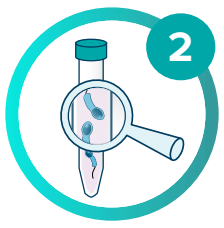
Smarter microbial cloning starts here: How the QPix FLEX picker + SpectraMax iD3s reader streamline your workflow

MOLECULAR DEVICES

Automating the microbial cloning workflow doesn't just save time; it increases precision, consistency, and confidence. Together, the QPix® FLEX™ Microbial Colony Picking System and SpectraMax® iD3s Multi-Mode Microplate Reader eliminate bottlenecks from colony picking to DNA quantification, helping researchers accelerate discovery and minimize rework.

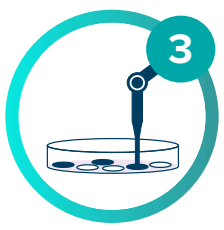
DNA/plasmid assembly

- Manual or upstream process
- Gene of interest is packed into a vector plasmid (e.g., via restriction digest and ligation).



Bacterial transformation

- Competent cells are transformed to uptake plasmids
- Transformants are plated on to selective media, allowing for the identification of successful transformations.



Plating + colony picking with the QPix FLEX picker

Desired transformants are automatically picked using image-guided selection.

- Uses customizable morphology-based criteria
- Reduces bias and improves strain recovery
- When needed, can operate within a hypoxic chamber

Why It matters:
Higher-quality colonies are picked faster, preserving diversity and viability.

Plasmid purification

Plasmid DNA is isolated from cultured cells following colony picking. This step is critical to ensure that downstream applications like sequencing, cloning, or transfection start with clean, concentrated DNA.

- Removes proteins, salts, and other cellular debris
- Improves accuracy of downstream quantification
- Enables reproducible results across workflows
- Essential bridge between microbial work and molecular biology assays

Why It matters:
Poorly purified plasmids can skew DNA quant results, compromise enzymatic reactions, or reduce transfection efficiency—costing time and resources.

DNA quantification with SpectraMax iD3s reader

Purity ratios and DNA concentration measured ia absorbence.

- Confirm yield and quality before moving on to downstream workflows.
- Fast and accurate, with high-throughput
- Compatible with 96-well output from QPix FLEX picker

Outcome:
Confident sample validation before downstream workflows (e.g. sequencing, expression).

Why pair the QPix FLEX picker and SpectraMax iD3s reader?

- ✓ End-to-end continuity from plating to quantification
- ✓ Reduced bias and contamination risk
- ✓ Consistent, traceable results at every stage

Ideal for:

Plasmid production
High-throughput recovery of quality plasmids for gene expression, vaccine development, or biomanufacturing

Synthetic biology
Rapid design-build-test-learn cycles enables by accurate clone selection and validation

Microbiome research
Recovery of rare or anaerobic strains, paired with scalable downstream screening and characterization

New product spotlights

QPix FLEX
Microbial Colony Picking System

Optimized for precision, flexibility, and hypoxic workflows

- **Compact & configurable:** Benchtop footprint fits tight spaces and adapts to your lab's needs.
- **Accurate & insightful:** High-precision picking with imaging for colony morphology and color analysis.
- **Sterile & traceable:** Built-in decontamination and 2D barcode tracking ensure sample integrity.
- **Automated & efficient:** Streamlines plating, picking, and hit selection—minimizing manual steps.

SpectraMax iD3s
Multi-Mode Microplate Reader

Streamlined power for everyday assays

- **3 detection modes:** absorbance, fluorescence, and luminescence
- **CO_2/O_2 control and shaking** options for live-cell support
- **Dual injectors** for fast, high-precision reagent mixing
- **Tunable monochromator** with 1-nm wavelength increments for full wavelength flexibility

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