



Beyond the Bench:

# How Molecular Designs' PCR Ecosystem Simplifies Lab Management



## How Molecular Designs' PCR Ecosystem Simplifies Lab Management

There is a unique type of baggage that modern molecular testing laboratories often carry—due to the rapid advancement of the industry in recent years, they rely on a diverse patchwork of suppliers and solutions for critical workflow components.

Different vendors each contribute their small solution to the panoply of products that is needed to run specimen collection, extraction, PCR assay preparation, and data management. A fragmented approach like this can create inefficiencies, increase costs, and introduce inconsistencies that complicate lab operations.

### A Unified Ecosystem

- ✓ One vendor required
- ✓ Seamless product integration
- ✓ Centralized support and service
- ✓ Economies of scale from multiple product category purchases

### A Fragmented Approach

- ✗ Multiple vendors required
- ✗ Manual workarounds needed for products to work together
- ✗ Multiple support channels, leading to confusion and slower issue resolution
- ✗ Less buying power with fewer products needed from each vendor

At Molecular Designs, we design our products to comprehensively satisfy a lab's core molecular needs. The fruit of this approach is an integrated PCR ecosystem that has the potential to streamline workflows, improve scalability, and promote cost control.

## A Unified Approach: The Molecular Designs Ecosystem

Molecular Designs' suite of products is designed to work together, creating **compounding benefits** when multiple solutions are implemented.



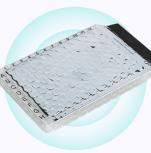
The goal for any lab is to reduce errors, streamline processes, and maximize efficiency—the products offered by Molecular Designs help you achieve these ends:



**Simplicity™ Dx Collection:** Collection kits that come pre-packaged with both swab and vial, along with barcoding for easy tracking.



**Simplicity™ Dx Extraction:** Nucleic acid extraction automated with innovative magnetic bead-based technology.



**Simplicity™ Panels:** PCR panels upgraded with pre-plated assays and breakaway wells to minimize waste and improve workflow adaptability.



**Simplicity™ Connect:** A flexible, cloud-based LIS that surprises you with its ease-of-use, automated data management, and advanced compliance tracking.

## How Molecular Designs' Ecosystem Helps at Every Step



### Specimen Collection – Reducing Errors and Inventory Complexity

#### Problem

Manually assembling collection kits is not only tedious, but increases labor costs. And once vials leave the lab, they cannot be tracked throughout the sample's journey.



#### Solution

*Simplicity™ Dx Collection* kits come pre-assembled with swab and vial, which reduces manual work and streamlines ordering and inventory tracking. The vials themselves are barcoded so you can trace where they are for actionable insights into your workflow, as well as to minimize mislabeling and sample mix-ups.



## How Molecular Designs' Ecosystem Helps at Every Step



### Extraction – Faster Nucleic Acid Purification with Less Contamination Risk

#### Problem

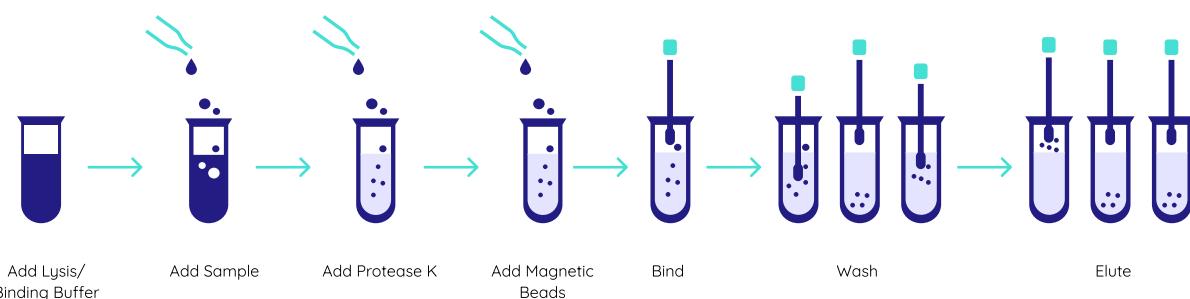
Manual extraction processes increase hands-on time, which not only increases labor, but also the risk of contamination and inconsistencies.

#### Solution

After lysis and the introduction of magnetic beads, the *Simplicity™ Dx Extraction* device automates the movement of the sample through separation, purification, and processing. All of this is done quickly—completed extractions for up to 32 samples take just 30 minutes. Benefits to a system like this include reduced operator variability, higher throughput, and less risk of cross-contamination.



**Simplicity™ Dx**  
Extraction



## How Molecular Designs' Ecosystem Helps at Every Step



### PCR Assay Preparation – Minimizing Waste and Enhancing Flexibility

#### Problem

Not only is full plate preparation itself time-consuming, but so is tracking the inventory for a variety of reagents—each of which have their own unique expiration dates and storage requirements. Waste is also inherent to the process since pipetting loss requires building in overage to preparation calculations, which is then further exacerbated when PCR runs do not demand the usage of a full plate.



#### Solution

*Simplicity™ Panels* are pre-plated so you don't have to waste more time than needed on plate prep. They also have an integrated breakaway feature that allows labs to use only the wells needed. These changes can reduce unnecessary spending on excess inventory, save inventory management and PCR prep time, and improve the adaptability of your PCR workflows, allowing you to adjust test volumes dynamically.

***Simplicity™  
Panel***



Preplated master mix to expedite workflow



Improved user experience and lower error rate



Fully Customizable to optimized throughput



Our 96 well break-away plates allow you to use only what you need; minimizing waste

## How Molecular Designs' Ecosystem Helps at Every Step



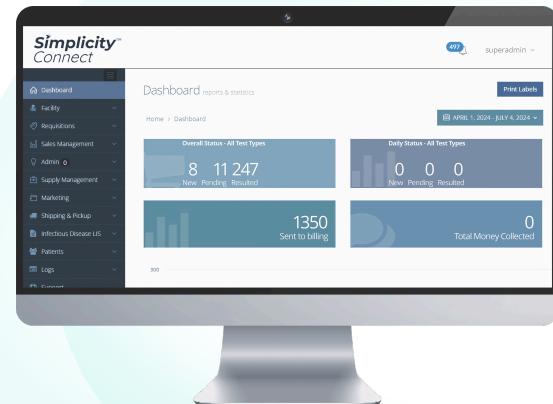
### Data & Workflow Management – Bringing It All Together

#### Problem

LIS systems are often disjointed, lack insightful analytics for your lab workflows, integrate poorly with EHRs, and require physical, on-site server space allocation.

#### Solution

*Simplicity™ Connect* was built from the ground up to answer these frustrations. Unlike traditional LIS solutions, the system is cloud-based—this means no dedicated server space is required and we can support the software directly with minimal involvement from your in-house IT. *Simplicity™ Connect* integrates seamlessly with any EHR you have, includes support for specialists, offers state reporting and PCR instrument integration, and provides actionable data on your inventory and workflows.

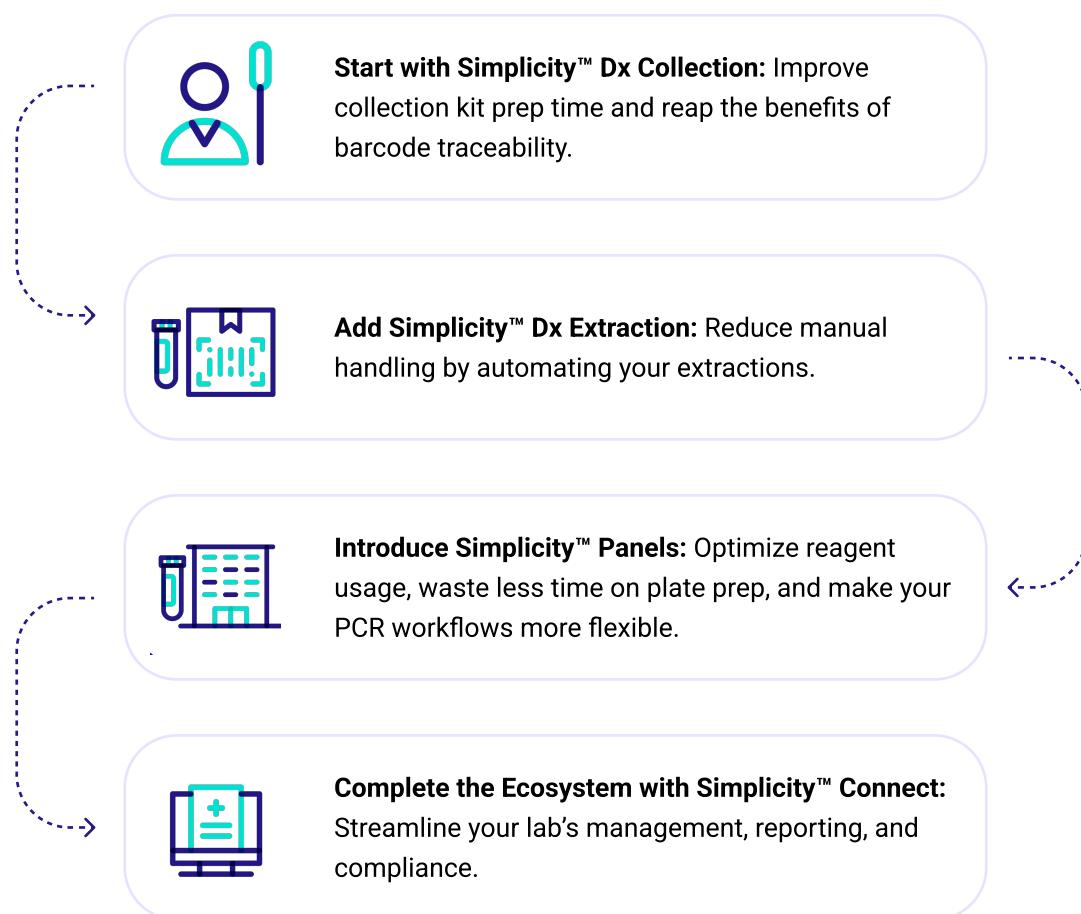


**Simplicity™ Connect**



## Incremental Implementation: Upgrade Your Lab at Your Own Pace

An obstacle labs face when upgrading their workflows is the perceived need for an all-or-nothing transition. While Molecular Designs' ecosystem of products works best together, the **strong benefits from each product allow them to stand on their own**, which means you can take an incremental approach to product adoption. For those making a case to stakeholders, this allows you to measurably demonstrate the positive impacts Molecular Designs products have on your lab.





## Unlock the Full Potential of Your Lab

Molecular Designs' PCR ecosystem is more than just a collection of products—it's a **comprehensive strategy for optimizing your lab's workflows**. We're out to help you improve processes core to your molecular workflows: specimen collection, extractions, assay prep, and data management. Work with us to help you create a more effective, cost-efficient, and scalable laboratory environment. With Molecular Designs, your lab doesn't just keep up—it stays ahead.

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