

ARKIV  

 The solution to ensure
microscope slide
traceability and integrity
with storage security
& protection



A.MENARINI
diagnostics



FACING THE CHALLENGES OF SAMPLE STORAGE IN A RAPIDLY CHANGING SCENARIO

The volume of microscope slides to be stored has increased dramatically over the last decade and is continuing to rise. An ageing and growing population, higher incidence of cancer and improved standards of care are all things that can lead to an increase in tissue sampling.

With more rigorous legal frameworks and **the increase in slides recalled for second and subsequent opinions or advanced testing**, patient sample management has become a real challenge in pathology labs and there is a vital need to easily and efficiently manage, safeguard and track biosamples.



A non-standardized and complicated sorting, archiving and retrieval process can be error-prone, leading to **specimen loss, misidentification, delays and excessive time spent cataloging and locating slides**. These things all translate to patient-impacting events, increased costs and potential liability for the laboratory.

In some cases, **sample integrity and stability during storage can be compromised** due to inaccurate handling and inadequate storage solutions and conditions, with the specimen becoming unsuitable for any additional testing.

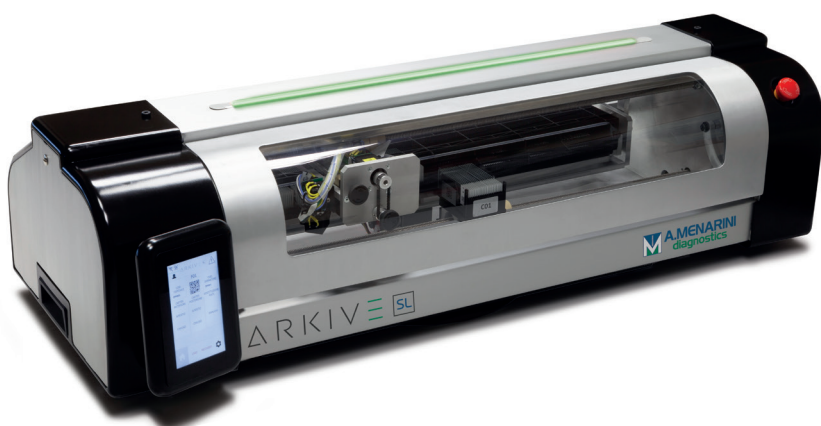
BE AT THE FOREFRONT OF INNOVATION AND EFFICIENCY: GAIN CONTROL OF YOUR MICROSCOPE SLIDES

Arkive SL™ is the innovative microscope slide storage and management solution for pathology labs and departments developed by **A.Menarini Diagnostics** to transform the archiving and retrieval process, optimize traceability and safety of precious patient cytology and histology slides, and reduce the time and effort needed to sort and store.

Pathologists, lab managers, and risk managers can be reassured that their patient samples are now safe and viable for future use. Laboratory resources can now be focused on what matters most – reliable diagnostics and better patient care.

A unique model for success

- ≡ Exclusive management software to facilitate quick and easy operation
- ≡ Full traceability and easy retrieval of microscope slides
- ≡ Safe and secure storage unit with constant monitoring
- ≡ Proper conservation for long-term sample integrity and quality
- ≡ No risks associated with lost slides
- ≡ User-friendly software and hardware interface
- ≡ Increased productivity and optimum laboratory workflow
- ≡ Cost efficiency with improved staff utilization and reduction of error-prone processes
- ≡ Modular, flexible and tailored solutions and capacities to meet different laboratory demands



The “Finder” device is an innovative and automated electromechanical tool with a built-in barcode reader. It is designed to easily load and unload slides using dedicated cartridges and racks



DESIGNED FOR TRACEABILITY



Laboratory processes and systems that manage important patient samples during pre-analytical and analytical steps are well-developed these days, are almost always automated and ensure good traceability.

The critical aspects of the histopathology workflow lie in the process of archiving slides and blocks and retrieving them for further testing. In most cases, the process is non-standardized and complicated; poor labeling and lost samples may occur, impacting safety, convenience and service costs.

From sorting to archiving and retrieving to re-archiving, **Arkiv SL™**, the integrated storage solution from A.Menarini Diagnostics, **can now provide pathology professionals with total slide traceability.**

Reliable identification technology

Thanks to unique 1D/linear and Data Matrix (2D/two-dimensional) barcodes and QR Codes, no manual data entry operation is needed. Each component, including microscope slides, cartridges, racks and storage units, can be fully tracked, virtualized and visualized. In-depth traceability information for important patient samples will always be available.



State-of-the art management and communication software

A dedicated, web-based management software platform developed with MAPS technology ensures that each step is managed quickly and appropriately. **SLTrack software** automatically logs a full audit trail of any slide and SL item in your laboratory and enables users to trace, locate and retrieve samples rapidly and efficiently.

With **SLTrack software**, the head pathologist can easily create tasks



and send alerts and notifications for both archival and retrieval to authorized users and keep track of the process each step of the way.

Any specimen can be very quickly archived or located and accessed for retrieval at any time. The entire workflow will be improved, minimizing errors and saving a lot of time each day.

An App for sample safety all the way

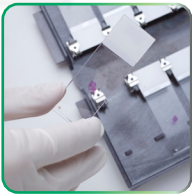
A mobile App with advanced security features has been specifically developed to improve efficiency and enhance traceability. Each lab technician is assigned a personal smartphone with the **SLTrack App** installed on it. **SLTrack App** is a user-friendly extension to the web-based software platform, and easily allows the operator to:



- ≡ Receive notifications to perform archiving or retrieval tasks
- ≡ Scan barcodes with the smartphone camera
- ≡ Receive step-by-step instructions that help to minimize errors
- ≡ Be authenticated to access samples and storage units
- ≡ Get operational feedback on the correctness of performed tasks
- ≡ Receive immediate alerts and warnings when a malfunction occurs or a problem is detected
- ≡ Access to Support Center tools, video-tutorials and operating manuals

The pathologist will be able to keep track of all user activities performed in the lab with a comprehensive audit trail, regardless of the distance.

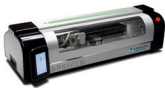
ARCHIVING PROCESS



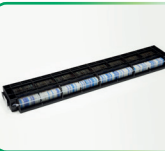
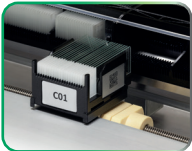
Slides are moved from the tray to the cartridge



Slides are ready to be archived (20 slides/cartridge)



Slides are moved automatically from the cartridge to the rack by the Finder device that has a built-in barcode reader



Full rack (200 slides) ready to be archived in the storage unit



Server storage unit (9 drawers - 39,600 slides)



Operator authentication and drawer opened



Rack archived

NEVER
TRACK
YOUR



Barcodes and QR codes

For more information, please

LOSS OF SLIDES



SLTrack management
and communication software



Smartphone
and SLTrack App

RETRIEVAL PROCESS

Storage unit
(server or standard)



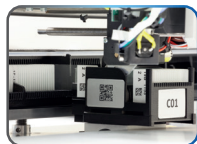
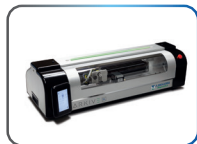
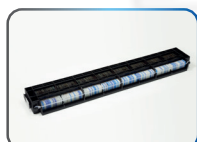
Operator
authentication
and rack
identification



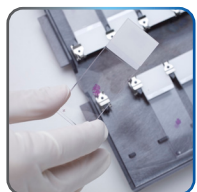
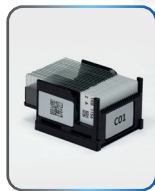
Rack removed



Slides are moved
automatically
from the rack
to the cartridge
by the Finder
device
that has a built-in
barcode reader



Slides are ready
for a second
opinion
or further analysis



refer to the User Manual



DESIGNED FOR SAFETY



Maintain the value of samples, keep them protected and eliminate the unknown

Traceability of anatomic pathology “assets” (specimens, blocks, slides) can enhance laboratory efficiency, promote patient safety, and improve patient care, thereby reducing medical-legal liability.

At A.Menarini Diagnostics, we understand that safe and secure storage is a non-negotiable part of the laboratory workflow and that each sample must be managed and monitored in a consistent manner. We are aware of the dual importance of sample integrity and storage management and offer a comprehensive and efficient solution to protect your samples, track your archiving process and provide peace of mind.

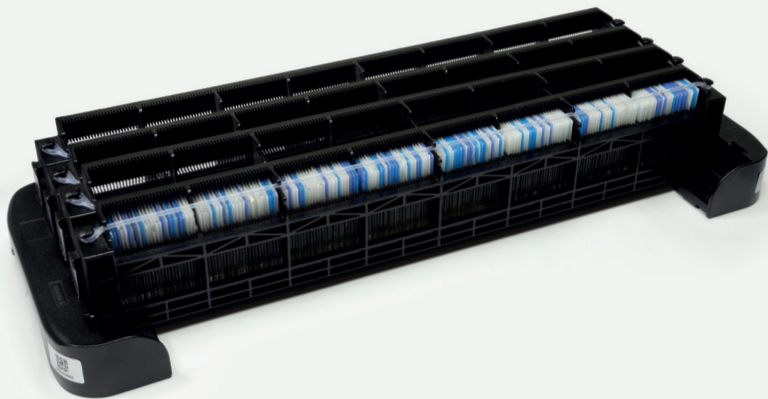
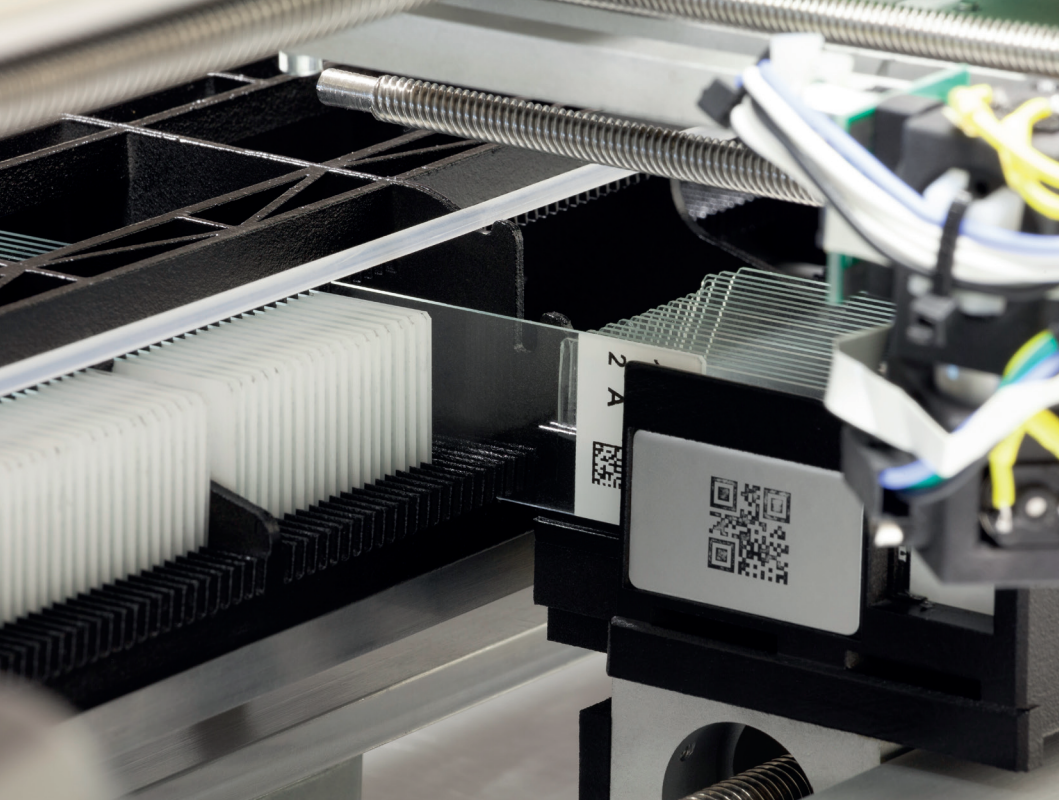
Arkive SL™ is designed to guarantee slide integrity during short and medium/long-term storage and to enhance safety and security. In short, it provides sample safety, user and laboratory safety, and ultimately, patient safety.

- ≡ Total traceability through the SLTrack management software and SLTrack application, combined with overall barcode technology to avoid manual data entry and reduce errors
- ≡ Physical protection of the slides during transport and storage with dedicated cartridges and racks
- ≡ Slides are spaced adequately to avoid contact and cross-contamination
- ≡ Operator access rights and authentication are established to prevent access by unauthorized users
- ≡ The unit is controlled by electromagnetic locks in order to prevent accidental and unauthorized opening
- ≡ Each unit is equipped with temperature and humidity sensors and values are displayed both on the external unit monitor and on the server console, as well as saved in a log file. Exceeding the pre-set thresholds generates an alarm signal, which is notified in real-time to the lab operators and the Service Center
- ≡ Similarly, any tampering of the unit or accidental malfunctions are monitored in a log file and alarms are immediately activated

User-friendly interface for improved user experience and security

The system includes three types of communication:

- *communication via terminal* – all connected devices can be monitored by the management software (SLTrack)
- *visual communication*: – pick/put to light technology (Led strip lights on the storage units) guides the operator to the right rack location both during archiving and retrieval procedures
- *communication via App* (SLTrack) – receive notifications, step-by-step instructions, operational feedback and access to an online help system

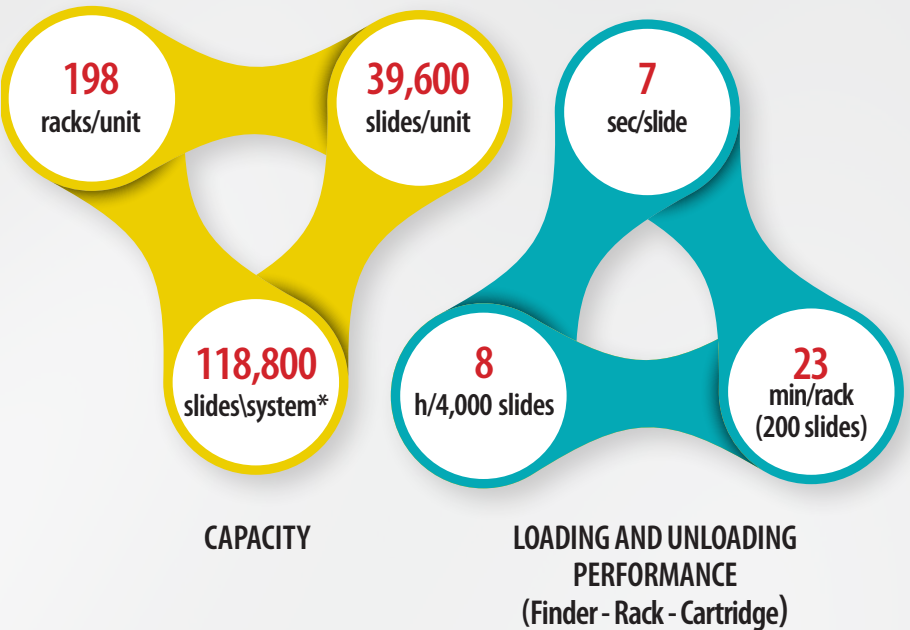


DESIGNED
FOR
PRODUCTIVITY



Increase speed, improve efficiency, reduce errors,
lower costs, deliver better quality

Due to a range of factors, processing of patient tissues for diagnostic purposes is leading to **huge amounts of microscope slides needing storage**. At the same time, the growing complexity of modern medical practice has **increased the frequency with which second opinions or advanced testing may be requested** for a variety of pathological specimens.



*1 server unit + 2 standard units

Patient sample management is therefore a real challenge in any pathology laboratory, and **it is essential that every item and sample can be easily assigned to storage or retrieved when needed**. Lean workflow is a key part of any lab's practice; it maximizes productivity and achieves the best possible turnaround times and efficient costs.

Arkive SL™ can help increase your lab's efficiency and productivity to better manage growing sample volumes in a way that is easy, quick and safe, which is vital for ensuring timely delivery of patient results and designing the necessary treatment.



DESIGNED FOR MODULARITY



Create a viable, flexible and cost-efficient slide management system

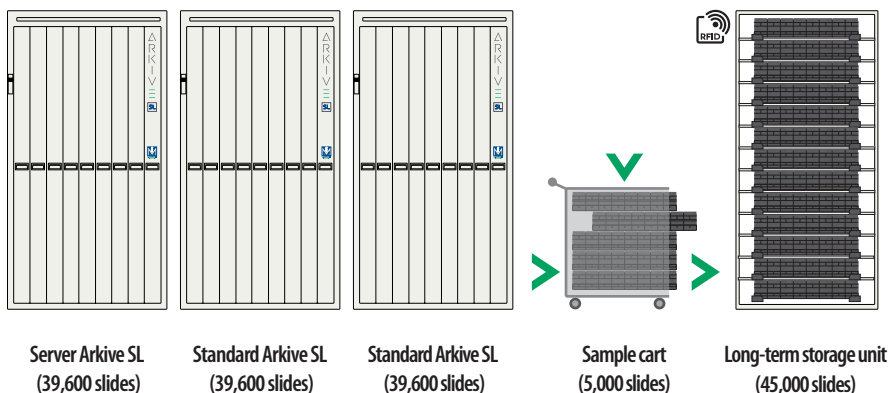
A storage system is a long-term investment. Since the future sometimes comes with unexpected turns, A.Menarini Diagnostics made **Arkive SL™** ready to face whatever the future brings.

Arkive SL™ is built with user-friendly design features and is a modular system that can be scaled to fit your needs and make efficient use of available lab space, while allowing for gradual investments over time.

Configure the system to meet current needs and expand it to accommodate future storage requirements

The system provides the option of installing different units in different areas of your lab or center. This can be done at different times according to changing needs and different storage demands. Modularity is achieved by adding more units to increase the overall capacity without limiting the number of slides to be stored for short and medium/long-term storage purposes. Moreover, **Arkive SL™** seamlessly interfaces with your IT infrastructure and LIMS by providing the necessary monitoring options.

Example of standard configuration



Custom solutions

In addition to a wide range of standard configurations, A.Menarini Diagnostics offers customized solutions to meet your more unique and demanding requirements. From small modifications to large integrated systems that simplify your entire process, our experts are glad to help.



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