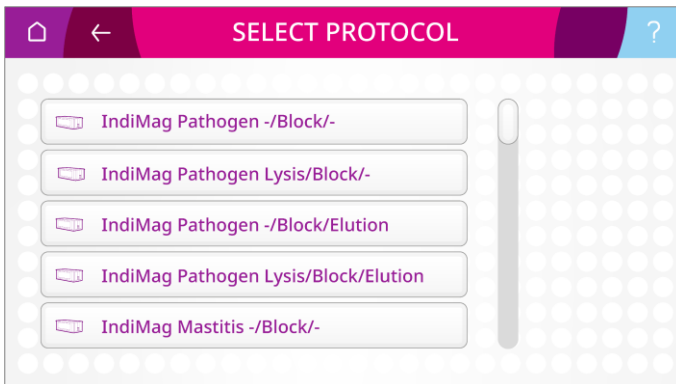


Figure 20. Protocol overview.

## 7.3.1 Run protocol

To run an extraction process, select a protocol from the list.

Load the consumables into their dedicated positions in the IndiMag 2. Verify that all the dispensed liquids are located at the bottom of the wells; liquids on the walls of the wells can cause cross contamination and will not guarantee adequate performance.

The status of the rod covers is displayed on the screen, highlighting the correctly installed rod covers with a tick (Figure 21). Make sure all sample positions contain correctly installed rod covers before starting the protocol by pressing the „start / play“ icon. In the event that no rod covers are inserted, an error message is displayed, and the extraction run cannot start.

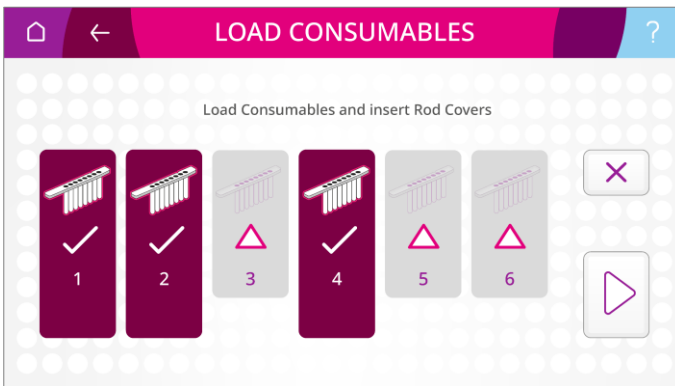


Figure 21. Rod covers status display.

After the run has started, the name and the progress of the running extraction protocol is displayed on the screen, counting down the time remaining until the end of the protocol (Figure 22).

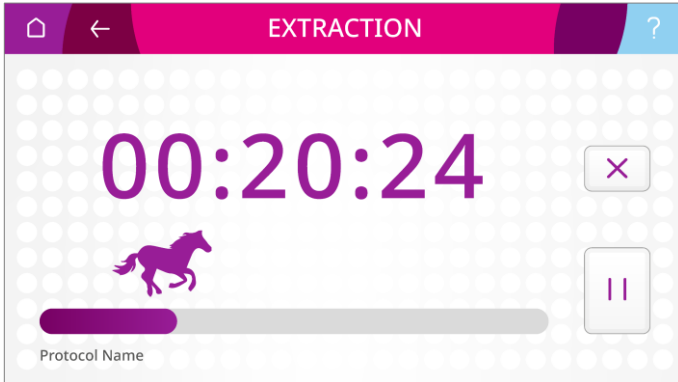



Figure 22. Protocol progress screen.

<b>WARNING</b>	
	Housing parts and covers must be closed during operation and may only be opened to eliminate malfunctions.

### 7.3.2 Pause / Abort run

The extraction process can always be paused or aborted by pressing the „pause“ or „abort“ icon, respectively, on the protocol progress screen. After pausing, the extraction process can be resumed by pressing the „start / play“ icon on the protocol progress screen (Figure 22). For further information regarding the topic, refer to chapter 9.4.1 (page 85).

### 7.3.3 Status lights

The status of the machine and the extraction run is highlighted by the status light at the bottom of the interactive screen. The information, displayed by different colors of the status light, is presented in Table 3.

Table 3. Colors of status lights.

<b>Color</b>	<b>Message</b>
Pink	Standby
Blinking Pink	Firmware update in progress
Green	Extraction in progress
Blue	Sterilization in progress
Red	Error

## 7.4 Favorite protocol overview

From the „FAVORITES“ icon in the main menu, most used / favorite extraction protocols can be more easily accessed. To navigate and run a favorite protocol, refer to chapter 7.3.1 (pages 51 - 52).

## 7.5 UV sterilization

From the „STERILIZE“ icon in the main menu, the sterilize menu can be accessed (Figure 23).

- The sterilization time can be increased or decreased using the time buttons (numbers starting with „+“ or „-“ symbol, respectively).
- Sterilization time can be reset to 0 min by pressing the „trash bin“ icon.
- The UV lamp can be switched on by pressing the „start / play“ icon. By pressing the „start / play“ icon, the countdown towards the end of sterilization starts.
- During the UV sterilization, the magnet rod and the magnet rod cover tables move to insure equal sterilization of every surface within the IndiMag 2.
- When the total run time is complete, the UV light is turned off automatically.
- The UV sterilization can be aborted at any point by pressing „X“ on the screen during the sterilization run and pressing „confirm“ button in the pop-up window.
- To start the process and the UV light the lid must be closed. Opening the lid mid-run stops the UV disinfection.

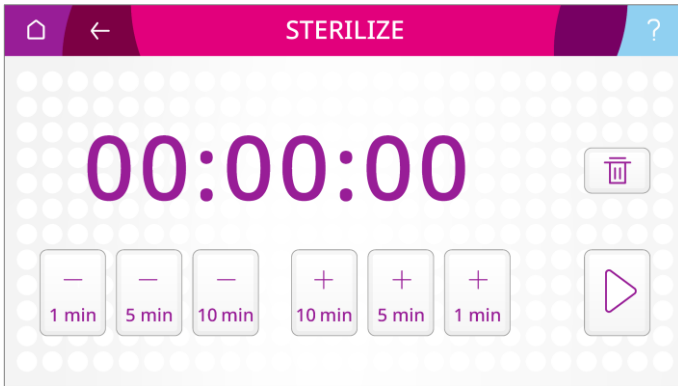




Figure 23. Sterilization menu.

<b>WARNING</b>	
	<p>Bypassing or putting safety devices out of operation is strictly prohibited and constitutes improper use.</p>
	<p>Danger of crushing! Reaching into the unit during operation can lead to injuries.</p>

## 7.6 Settings menu

From the „SETTINGS“ icon in the main menu, the list of settings can be accessed. In the bottom left corner of the list, the firmware version number is displayed. The following chapter provides a brief description of each of the settings functions in the order that they can be found in the settings menu.

### 7.6.1 Device settings

To access device settings, select the „device settings“ option in the settings menu (Figure 24). In the bottom of the device settings menu, the serial number and firmware version are displayed.

From the device settings, the interactive screen brightness can be adjusted by inputting desired brightness percentage by pressing the „display brightness“ button and using the on-screen keyboard in the pop-up window. Furthermore, the cabin light and the sound of the device can be turned on or off by pressing the cabin light „on / off“ or sound „on / off“ button respectively.

Finally, by pressing the „home“ button under the „home device“ function, the magnet rod and magnet rod cover tables can be made to exit the consumables and return to their starting positions. For further use of the „home device“ function, refer to chapter 9.4.2 (page 85).



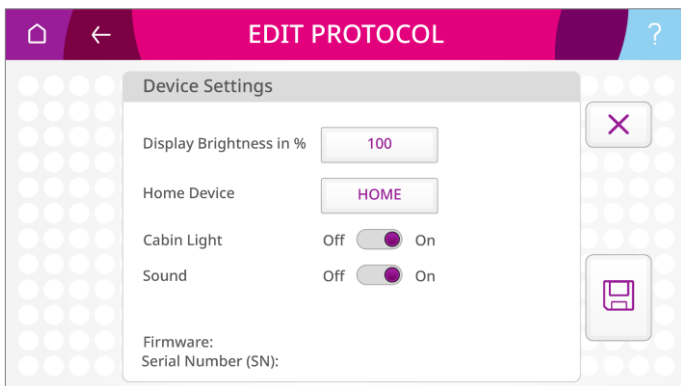


Figure 24. Device settings.

## 7.6.2 Language settings

To set the desired language, select the „language settings“ option in the settings menu. Choose the preferred language option by clicking on the desired language button.

## 7.6.3 Time settings

To set time and date, select the „time settings“ option in the settings menu. For time and date data entry, input desired parameters using the on-screen keyboard in the pop-up window. Time is displayed on top of the main menu.

## 7.6.4 Protocol editor

To create, edit and delete protocols, select the „protocol editor“ option in the settings menu. For detailed instructions on protocol editing, refer to chapter 8 (pages 60 - 75).

## 7.6.5 Protocol import / export

Extraction protocols can be imported to and exported from the IndiMag 2. To import and export extraction protocols, select the „protocol import / export“ option in the SETTINGS menu.

To export protocols, insert the USB key (not provided with the instrument) into the USB port at the side of the interactive screen. Choose „Export to USB-Stick“ option under „Protocol import / export“ option in the settings menu. A pop-up message will indicate finalized export process.

To import protocols, insert the USB key containing files with desired extraction protocols, into the USB port at the side of the interactive screen. Choose „Import from USB-Stick“ option under „Protocol import / export“ option in the SETTINGS menu. A pop-up message indicates that the import process was successful. The imported protocols are automatically saved and added to the existing protocol list.

## 7.6.6 Firmware update

Make sure that the latest version of the IndiMag 2 firmware is installed on your device. You can check for the latest firmware version in the download section at [www.indical.com/indimag2](http://www.indical.com/indimag2).

To begin the firmware update, select the “firmware update” option in the SETTINGS menu. For detailed instructions, refer to chapter 9.2 (page 78).

## 7.6.7 Reset device

In order to reset the IndiMag 2 to its base firmware settings, select the „reset device“ option. Upon confirmation the device firmware settings will be reset. Resetting the device will eliminate any saved custom protocols.

## 7.6.8 Service and shipment

To prepare the IndiMag 2 for service and shipment, choose the „service and maintenance“ option. In case logfiles need to be obtained, insert the USB key into the port on the side of the interactive screen, and choose the „export logfile“ button. The logfile will get automatically transferred to the USB key. A pop-up message will indicate a successful logfile export.

To prepare the IndiMag 2 for shipment, choose the „prepare for shipment“ option and follow the instructions provided. The instrument must be cleaned and disinfected before shipment. The service menu option should only be used by personnel trained in IndiMag 2 maintenance.

## 8 Create / Edit protocol

The following chapter provides a guide on how to create and edit extraction protocols. From the „SETTINGS“ icon in the main menu, the „protocol editor“ option can be selected. A list of protocols available for editing will open in the scroll menu. To edit a protocol, and adjust the different parameters as required (refer to chapter 8.1, page 61).

To create an extraction protocol, scroll to the bottom of the protocol list, and select an „add new protocol“ option (Figure 25).

In the event there is no „add new protocol“ option to choose at the bottom of the protocol list, the instrument’s maximum memory capacity has been reached. In this case, to create an extraction protocol, one of the existing protocols should first be deleted. For a guide on how to delete extraction protocols, refer to chapter 8.11 (page 75).



Figure 25. Edit protocol list with an “add new protocol” option.

## 8.1 Overview

Lysis, wash and elution extraction steps of the various extraction protocols can be edited to suit the needs of even the most challenging pathogen-sample combinations. For each of these steps, several parameters can be adjusted, for example well position, volume, mixing parameters, bead collecting parameters, and in case of lysis and elution, temperature control (Figure 26).

In addition, general parameters like bead collection and disposal, as well as extra parameters like evaporation and end of run settings can be adjusted for each of the protocols (Figure 26). The following chapter provides a detailed description of each of the adjustable parameters.

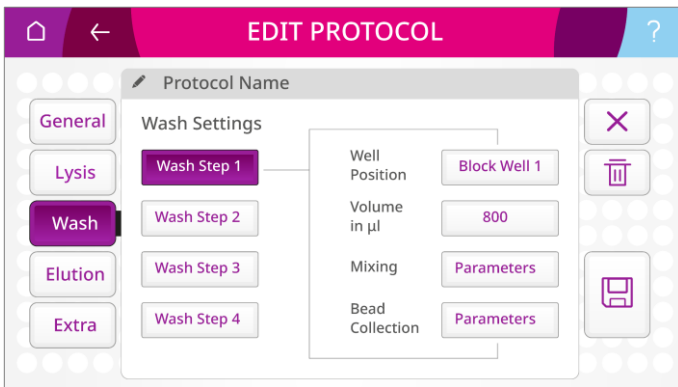


Figure 26. Protocol editing overview.

## 8.2 Well position

The IndiMag 2 allows flexible consumable usage to enable efficient and sustainable extraction. Besides rod covers, there are several other types of consumables available for the IndiMag 2 extraction, lysis strips, 32-well blocks and elution strips, each corresponding to their own position in the instrument (Figure 27a).

The names of the well positions correspond to the type of consumable an extraction step is taking place in, and in case of the 32-well block the position within. All the available well positions, depicted in the consumables, are showcased in Figure 27b.

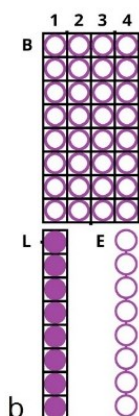
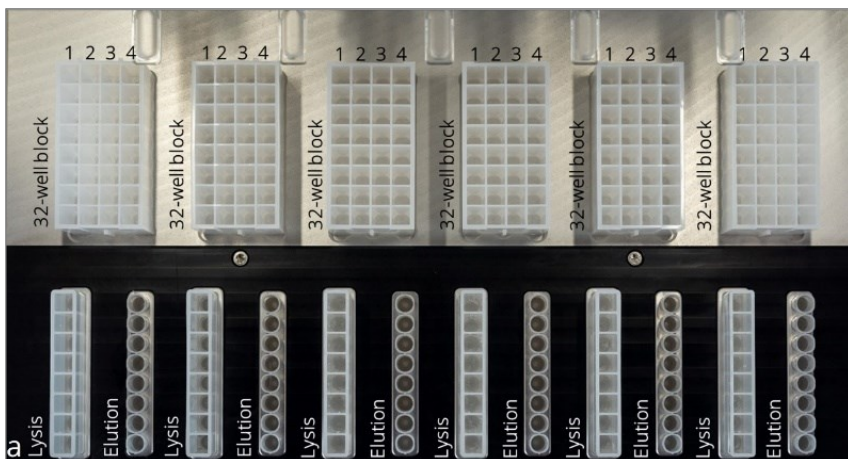


Figure 27. Overview of the consumables in the IndiMag 2.

a – Positioned consumables in the IndiMag 2.

b – Overview of the possible well positions.

L = Lysis well, B1 = Block well 1, B2 = Block well 2,

B3 = Block well 3, B4 = Block well 4, E = Elution well.

The well position, in which a certain extraction step (e.g., lysis, wash or elution) will take place, can be set by clicking the „well position“ button and choosing one of the available options in the pop-up window.

The well positions should be set according to the extraction protocol requirements and the required consumables, e.g., when third or fourth wash steps are required during the extraction, the use of lysis and elution strips is required to free up wells in the 32-well block.

When heated lysis and/or elution are required, the use of lysis and/or elution strips is required.

When a certain extraction step is not required (e.g., Wash 4), the „disabled“ option should be chosen in the well position pop-up window. When a wash step is disabled, all the subsequent wash steps are automatically disabled as well.

For additional information regarding the possible types of consumables, their combinations, and layouts, refer to chapter 5.3 (pages 26 - 36).



## 8.3 Mixing volume

The mixing volume, set in microliters ( $\mu\text{l}$ ), should correspond to the combined volume of reagents and sample during the extraction step in that well. The correct volume can be chosen by clicking the „volume“ button and inputting the correct volume in a pop-up window. For the lysis strip and 32-well block the maximum volume is 1000  $\mu\text{l}$ . For the elution strip the maximum volume is 200  $\mu\text{l}$ .

## 8.4 Mixing parameters

Each extraction step (lysis, washing, elution) consists of mixing steps, defined by three different mixing parameters: mixing speed, mixing range and mixing time. The sequence of maximum four mixing steps (marked 1 – 4) can be repeated “ $n$ ” times during an extraction step, which is set by the number of cycles. For more details on each of the mixing parameters, refer to the following chapter.

The mixing parameters can be set by clicking the „mixing“ button and navigating various mixing options in the pop-up window (Figure 28).

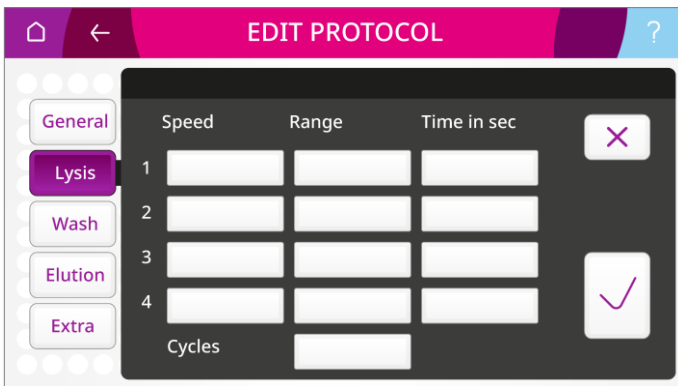


Figure 28. Mixing parameters.

## 8.4.1 Mixing speed

The desired mixing speed can be chosen by clicking the „speed“ button at one of the extraction steps and choosing one of the available options in the pop-up window. The available options range over five mixing frequencies, from “super slow” to “super fast”. If a pause in mixing is required during an extraction step, the „pause“ option should be selected for a mixing step.

## 8.4.2 Mixing range

The desired mixing range can be chosen by clicking the „range“ button at one of the extraction steps and choosing one of the available options in the pop-up window. The IndiMag 2 offers three mixing range options: full, bottom half and top half mixing. Full mixing should be chosen in case thorough mixing is required, top half mixing should be chosen in case gentle mixing is required, and bottom half mixing should be chosen in case vigorous mixing is required.

## 8.4.3 Mixing time

The desired mixing time, set in seconds, can be set by clicking the „time“ button at one of the extraction steps and inputting the desired time in the on-screen keyboard in the pop-up window. In case a certain mixing step is not required, a mixing time of zero seconds should be set.

## 8.4.4 Mixing cycles

The cycles, stating the number of times the sequence of mixing steps will be executed in order from one to four, can be set by clicking the „cycles“ button at the bottom of the mixing steps and inputting the desired number of cycles in the on-screen keyboard in the pop-up window. A minimum number of one cycle can be set, meaning that the sequence of mixing steps will be executed once.

## 8.5 Bead collection parameters

Bead collection parameters can be set by clicking the „bead collection“ button and navigating various bead collection options in the pop-up window (Figure 29). To efficiently transfer the magnetic particles between the wells, the bead collection parameters can be set individually for each of the extraction steps.

The bead collection process is defined by two parameters, falling time and collection time. The bead collection process can be repeated “*n*” times, set by the number of cycles. For more details on each of the bead collection parameters, refer to the following chapter.

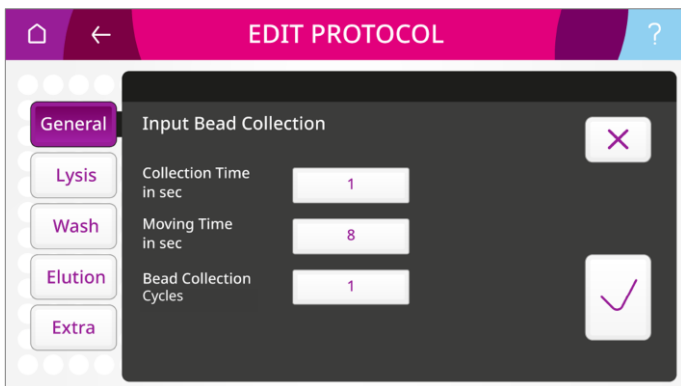


Figure 29. Bead collection parameters.

## 8.5.1 Collection time

Collection time corresponds to number of seconds the magnet rods spend on the bottom of the well to enable binding of the magnetic beads. Bead collection time can be set by clicking „collect time“ button and inputting the desired number of seconds in the on-screen keyboard in the pop-up window.

## 8.5.2 Falling time

Falling time corresponds to number of seconds the magnet rods spend travelling from the top liquid level in the well to the bottom of the well, and vice-versa (lifting time). Falling time can be set by clicking „falling time“ button and inputting the desired number of seconds in the on-screen keyboard in the pop-up window.

### 8.5.3 Bead collection cycles

The bead collection cycles, stating the number of times the sequence of falling, collecting and lifting will be executed, can be set by clicking the „cycles“ button under the bead collection parameters and inputting the desired number of cycles in the on-screen keyboard in the pop-up window. A minimum number of one cycle can be set, meaning that the sequence of bead collecting steps will be executed once.

## 8.6 Temperature control

The IndiMag 2 allows for heating of the lysis strips and heating and cooling of the elution strips (Figure 30), which supports enzyme activation, process acceleration, and increase in efficiency. Temperature control during lysis or elution can be turned on by choosing the „lysis well“ or „elution well“ option and switching the „heating off / on“ button to “on”.

Once the temperature control button is switched on, a desired temperature can be set by clicking the „temp“ button and inputting the desired temperature in degrees Celsius in the on-screen keyboard in the pop-up window. Temperatures between 30°C and 100°C can be set during lysis, and temperatures between 4°C and 100°C can be set during elution.

**Note:** Extensive heating might lead to evaporation of purification reagents impacting nucleic acid purification performance.

To ensure that the desired temperature will be reached by the beginning of the extraction step, the „pre-heat“ button should be switched to “on”. If the pre-heat button is switched to “off”, temperature ramping will only start at the beginning of the step and desired temperature in the lysis or elution strips may not be achieved for a sufficient time.

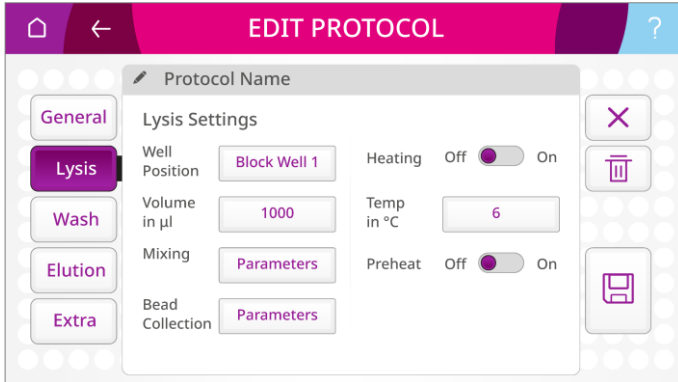


Figure 30. Temperature control.

## 8.7 General settings

Under the general settings of the extraction protocol editing, bead pickup and bead waste settings can be set (Figure 31). For more details on bead collection and bead disposal parameters, refer to the following chapter.

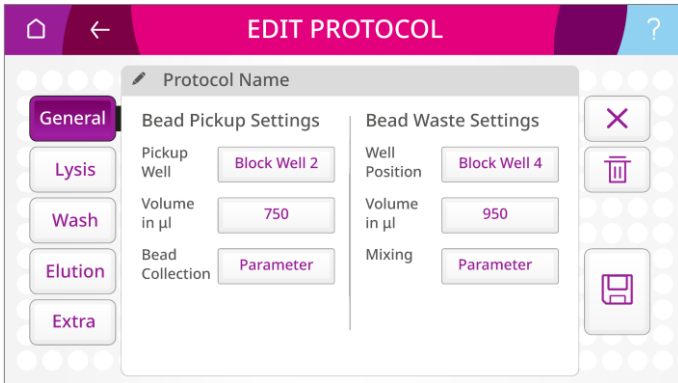


Figure 31. General settings.

### 8.7.1 Bead pickup

When using the prefilled IM2 or IM48 cartridges, the magnetic beads are stored in one of the wash wells, and need to be transferred to the lysis well before the start of the extraction process. This process can be set under the bead pickup settings under the general settings (Figure 31, left).

Bead pickup parameters consist of well position, corresponding to the location from where the magnetic beads need to be picked up from (chapter 8.2, pages 62-64) and volume (chapter 8.3, page 65), as well as collection time, falling time and cycles (chapter 8.5, pages 67 - 69).

If the lysis well already contains all the magnetic beads before the start of the extraction, this renders bead pickup unnecessary. In this case, the bead collection can be disabled by choosing the „disabled“ option in the pop-up window under the well position parameter setting.

## 8.7.2 Bead waste

Once the extraction run is finished, the bead waste settings under the general settings allow the transfer of magnetic beads from the elution well (Figure 31, right).

Bead disposal parameters consist of well position, where magnetic beads get disposed to (chapter 8.2, page 62) and volume (chapter 8.3, page 65), as well as mixing parameters (chapter 8.4, pages 65-67).



## 8.8 Extra settings

Under the extra settings, the end of run settings, as well as evaporation settings can be set (Figure 32).

For more details on end of run and evaporation parameters, refer to the following chapter.

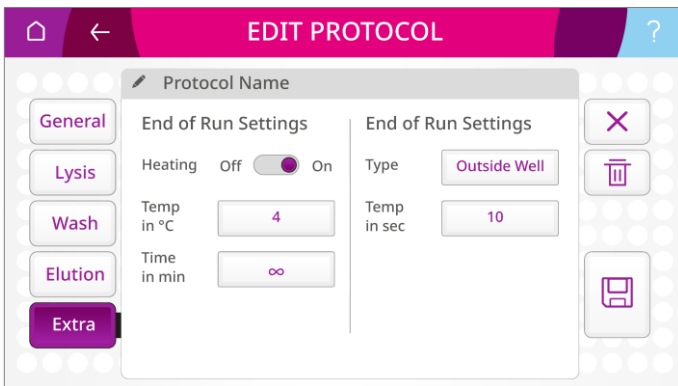


Figure 32. Extra settings.

### 8.8.1 End of run settings

The end of run settings consist of temperature control of the elution strips after the run is finished, as well as sound notification signifying the end of the run (Figure 32, left).

The temperature control at the end of the run can be turned on by switching the „heating off / on“ button to “on”. Once the temperature control button is switched on, the temperature control parameters can be set.

Desired temperatures can be set by clicking the „temp“ button and inputting the desired temperature in degrees Celsius in the on-screen keyboard in the pop-up window. Temperatures between 4°C and 100°C can be set.

Desired time for the end of the run temperature control can be set by pressing the „time“ button and inputting the desired number of minutes in the on-screen keyboard in the pop-up window. In case a very long cooling time is desired, choose an „infinity“ symbol in the on-screen keyboard.

The end of run sound notification can be switched on by switching the „sound off / on“ button to “on”.

## 8.8.2 Evaporation settings

The evaporation settings consist of the location of evaporation and time of evaporation (Figure 32, right).

Unless disabled, evaporation will automatically occur in or above the well of the last extraction step before elution.

The location of evaporation can be chosen by clicking the „type“ button and choosing one of the available options in the pop-up window. If the evaporation is to be carried out outside the well, „outside well“ option should be chosen. If the evaporation is to be carried out just above the liquid level inside the well, „inside well“ option should be chosen. If evaporation is not the desired, the location of the evaporation should be disabled by choosing „disabled“ option.

The evaporation time can be set by clicking the „time“ button and inputting the desired number of seconds in the on-screen keyboard in the pop-up window.

## 8.9 Saving extraction protocols

A protocol or changes made to a protocol can be saved by pressing the „save“ icon when editing a protocol. Saved protocols are automatically stored on the instrument's memory card, which is independent of the rest of the IndiMag 2 and can be exported at any point. This means that in case of the instrument's malfunctioning, the saved protocols are unaffected and may be recovered.

## 8.10 Renaming extraction protocols

A protocol can be renamed by pressing the „rename“ icon next to the protocol name when editing the protocol and typing in the new name in the on-screen keyboard in the pop-up window. The protocol name should not be more than 36 characters long.


## 8.11 Deleting extraction protocols

A protocol can be deleted by pressing the „delete“ icon when editing the protocol. Once confirming your choice in the pop-up window, the protocol will be permanently deleted from the instrument memory card without any means of recovery.

# 9 Maintenance and servicing

The appliance may only be serviced and maintained by persons, who:

- are trained and informed about hazards. Furthermore, they must be instructed about the necessary personal protective equipment (PPE) and protective measures.
- are able to assess the work assigned to them and recognize possible hazards on the basis of their technical training, knowledge and experience. In addition, they must be trained on the proper use of the instrument. INDICAL offers a preventative maintenance service.

<b>WARNING</b>	
	<p><b>Electric shock hazard!</b></p> <p>Maintenance and repair work may only be carried out when the unit is disconnected from the power supply and the front power switch stops glowing.</p>



## 9.1 Cleaning and decontamination


Clean the instrument regularly depending on the operating grade, but ideally daily, by following the steps below. In case you need further assistance please contact [support@indical.com](mailto:support@indical.com).

Before commencing the clean-up, turn the IndiMag 2 main power switch off by moving the power switch at the bottom left of the back of the instrument into the “off” position (see Figure 4, chapter 5.1.2, page 20).

Gently wipe the surfaces with a soft cloth or tissue paper moistened with distilled water, a mild detergent such as SDS (sodium dodecyl sulfate) or soap solution. Wait for the liquid to dry before starting any UV lamp sterilization process.

Turn on the UV lamp to initiate sterilization process when decontamination is needed.

NOTICE	
	Avoid spraying cleaning agents directly into the device.
	Do not use acetone to wipe the front screen.

WARNING	
	<b>Warning! Hazardous chemicals!</b> Do not use bleach to wipe the device on the inside.

## 9.2 Firmware updates

Availability of new firmare updates will be communicated to end users by INDICAL. When new IndiMag 2 firmware updates get released, one can install it onto the machine by following these steps:

- Check for the latest firmware version in the download section at **[www.indical.com/indimag2](http://www.indical.com/indimag2)**.
- Download the new IndiMag 2 firmware version onto a USB key (not provided).
- Turn on the IndiMag 2.
- Insert the USB key into the USB port on the side of the interactive screen.
- Go to Main menu / Settings / Firmware update.
- Press the “update firmware” button.
- Upon pressing “update firmware”, the IndiMag 2 will automatically restart. The interactive screen will display an informative message on the status of the update.
- **DO NOT TURN OFF THE INDIMAG 2 OR REMOVE THE USB KEY FROM THE PORT WHILE UPDATE IS IN PROGRESS!**
- Once the update is completed, the IndiMag 2 will fully turn back on. An informative message will display a notification about the successful update.
- Remove the USB key from the port and store it in a secure place for future firmware updates.

## 9.3 Malfunction guidelines

The following section provides guidelines for repairing the most common IndiMag 2 malfunctions. Table 4 summarizes the possible malfunctions, their potential causes, and how to resolve them.

Table 4. Malfunction overview.

<b>Malfunction</b>	<b>Cause</b>	<b>Correction</b>
UV lamp does not glow	Lamp broken	Replace UV lamp (chapter 9.3.1, page 80).
Device does not turn on	Fuse broken	Replace main fuse (chapter 9.3.2, page 81).
No movement of the axes	Front lid opened	Close the front lid.
	Travel path blocked	Remove any obstructing objects from the travel path.
	Transport locks not removed	Remove the transport locks.

## 9.3.1 Changing the UV lamp

To change the UV lamp, shut down the device, detach the mains plug, and open the instrument hood.

The UV lamp is easily accessible, and its change is possible without any tools. Simply hold and turn the bulb a quarter turn to remove the lamp (Figure 33). Insert a new bulb and secure it again with a quarter turn. The UV lamp can be ordered from INDICAL under the article number 1300022.

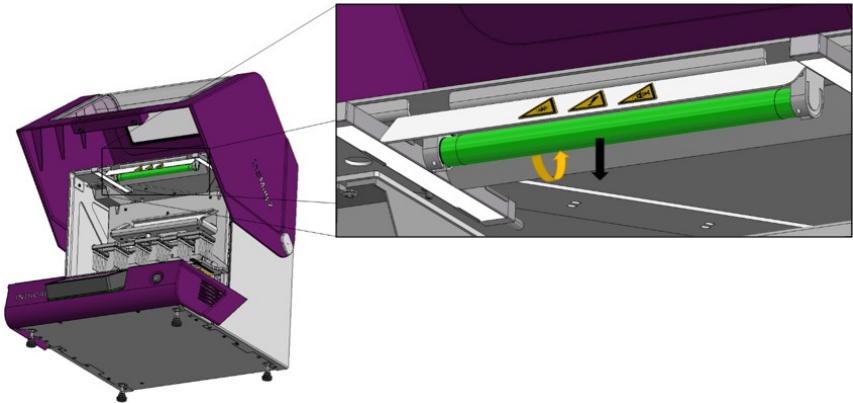


Figure 33. Changing the UV lamp.



## 9.3.2 Changing the main fuse

To change the main fuse, shut down the device and detach the mains plug. The fuse is integrated in the mains filter combination at the electrical interface, located in the bottom left corner at the back of the instrument. Use a slotted screwdriver to loosen the fuse insert and remove it from the back of the system (Figure 34a and b). Pull out the fuse and replace it with a new T6.3A fuse (Figure 34c and d). The main fuse T6.3A can be ordered from INDICAL under the article number 1300021.

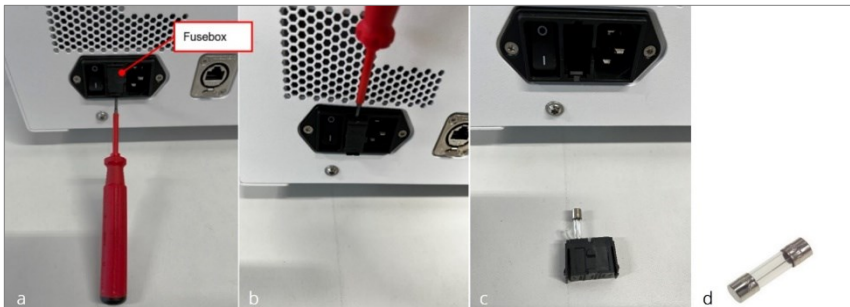


Figure 34. Changing the main fuse.

a, b – Loosening the fuse insert with a screwdriver.  
c, d – Detached fuse.

### 9.3.3 Changing the magnet rod

To change the magnet rod, shut down the device, detach the mains plug, and open the instrument hood. Use an L-Key for TORX® Screws (TX10) to loosen the screw at the top of the magnet rod (Figure 35). Replace the magnet rod and tighten the screw hand-tight. The magnet rod can be ordered from INDICAL under the article number 1300020.

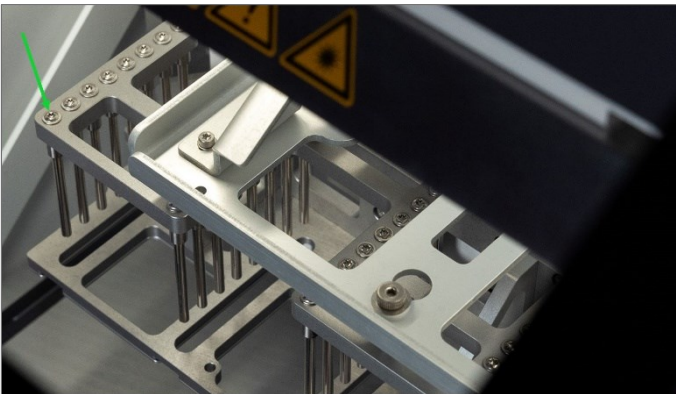


Figure 35. Changing the magnet rod.

## 9.4 Troubleshooting guidelines

The following section provides troubleshooting guidelines in case an error occurs during any process concerning the IndiMag 2. If an error occurs a distinct error message corresponding to different types of possible causes will appear on the interactive screen. The list of possible errors and their causes is presented in Table 5. Follow the error guidelines to resolve the issues.

If errors persist, or if an error not listed in Table 5 occurs, refer to chapter 9.5, page 86.

Table 5. Error message overview.

<b>Headline</b>	<b>Text</b>	<b>Resolution</b>
Lid Open	Cannot proceed while lid is open. Please close the lid!	Close the lid.
Missing Rod Covers	No rod covers detected! Please insert rod covers.	Insert rod covers to the correct positions.
Process Interrupted	The process was interrupted unexpectedly and paused.	Press „start / play“ or „abort“ depending on whether the process should be resumed or aborted.
Error	Something went wrong. Please restart your device.	Restart the device.

USB Stick Missing	No USB stick plugged in. Please insert an USB stick.	Insert an USB stick.
File Export Failed	An error occurred during file export.	Repeat the file export process (chapter 7.6.5, page 58).
File Import Failed	An error occurred during file import.	Repeat the file import process (chapter 7.6.5, page 58).

## 9.4.1 Pause / abort run

In case the extraction process needs to be abruptly stopped, for example for changing the extraction protocol, correcting the orientation of consumables, inserting additional rod covers or clearing blocked pathways, the extraction process can always be paused by pressing „pause“ button on the protocol progress screen.

After pausing, the extraction process can be resumed by pressing the „start / play“ icon on the protocol progress screen.

The extraction process can also be aborted by pressing the „abort“ icon on the protocol progress screen.

Pressing the „abort“ icon instantly pauses the extraction process until the confirmation for aborting the process is either confirmed or declined. Declined confirmation resumes the extraction process.

Furthermore, opening the instrument hood while the extraction process is in progress causes the extraction process to instantly pause.

Once the instrument hood is closed again, the extraction process can be resumed by pressing the „start / play“ icon on the protocol progress screen.

## 9.4.2 Home function

In case a malfunction occurs mid-extraction run, the magnet rods and/ or rod covers can remain lodged inside the consumables. The magnet rod and magnet rod cover tables can be forced to exit the consumables and return to their starting positions by pressing the „home“ icon in Settings / General / Home. After the magnet rod table and magnet rod cover platform return to their starting position, the device can be opened and consumables safely removed.

## 9.5 Customer service and support

In case of a persistent error or another type of malfunction not listed in this User Guide, please contact **support@indical.com**. Refer to chapter 6.6 (page 45) for instructions on repacking the instrument for transport.

## 10 Technical data

Specification	Value	Comments
Dimensions (W x H x D)	513 x 532 x 656 mm (closed) 513 x 740 x 656 (opened)	
Dimensions (W x H x D) including packaging	approx.: 600 x 730 x 800mm	
Weight total system	approx. 32 kg	Without consumables
Weight including packaging	approx. 40 kg	
Max. capacity	Up to 48 samples	
Power supply	100 - 240 V/AC (+/- 10%) / 600 W	internal 24 V
Input frequency	50 - 60 Hz	
Operating conditions	Laboratory environment temperature: +5°C - +40°C rel. humidity: 20 % - 80 % (non-condensing)	
Storage conditions	Temperature: +1°C - +60°C rel. humidity: 5 % - 80 % (non-condensing)	
Transport conditions	Temperature: -20°C - +55 °C rel. humidity: 20 % - 85 % (non- condensing)	
Protection class	IP 20	
Operating altitude	0 to 5000 m	

## 11 Ordering information

<b>Product</b>	<b>Description</b>	<b>Cat. No.</b>
<b>IndiMag Pathogen IM48 Cartridge (6 x 8)</b>	For automated purification of viral RNA and DNA and bacterial DNA from animal samples	SP947654P608
<b>IndiMag Pathogen IM2 Cartridge (96)</b>	For automated purification of viral RNA and DNA and bacterial DNA from animal samples	Please contact <a href="mailto:support@indical.com">support@indical.com</a>
<b>IndiMag Pathogen Kit w/o plastics (384)</b>	For rapid and automated purification of viral RNA/DNA and bacterial DNA from animal samples, excl. plastics	SP947257
<b>IndiMag 48 PW 8-Sample Blocks</b>	Plasticware (32-well blocks) for 70 x 8 samples on IndiMag 48/s and IndiMag 2	PW940166
<b>IndiMag 48 PW Rod Cover</b>	rod cover strips for 84x 8 samples on IndiMag 48/s and IndiMag 2	PW940237
<b>IndiMag 2 PW Elution Set (384)</b>	48 racked elution strips (48 x 8 wells)	PW950235
<b>IndiMag 2 PW Lysis Strips (672)</b>	84 lysis strips (84 x 8 wells)	PW950215
<b>IndiMag 2 PW Lysis Rack (6)</b>	6 racks for 6 lysis strips each	PW950225
<b>IndiMag 2 PW Elution Storage Rack (6)</b>	6 racks for storing 12 elution strips each	PW950245
<b>IndiMag 2 Magnet rod (8)</b>	Replacement magnet rod for the IndiMag 2	1300020
<b>IndiMag 2 Fuse (1)</b>	Replacement fuse for the IndiMag 2	1300021
<b>IndiMag 2 UV lamp (1)</b>	Replacement UV lamp for the IndiMag 2	1300022



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## 12 Change index

Handbook	Version	Change
HB-2652-EN-001	April 2024	Product launch