



**V** For in vitro diagnostic use only.



# Kylt<sup>®</sup>

## Kylt<sup>®</sup> Purifier 48

Medium Throughput Purification Instrument

[www.kylt.eu](http://www.kylt.eu)

## **Kylt® Purifier 48**

### **Medium Throughput Purification Instrument**

#### **A. Introduction**

The Kylt® Purifier 48 is an automated nucleic acid purification device, intended for medium-throughput applications. Specialized spin tips enable superb mixing efficiency of magnetic beads and larger processing volume. With intuitive interface and flexible automation settings, the Kylt® Purifier can boost laboratory productivity by transforming routine operations into a walk-away solution.

The Kylt® Purifier 48 uses magnetic rods to collect and transfer magnetic beads. Unique Kylt® Purifier Spin Tips are employed to mix the well contents with highest efficiency by stirring. Purified nucleic acids can be obtained after lysis, binding to magnetic beads, several wash steps and elution.

The Kylt® Purifier 48 can be used in combination with the Kylt® RNA / DNA Purification HTP kits and the Kylt® Salmonella Purification HTP kits.

## B. Safety Instructions

The Kylt® Purifier 48 requires a table that can support its weight of 45 kg.

- Ensure good air circulation.
- The Kylt® Purifier 48 may be used at a temperature range of 4°C to 40°C.
- High temperature variability and high humidity environments have to be avoided.
- This device can be used with potentially biohazardous materials.
- Use appropriate personal protective equipment (e.g. gloves, lab coat)
- Under normal condition, the noise level emitted by the Kylt® Purifier does not exceed 80 dBa and does not cause any hazard. Please contact technical support in case of higher noise level occurring.
- This device can be hazardous due to the use of chemical and biohazardous substances.
- Users should adhere to their institutional guidelines for the handling and disposal of all infectious substances used with this device.
- It is important to clean the device after every use. If samples or reagents have been spilled, it is important to clean the instrument immediately to avoid damage or contamination of samples.
- This device is to be used with the compatible Kylt® Purifier Spin Tips. Using incompatible labware may cause poor extraction performance or may damage the system.
- Prior to starting a new run, please make sure, that all previously loaded Kylt® Purifier Plates and Kylt® Purifier Spin Tips have been unloaded completely. Remaining Kylt® Purifier Plates or stuck Kylt® Purifier Spin Tips can damage the system.
- Read this user manual in its entirety prior to operating the device. Failure to read, understand, and follow the instructions in the manual may result in damage to the device, injury to laboratory and operating personnel or poor performance.

## C. Instrument Overview

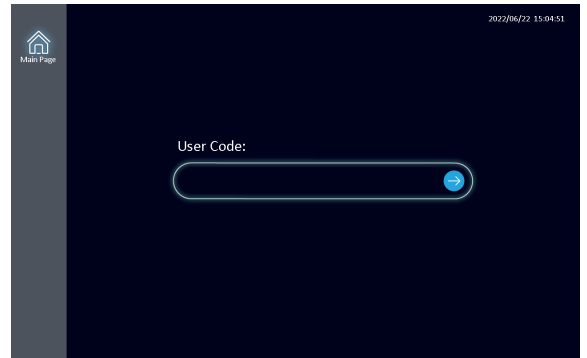


1. Display with graphical user interface.
2. Button to turn off alarm signal.
3. USB port to connect a USB-stick, a keyboard, a barcode scanner or a computer mouse. A USB-hub may be used.
4. Stop button to stop a run.
5. On / Off switch on the left backside of the Kylt Purifier 48.
6. Three plate positions that can be used as needed. On each plate position up to 16 samples can be purified.

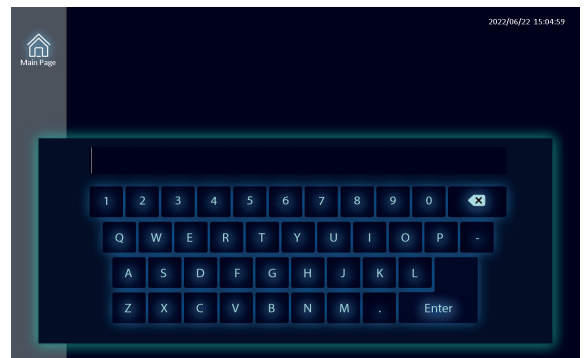
- Model: Kylt® Purifier 48
- Weight: 45 kg
- Dimensions: 580 x 430 x 470 mm
- Power Supply: 220 - 240 VAC
- Processing Volume: 100 µl - 1600 µl
- Rotational Speed: up to 3000 rpm
- Heating: 12 independent heat blocks, two per sample set - used for lysis and / or elution steps.
- Magnets: 48 rods, 30 mm, >3900 Gauss
- Display: 7-Inch Touchscreen
- UV-Light: UV-C, 8 W
- HEPA: E10 class. Negative pressure.

## D. Start up and log in

- After switching on the system, the Kylt® Purifier 48 will boot.
- Once booted, the login window is displayed.
- Clicking on the field will open the screen keyboard.

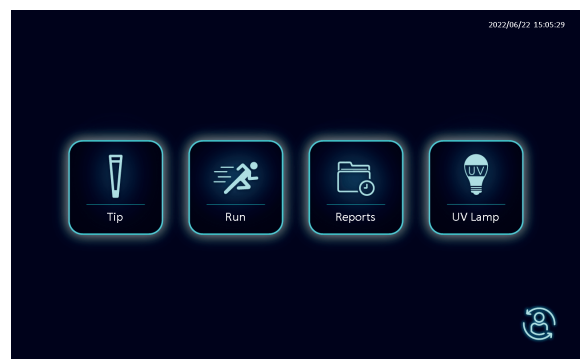


- Enter the user code provided to you at the installation.
- Press Enter.
- Click on the arrow next to the field to log in.



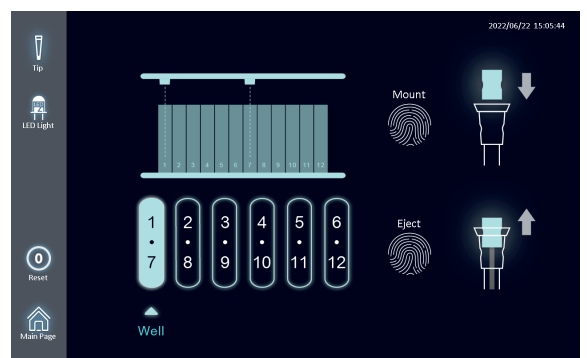
## E. Home screen

- The home screen allows access to four functions described in detail below.
- Tip: Tip loading and unloading.
- Run: Select and run a protocol.
- Reports: Access to run and error reports.
- UV-Lamp: Decontamination with UV-C.



## F. Tip

- The Kylt® Purifier Spin Tips need to be loaded to each used position prior to choosing and running a protocol.
- Load tips separately on the three available positions.
- Tips can be loaded from two columns at once by choosing the respective position.
- Tips can be loaded or ejected by pushing the according button.



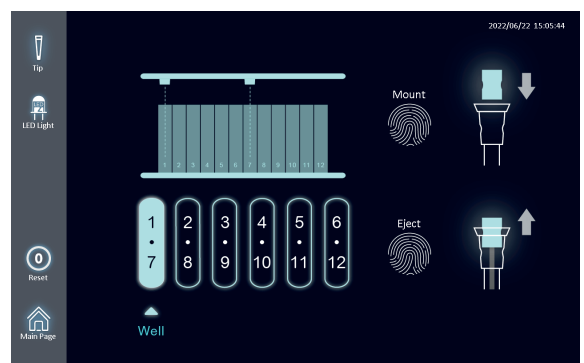
## G. Home screen

- The home screen allows access to four functions described in detail below.
- Tip: Tip loading and unloading.
- Run: Select and run a protocol.
- Reports: Access to run and error reports.
- UV-Lamp: Decontamination with UV-C.



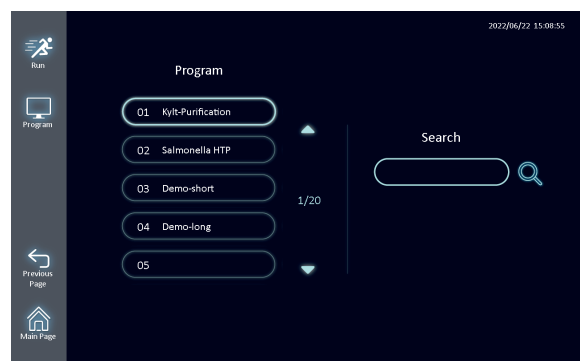
## H. Tip

- The spin tips need to be loaded to each used position prior to choosing and running a protocol.
- Load tips separately per plate position.
- Tips can be loaded from to columns at once by choosing the respective position.
- Tips can be loaded or ejected by pushing the according button.



## I. Run

- In the first Run-screen a list of available protocols is displayed.
- Use the arrow buttons to scroll through the list.
- Quickly double click the intended protocol.

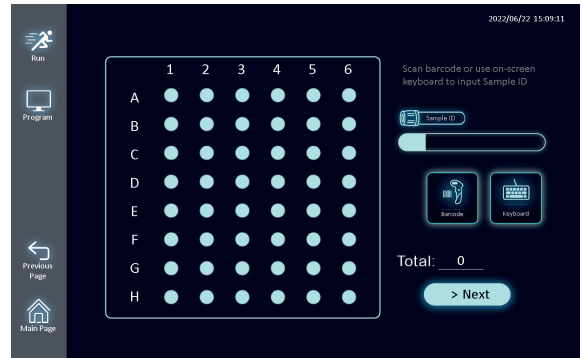


- The first screen after choosing a protocol shows the protocol name and allows the optional entering of purification kit lot and the used lot of spin tips.
- Clicking on the running person will proceed to the next screen.

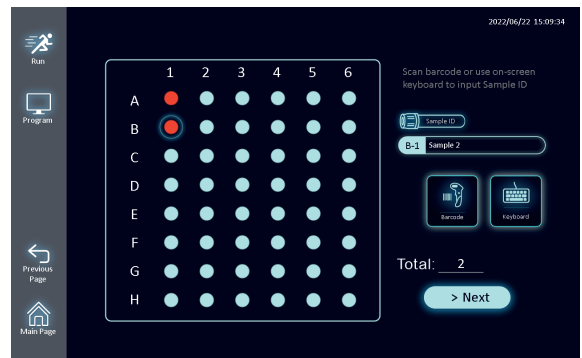


## I. Run (continued)

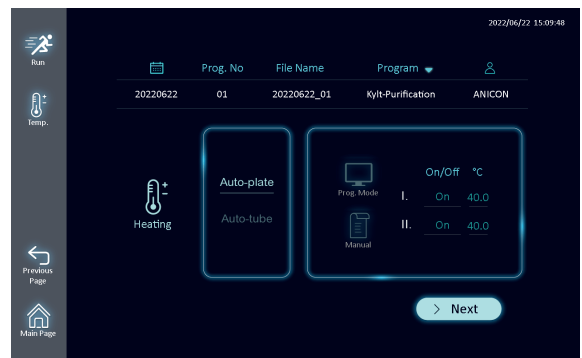
- Sample IDs can be tracked in the subsequent screen.
- Each position can be selected by clicking.
- Columns are displayed from left to right, e.g. column 4 refers to the right side of the middle plate.



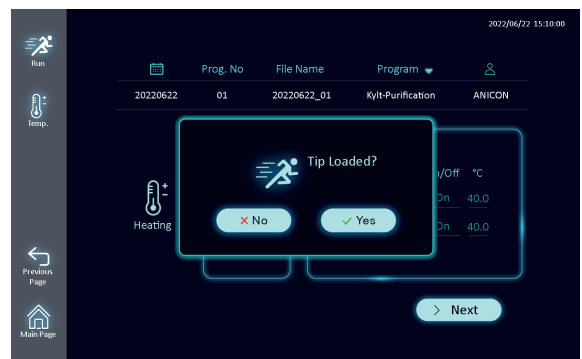
- Positions already assigned a sample ID are marked red.
- To enter sample IDs, a barcode reader, a keyboard or the on-screen keyboard may be used.
- The barcode reader is most convenient, as the next position (vertical, then horizontal) is automatically selected after an ID is assigned.
- When finished, click next.



- On the subsequent screen, the details are displayed.
- Keep the selection on auto-plate (default).
- Click next.



- Prior to the actual start, the user needs to confirm that tips have been loaded to the respective positions.
- Please refer to section H. Tips.
- Choosing "No" will stop the protocol.
- Tips need to be loaded in order to not damage the Kylyt® Purifier 48.



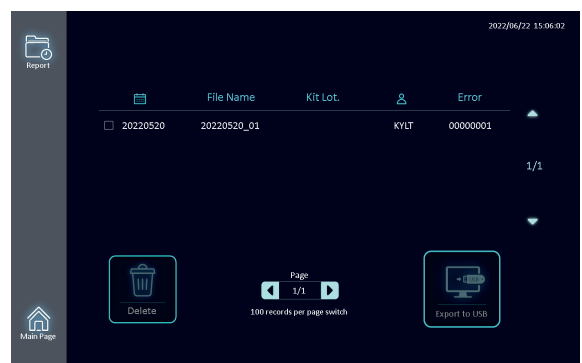
## I. Run (continued 2)

- During the run, the current step, position of the tips, start time as well as the expected completion time and other parameters are displayed.



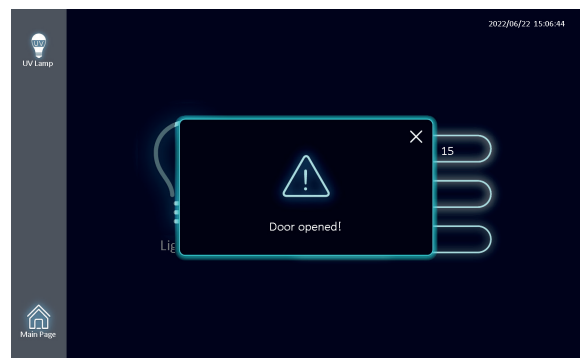
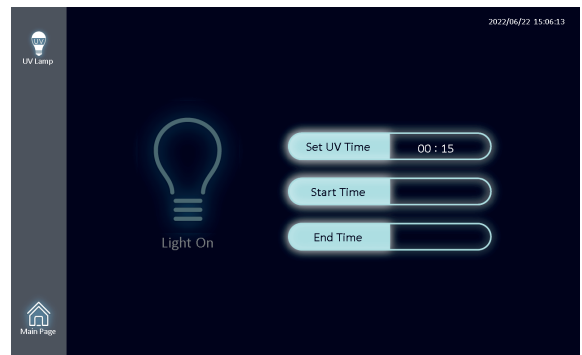
## J. Report

- The reports menu lists reports to all previous runs and error occurrences.
- Reports can be either deleted or transferred to the USB-drive via the port in the front on the Kytl® Purifier 48.



## K. UV-Decontamination

- The UV-C lamp is a feature to decontaminate the surfaces and the air inside the working chamber of the Kytl® Purifier 48.
- 15 minutes UV-C treatment is sufficient and will ensure that no contaminants remain inside.
- To set the treatment time click "Set UV Time"
- To start, click on the lamp icon.
- If the door on the instrument is opened for any reason during UV-decontamination, the lamp will switch off as a precautionary measure.
- A message will display this circumstance.
- If needed, restart the decontamination.





## L. Supervisor

- When logged into an administrator account, two additional icons are displayed on the home screen.



## M. Editing programs

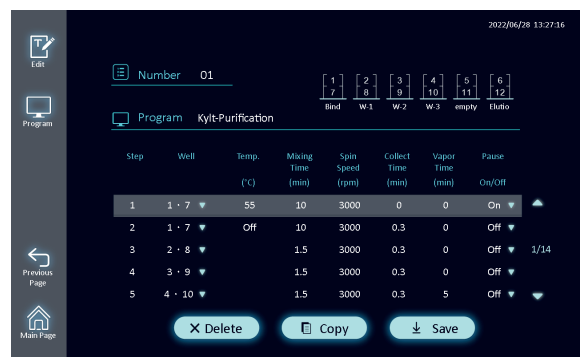
- After clicking edit, the available programs and options are displayed.
- Programs can be edited, copied or deleted.
- Programs can also be imported from and exported to the USB-stick.
- It is advisable to back up protocols before deleting or changing any feature.



- In the first screen of the program editing, the position, names and volumes of the reagents are defined.
- Clicking on a value opens a context menu to change the according parameter.



- The second display lists the protocol steps.
- Here the column, heating, mixing time, speed and collect time as well as drying time (vapor) is defined.
- The Pause function will stop a run to allow for user intervention.
- Single lines can be deleted or copied with the respective buttons. The program can be saved by clicking Save.



## M. Editing programs (continued)

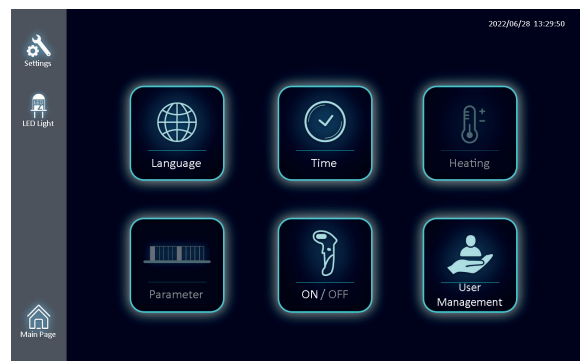
- Programs may as well be edited on an external computer by adjusting values in an exported CSV-file with a text- or spreadsheet-editor.

```
Well,Name,Volume,Action,Mixing,Collect
1,Bind,870,For.,Low,Low
2,W-1,500,For.,Low,Low
3,W-2,500,For.,Low,Low
4,W-3,500,For.,Low,Low
5,empty,50,For.,Low,Low
6,Elution,100,For.,Low,Low
```

```
Step,Well,Temp,Mix_time,Mix_speed,Collect_time,Vapor_time,Pause
1,1,55,10,3000,0,0,0n
2,1,Off,10,3000,0.3,0,Off
3,2,,1.5,3000,0.3,0,Off
4,3,,1.5,3000,0.3,0,Off
5,4,,1.5,3000,0.3,5,Off
6,6,55,1,3000,0.3,0,Off
7,4,,0.5,3000,0,0,Off
```

## N. Settings

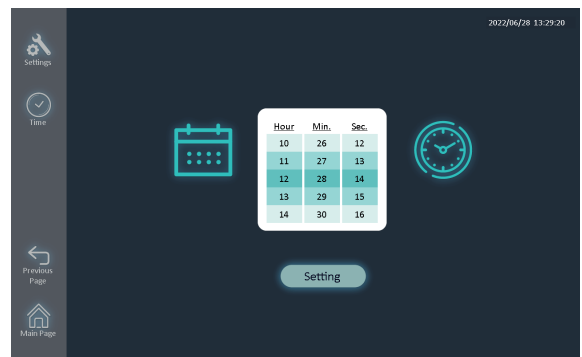
- In the settings menu, the language, time and date as well as user accounts and barcode scanner options can be defined.
- Setting of parameters and heating are reserved to administrators, because the system may be damaged if errors occur in these.
- Damages from wrongful settings void the warranty.



- By clicking "Time", the time and date settings can be accessed.
- If changes are required, click on either time or date to open a context menu.



- In the context menu, scroll the correct values to the dark background.
- Click "Setting" to exit context menu and again to set the system time to the displayed value.
- Setting the date works similarly.

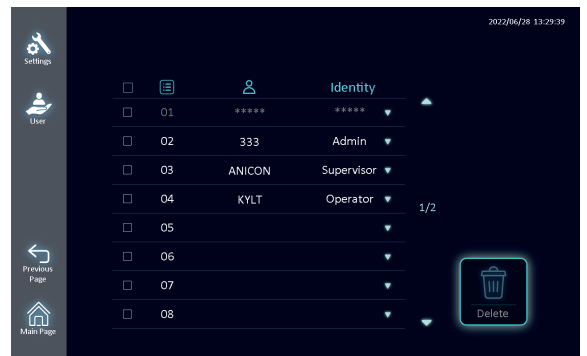


## N. Settings (continued)

- Depending on the software version, different language settings are available.
- Choose the required language to set.



- In the user menu, user names and permission levels can be set.
- Do not change default user 333.



## O. Related and Accessory Products

| Product                           | Article No | Content / Reactions | Description   |
|-----------------------------------|------------|---------------------|---|
| Kylt® RNA / DNA Purification HTP  | 31826      | 4 x 96              | Magnetic bead based combined RNA and DNA purification kit for veterinary diagnostic samples. Suitable for Kylt® Purifier and Kylt® Purifier 48.                             |
| Kylt® Salmonella Purification HTP | 31433      | 4 x 96              | Magnetic bead based DNA purification kit from Salmonella pre-enrichment samples. Suitable for Kylt® Purifier and Kylt® Purifier 48.   |
| Kylt® Purifier                    | 31436      | 1 unit              | Purification system for magnetic bead based kits. Up to 96 samples are processed in under 30 minutes. Intended for high-throughput laboratories.                            |
| Kylt® Purifier Spin Tips          | 31434      | 5 Sets              | Plate with 96 separate spin tips, used by the Kylt® Purifier to mix the well contents by stirring. Sufficient for 480 samples.  |
| Kylt® Purifier Plates             | 31435      | 20 Plates           | Plates to be used for the several reactions and reagents during automated nucleic acid purification. Sufficient for 320 to 480 samples (depending on device and protocol) . |

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