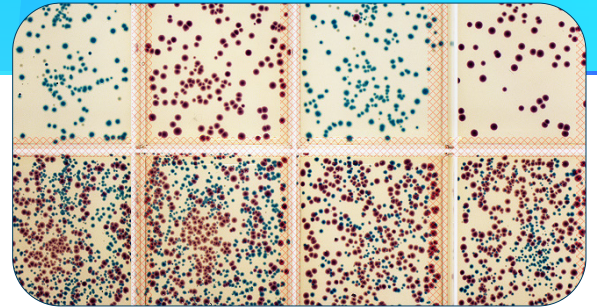




**QPix<sup>®</sup> FLEX<sup>™</sup>**

Microbial Colony Picker

It's not just a colony picker. It's your new lab workhorse – automating every step with unmatched accuracy, reproducibility, and traceability.



## See the difference. Pick the best.

The QPix® FLEX™ Microbial Colony Picker transforms microbial research by automating what was once tedious, manual labor – colony picking, plating, streaking, and liquid handling – all in a single compact instrument that fits right on your benchtop or inside a hypoxic chamber.

Built for precision, flexibility, and space-limited environments, the QPix FLEX system combines over 95% efficiency and greater than 99% picking accuracy with an advanced color camera, allowing you to analyze colonies by morphology and color. This ensures only the most viable and relevant colonies move forward in your workflow. By focusing on the right samples from the start and spending less time on repetitive tasks, you can fast-track your research, get to publication sooner, and have more time for the groundbreaking discoveries that truly matter.

From synthetic biology to microbiome and food safety research, the QPix FLEX system doesn't just automate colony picking, it elevates it. **See the difference. Pick the best.**

## Key capabilities



Equipped with a **high-resolution color camera**, the QPix FLEX system classifies and selects colonies based on morphology and color – ensuring you pick the most relevant and viable colonies every time.



From plating and streaking to colony picking, liquid handling, and cherry picking, the QPix FLEX system **automates every step in your microbial screening workflow** – saving time, reducing error, and streamlining operations.



With its small footprint, the QPix FLEX system **fits directly into hypoxic and anaerobic chambers**, making advanced automation accessible in environments where space and sterility are critical.



**Automate complex liquid handling** tasks like media dispensing, glycerol addition, plating, and hit picking without needing additional instruments, thanks to the versatile 4-channel pipettor.



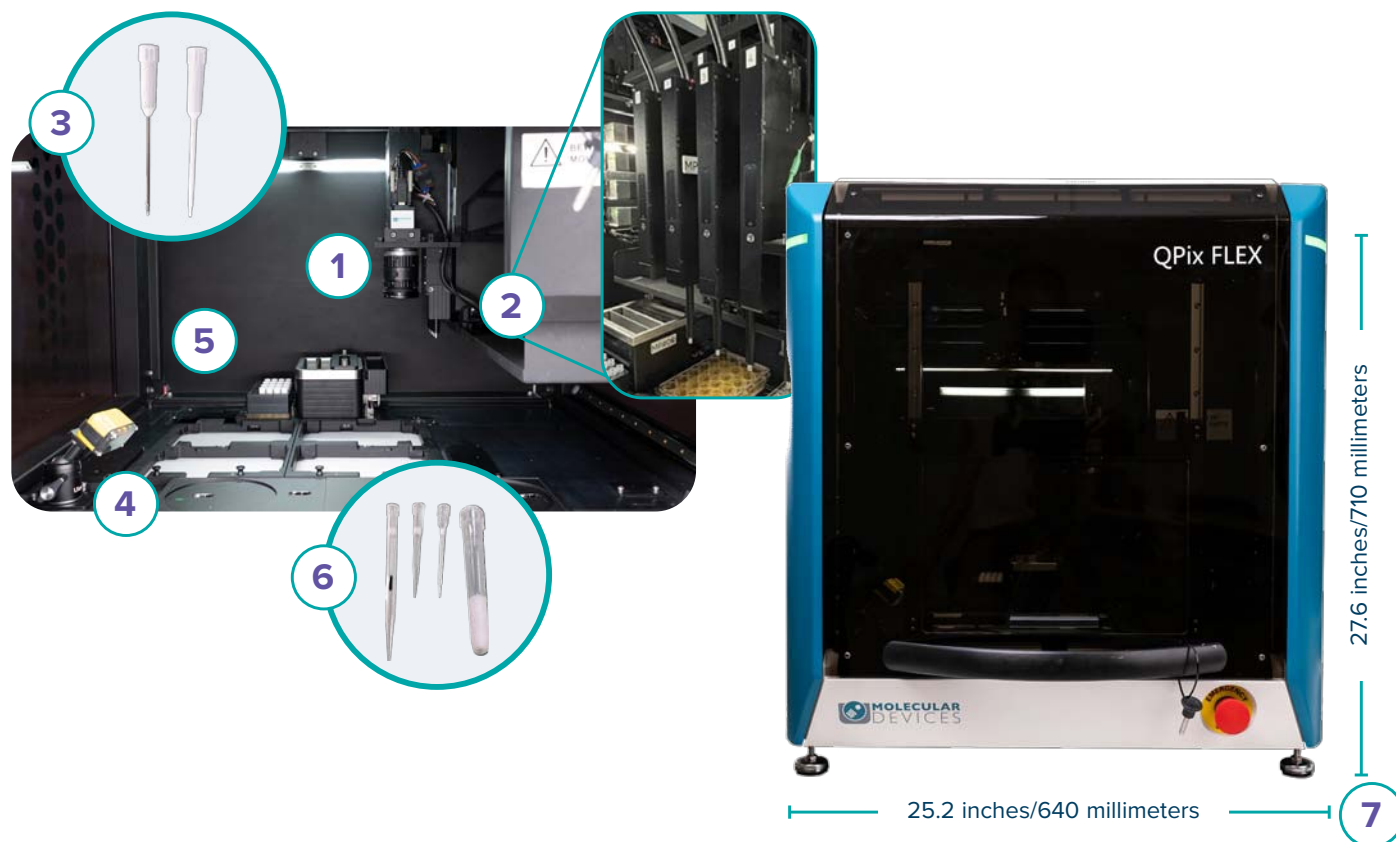
Switch between eco-friendly sterilizable tips and disposable plastic tips without changing hardware, giving you **flexible control over sterility, sustainability, and cost**.



**Maintain full traceability across every plate and pick with automated 2D barcode scanning**, supporting reproducibility, regulatory compliance, and high-integrity data.

# QPix FLEX colony picker instrument walkthrough

Smart design meets powerful functionality – engineered to simplify every step of your microbial workflow.



## Key features

- 1 High-resolution color and white light camera**  
Enables precise colony classification based on morphology and color – ideal for phenotype-based selection and microbial diversity screening.
- 2 Multi-function pipetting head (4-channel)**  
Automates media dispensing, plating, hit picking, and streaking, reducing manual intervention and ensuring consistent sample preparation.
- 3 Swappable tip system**  
Quickly switch between sterilizable metal pins and disposable tips without changing hardware. Maximize sterility, sustainability, or budget depending on your lab's needs.
- 4 Integrated barcode reader**  
Built-in 2D barcode scanning ensures full sample traceability from plating through picking and downstream analysis.
- 5 Modular labware deck**  
Supports flexible source and destination labware configurations: Petri dishes, PCR plates, microfuge tubes, 96/384-well plates, and more.
- 6 Proprietary plating & streaking tip**  
Gently streaks colonies across agar surfaces with precision, preserving plate quality and minimizing disruption to delicate media.
- 7 Compact, chamber-ready footprint**  
Sized for benchtops and hypoxic chamber use (25.2 x 21.6 x 27.6 in), allowing full automation even in space-constrained or anaerobic environments.

## Confident, phenotype-based colony selection

With a **high-resolution color camera**, the QPix FLEX system empowers researchers to classify and select microbial colonies based on both morphology and color. This capability is essential for distinguishing phenotypically similar but functionally distinct strains.

Manual colony picking relies heavily on guesswork and often fails to identify subtle differences in colony traits. Most automated systems use basic imaging that can't distinguish color differences, leading to inaccurate selections, high rework, and wasted time.

The QPix FLEX system's integrated colorimetric and white light imaging system allows researchers to group and rank colonies by size, shape, proximity, and color, ensuring only the most promising candidates are selected. This boosts experimental precision and cuts down on false positives.

## Streamlined plating, streaking, and picking in one system

The QPix FLEX system replaces multiple instruments with a **single, compact platform** that handles media dispensing, agar plating, streaking, colony picking, and hit picking.

Traditional workflows are fragmented, requiring manual transfers between plating, incubating, and picking steps. This introduces variability, increases contamination risk, and slows down throughput – especially in time-sensitive studies.

By integrating all major steps into one device, the QPix FLEX system eliminates manual hand-offs and ensures consistency throughout the microbial screening process. Researchers save up to eight hours of manual labor each day and benefit from faster cycle times and reduced error.

## Automation where others can't operate

The QPix FLEX system is purpose-built to operate within **hypoxic or anaerobic chambers**, opening doors for automation in environments where traditional instruments fail.

Microbiome researchers and anaerobic microbiologists often rely on fully manual workflows due to the incompatibility of most lab automation systems with hypoxic conditions. This dramatically limits throughput and standardization.

With its compact design, durable hardware, and sterilizable tips, the QPix FLEX system fits seamlessly into standard-sized hypoxic chambers. It enables automated picking and plating under low-oxygen conditions – accelerating discovery in microbial communities that thrive in these environments.





## Full visibility across every step of your workflow

The QPix FLEX system includes an integrated **2D barcode reader** that tracks every plate and colony from start to finish, maintaining rigorous data integrity.

Manual documentation is error-prone and time-consuming, especially when handling dozens – or hundreds – of colonies. Without sample tracking, it's difficult to reproduce experiments, audit trails, or troubleshoot inconsistencies.

With automatic 2D barcode scanning and software-linked tracking, the QPix FLEX system eliminates the need for manual labeling and logging. Researchers gain complete visibility and control over sample history, ensuring reproducibility and simplifying compliance.

## Multiple functions, one pipetting system

The QPix FLEX system features a **built-in 4-channel pipetting system** capable of media dispensing, plating, streaking, cherry picking, and even glycerol addition – all within the same instrument.

In many labs, liquid handling for microbial workflows requires separate pipetting systems or manual techniques, creating inconsistency and increasing the chances of user error. These setups are inefficient, especially when switching between tasks like plating and picking.

With its integrated 4-channel pipettor and flexible programming, the QPix FLEX system handles multiple liquid transfer tasks without additional hardware. This reduces equipment costs, streamlines workflows, and ensures consistent, reproducible results across every protocol.

## Sterility, sustainability, and convenience – your way

The QPix FLEX system allows users to easily switch between **eco-friendly sterilizable tips and disposable plastic tips** depending on the workflow, without changing or recalibrating the head.

Most colony pickers are limited to one tip type, forcing researchers to choose between sterility and cost. Disposable tips can be expensive over time, while sterilizable systems often lack flexibility or require complex hardware changes.

Whether you need full sterility for sensitive experiments or want to reduce plastic waste and consumables costs, the QPix FLEX system gives you both options. Tip swapping is seamless, offering researchers the freedom to tailor operations to their lab's needs without sacrificing performance.

# Applications



## Microbiome research

Studying anaerobic microbial communities requires sterile technique, precise colony isolation, and compatibility with hypoxic chambers – all while tracking samples with varying growth conditions. The QPix FLEX system operates directly inside hypoxic and anaerobic chambers, enabling reliable picking and plating in low-oxygen environments. Its sample traceability, customizable labware compatibility, and gentle agar handling allow researchers to isolate even fastidious or rare colonies with confidence.

## Food safety & environmental microbiology

QC labs processing food or environmental samples must quickly identify and isolate pathogens like *E. coli*, Salmonella, or Listeria using selective plating and manual picking – often under tight timelines. The QPix FLEX system automates this labor-intensive process with high-efficiency plating and picking, while its 2D barcode tracking supports traceable, audit-ready workflows. With selective media and the system's color camera, distinguishing target colonies becomes faster and more accurate.

## Microbial strain engineering

Microbial engineering workflows often involve screening large libraries of colonies to identify top-producing strains for small molecules, bioplastics, or therapeutic proteins. This requires rapid, accurate selection based on subtle phenotypic traits. The QPix FLEX system streamlines this process by automating colony picking and plating, while the high-resolution color camera enables differentiation based on morphology and color – reducing time-to-hit and improving the quality of selected candidates.

## Protein & enzyme engineering

Researchers engineering microbes for enzyme production must evaluate diverse colonies for activity, stability, and expression. Manual methods limit throughput and increase variability. The QPix FLEX system enhances screening throughput with automated picking and the ability to double-pick colonies for parallel analysis. Its precise liquid handling system ensures consistent sample prep, while color imaging helps correlate phenotype with productivity traits early in the workflow.

## Natural product & pigment discovery

When screening microbial colonies for production of vitamins, pigments, or secondary metabolites, researchers rely on visual traits like colony color and shape as early indicators of metabolic output. The QPix FLEX system's advanced imaging allows you to identify and classify colonies producing unique pigments (e.g.,  $\beta$ -carotene, violacein). You can automate the isolation of promising strains while maintaining sterility and traceability, accelerating your path from colony to compound.

## Synthetic biology & plasmid production

Cloning and transformation workflows require recovery of individual colonies, growth validation, and downstream plasmid prep or expression analysis. Bottlenecks here delay experimental timelines. The QPix FLEX system supports high-throughput colony picking and hit picking post-transformation. With integrated plating, and liquid handling, it enables seamless transitions between discovery, validation, and prep – reducing cycle time and increasing reproducibility.

# Specifications

## Product specifications

Product	QPix FLEX Microbial Colony Picker
Warranty	1 yr

## Computer & monitor specifications

Internal PC spec (included)	CPU: Intel® 12th generation Core™ i9 12900 Memory: Dual 32G*2 DDR5 Storage: 1T SSD OS: WIN 11 IOT
Monitor (included)	24", 1920 x 1080
Software	Software guided process flow: Dedicated software suite that handles all the processes including image acquisition & analysis through hit consolidation

## System specifications

Instrument dimensions & weight	W 640mm x D 550mm x H 710mm (excluding handle) Weight: 80 kg Power: 100–240V AC (50/60 Hz) Compatible, 220V AC at 4 Amps
External control box dimensions	W 440mm x D 325mm x H 145mm Weight: 12 kg
HEPA (optional)	W 600mm x D 480mm x H 270mm Weight: 25 kg Power: 110VAC or 220VAC
Light source	Custom LED for top light WL Trans-illumination WL
Head	4-channel
Camera	CMOS color camera 20mp; USB 3.0
Deck layout	4-position flexible
Functional reliability in anaerobic/hypoxic chamber	Yes
Ultrasonic agar height sensor	Yes

## Processes supported & specifications

Processes supported	Software guided process flow Standard & regional picking: detection, selection, classification & clustering (morphology & color) Plating & streaking Liquid handling Hit consolidation
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## Standard & regional picking (WL & colorimetric)

Picking efficiency	95%
Picking speed	At least 260 colonies/hr (sterilizable tips mode) At least 350 colonies/hr (disposable tips mode)
Picking accuracy	99%

## Plating & streaking

Plating/streaking speed	Plating: <1 min for two 8-well mini-tray as destination (16 samples/<1min) Streaking: <1min/8-well mini-tray as destination
Volume range	20–300 µL

## Liquid handling

Accuracy variance	<5%
Precision variance	<3%
Modes supported	Single dispense & Multidispense
Volume range	10–1000 µL

## Hit consolidation/hit picking

Throughput	>200 sample/h (200 µL tip, single dispense, with liquid following on)
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## Supported labware & liquid class

Destination plates	6/12/24/48 Std well plates 96/384 Std & DW plates 96-well PCR plate 1.5 & 2 mL tubes (with tube holders and inserts only) 9 cm petri dishes (with holder only) 1/4/8-well mini trays 1-well & 12-well reservoir
Source plates	6/12/24/48 well plates 96 Std & DW plates 384 Std & DW plates 1.5 mL & 2 mL tubes (with tube holder only) 9 cm petri dishes (with holder only) 1/4/8-well mini trays
Sterile filter tips	50 µL 200 µL 1000 µL* (not supported for 384-well plates) Custom sterile plating tips 300 µL Custom sterilizable metal picking pins (replace every 5000 picks) Custom disposable picking pins
Liquid class	Water/buffer Media 50% glycerol* (50 µL tips are not supported for glycerol)

## Sterility

Sterilization modes	UV; Ultrasonic wash baths; HEPA (optional)
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## Sample traceability

Sample tracking	Yes – Integrated 2D barcode reader
Import/export functions	Results, data, plate maps

## Service and support

Yes – Multiple service plans offered
Optional sliding door with interlocking function for operating in anaerobic/hypoxic chambers (L 300mm x H 165mm)



Learn more about the  
**QPix FLEX Microbial Colony Picker**

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