HIALIQUOT

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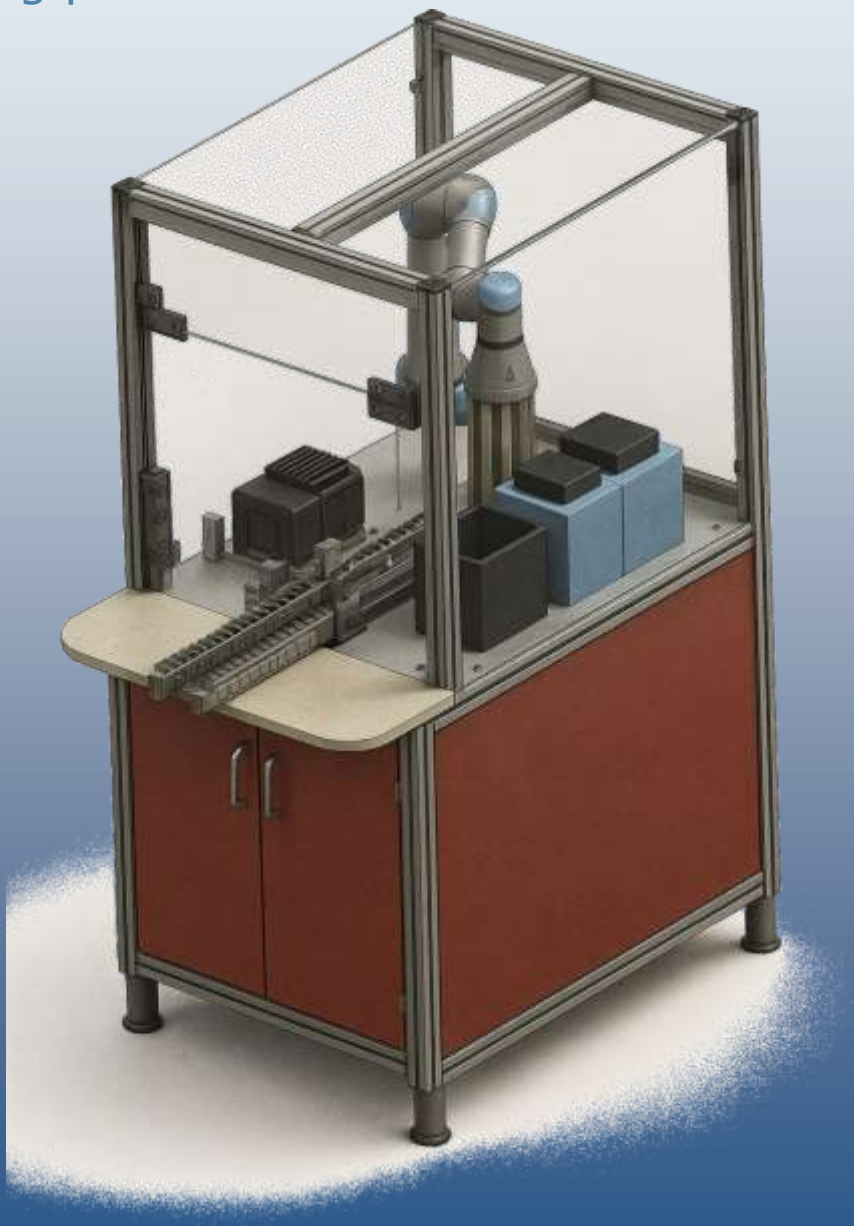
HIAliquot

The versatile automated aliquoting platform



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The HIAliquot – General features

The HIAliquot is an automated robotic system to pipette samples from tubes to microtubes into SBS format 96, 48 or 24 racks.

As a standalone pipetting system, it manages SBS format racks and sample tubes in holders for medical laboratories.

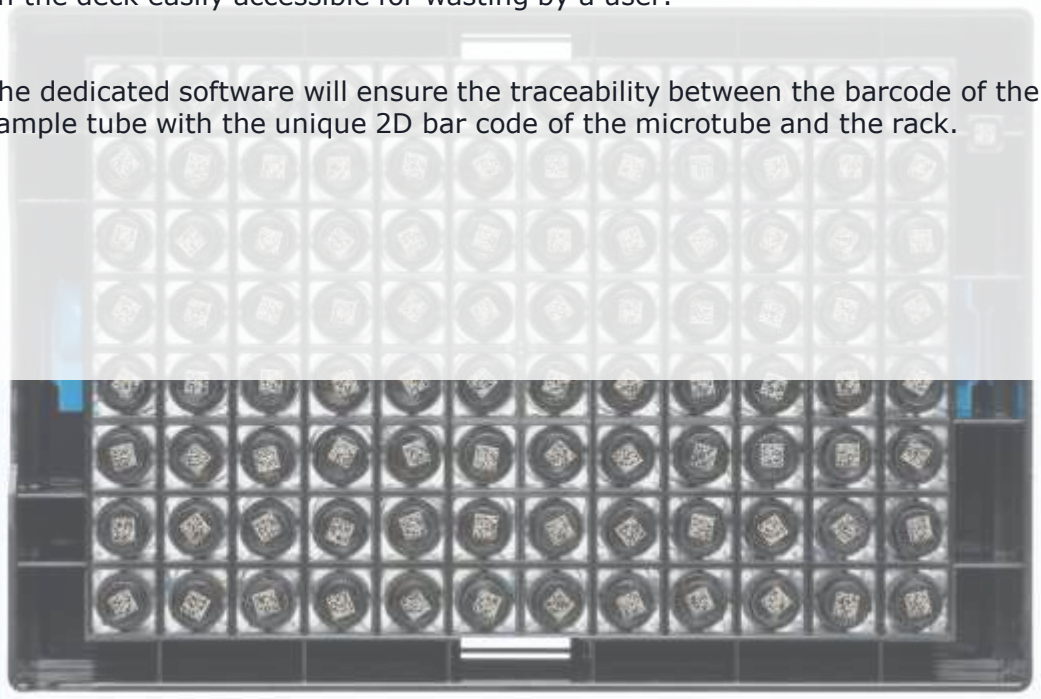
The basis of the HIAliquot design is a combination of secured inlet/outlet sliding tube holders mounted on rail.

The user can fill one to 6 available holders.
Those holders are sitting on sliding blocks with safety position sensors.
The robotic arm will automatically slide the tube holders and sample tubes barcode will be automatically read.

The liquid is then pipetted out from the tube and dispensed in one of the available microtubes on the pre-positioned microtubes rack.
The system will pipette all the tubes from the holder until finished and dispensed them into microtubes from the rack.

Between every dispense, tips are changed and thrown away into the DASRI waste on the deck easily accessible for wasting by a user.

The dedicated software will ensure the traceability between the barcode of the sample tube with the unique 2D bar code of the microtube and the rack.



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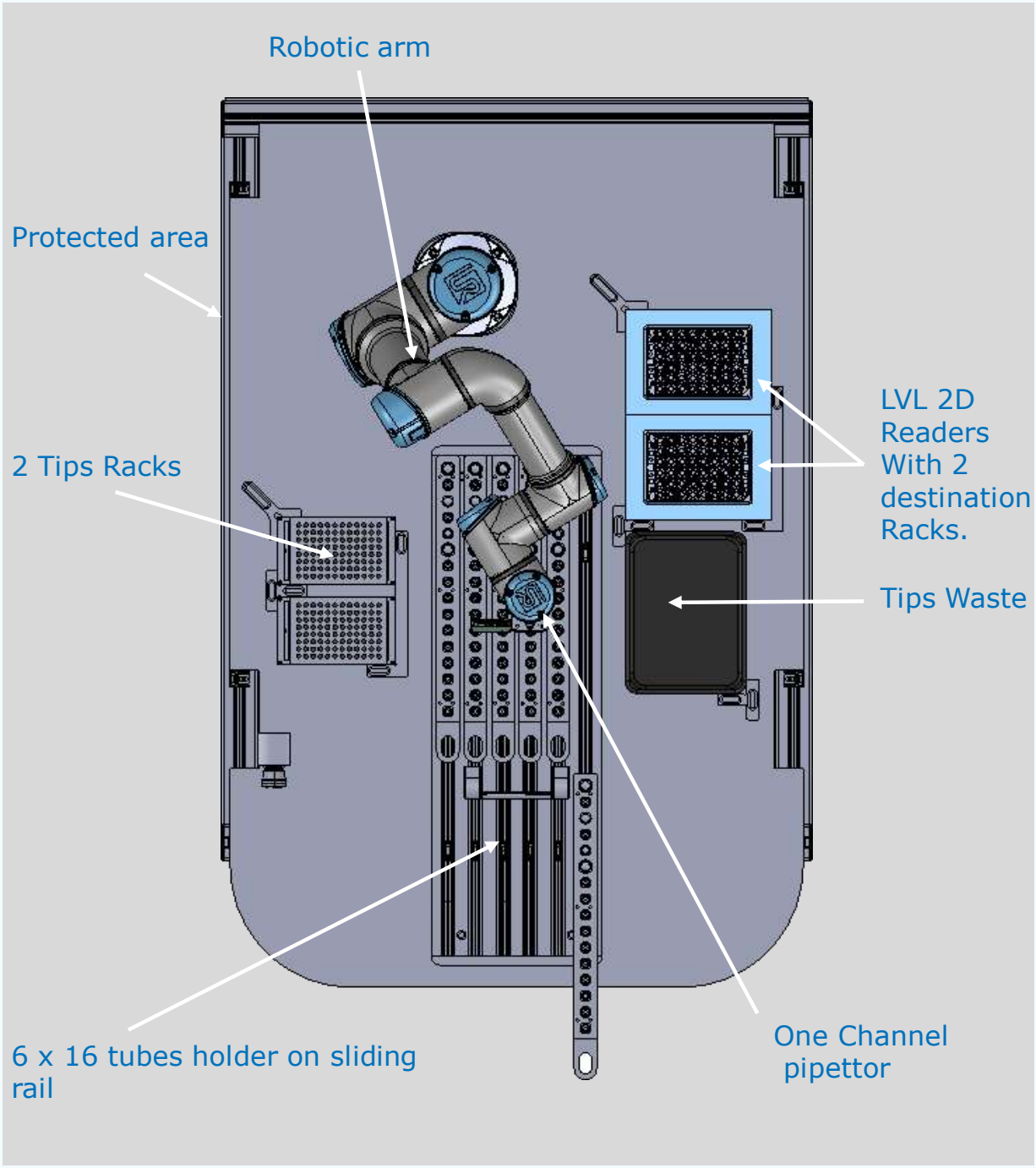
The HIAliquot – Schematic configuration



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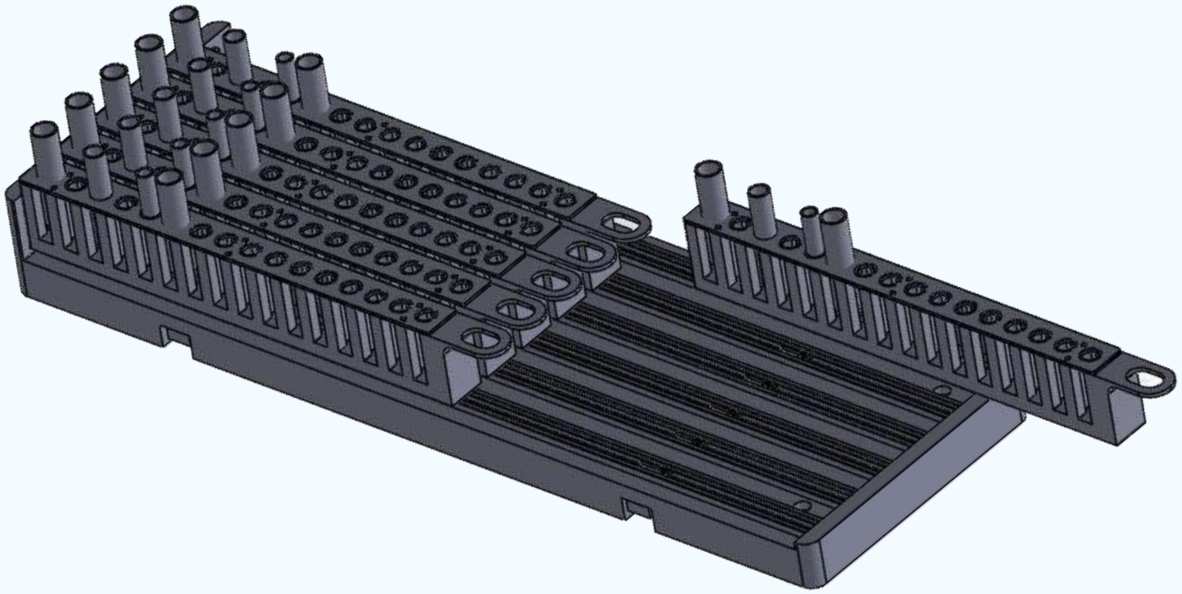
The HIAliquot – Custom made configuration

Thanks to the highly flexible software solution, it is possible to select in the range of SBS format Racks several types of destination containers.
The table frame can also be customized to accommodate any containers.

The HIAliquot – Tube Holder sliders system

User protection

Tube holders are mounted on a sliding rail.
When filling of holder is finished, user will close the door and the arm will slide holders to read barcodes automatically.
The barcode reader will associate bar code/tube position in the tube holder and tube holder number.
If a bar code is missing or unreadable, customer will have information alert to continue, to cancel or to correct the reading.
When everything ready, the user will validate and the aliquoting will start automatically until the end.

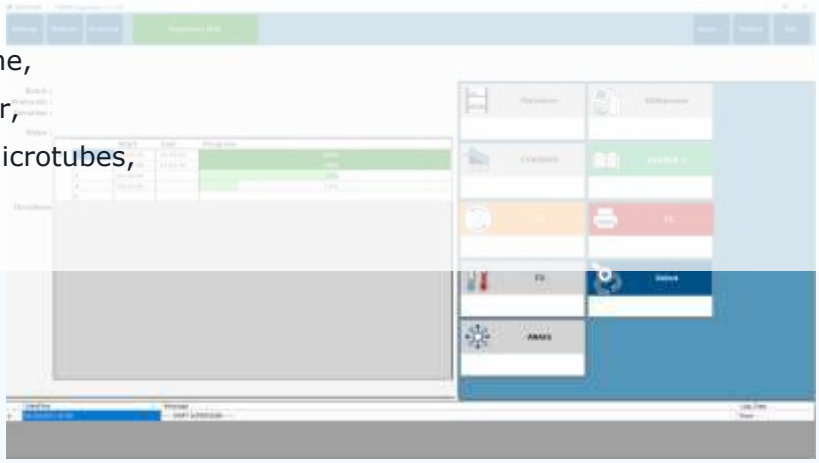


The HIAliquot – Powered software

Control software

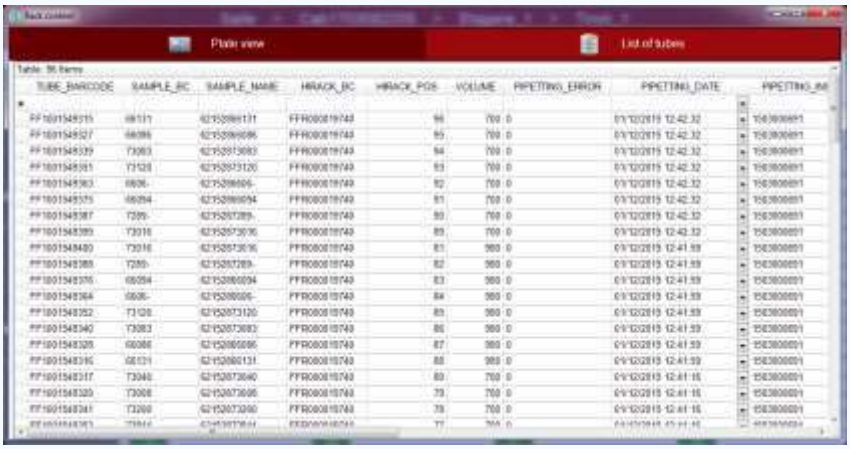
The interface allows the user to run their own protocol by defining parameters :

- Tube type,
- Transfer volume,
- Aliquot number,
- Type of SBS microtubes,
- Etc...



Traceability and receipt

2D barcode readers will manage traceability from samples to storage microtubes without any user interaction.
User only has to put sample tubes properly on the racks to enable the barcode reader to read the bar code. If the reading fail the system will not start.
A receipt is given at the end of the process.



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The HAliquot – Specifications

Specifications	Descriptions
Pipettor	One channel pipettor with 10-1000µL pipetting range. Included level detection via pressure sensor. Multi dispense mode possible for larger volume.
Outlet microtubes/Racks	1 or 2 outlet racks on 2D scanner
Inlet capacity	6 X 16 samples tubes
Tips capacity	2x 96 Boxes of 1 mL tips
Traceability	Recipe provide in txt or CSV file with date/hours
reader	LVL Tubes reader
Racks	Any type of rack in SBS format (Other containers on request)
Microtubes	24, 48, 96 SBS Format
Robotics	Collaborative robot 6 axes Safety hardware
Size (HxPxD) mm	1500x1000x750

Shop and Go system preconfigured.

Could be customized with additional capabilities in terms of tubes holder, microtubes rack holders, robotic ram, automated capper/decapper, larger UR5E arm, software integration with HITheque serotheque management software etc.