PRIMER
DESIGN

Automate for PROmate®
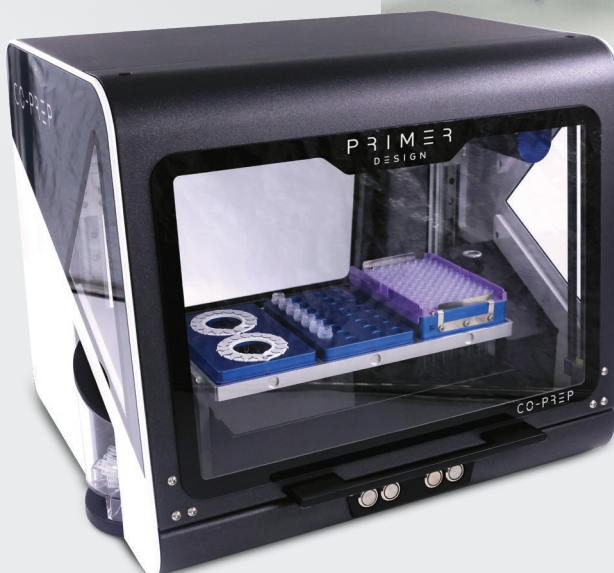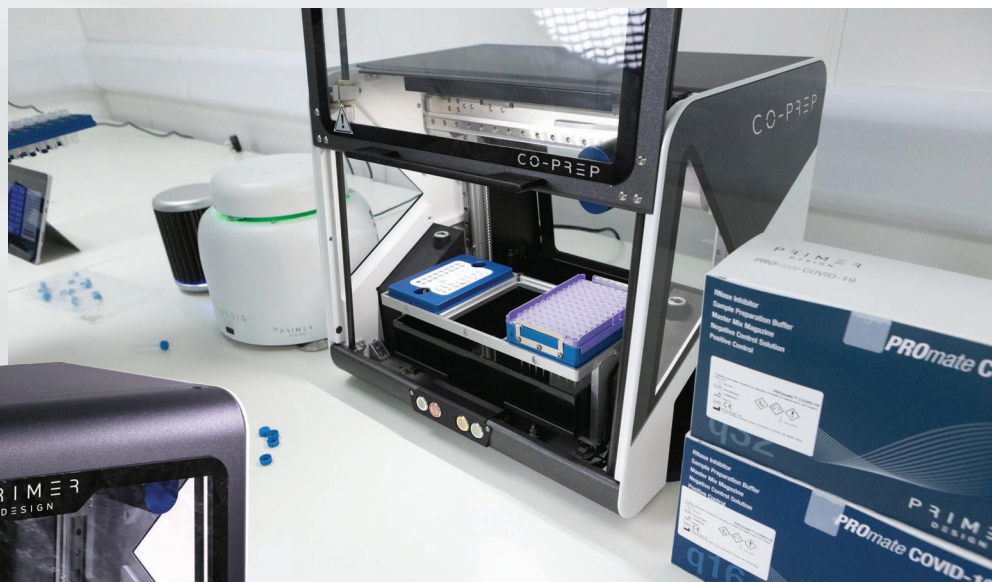## *CO-Prep™ Automated Liquid Handling System*

CO-PREP

A dedicated liquid automation system for laboratories using PROmate

The CO-Prep Automated Liquid Handling System is designed to eliminate the manual pipetting process required in the PROmate COVID-19 assay workflows. It is ideal for use in busy laboratories and for private healthcare providers performing COVID-19 testing. The CO-Prep system is perfect for users who want to automate or deskill their COVID workflows.

The PROmate COVID-19 assays are a total workflow solution, including sample preparation, qPCR amplification, and analysis on the genesig q16 and q32 qPCR instruments. These Direct to PCR assays require only one pipetting step to transfer 5 µl of sample into the 0.1 ml PCR tube, ready for amplification.

Using the CO-Prep to automate this one pipetting step will reduce the risk of contamination. Automating the pipetting process also delivers walkaway time which can be used to complete other tasks within the laboratory.

CO-Prep was developed with the PROmate workflow in mind. Therefore, it has been designed with a small footprint that minimizes laboratory bench space or fits easily into a Class II Biological Safety Cabinet (BSC) to suit individual requirements.

CO-Prep, your solution to accurate and precise pipetting.

Because time is precious!

Key Benefits

Removal of repetitive pipetting process

Reduces risk of contamination

Improves accuracy of pipetting

Easy to track patient samples from swab to result

Delivers walk away time

Sample Custodianship

Sample tracking is a vital part of the sample/patient workflow and the CO-Prep has been designed to seamlessly integrate with the genesig software.

Sample/patient barcodes, as well as the QR codes on the set-up plates, can be scanned to effortlessly upload the information to the CO-Prep software. Once the samples have been prepared for qPCR amplification, the sample/patient IDs are transferred easily across to the genesig software, ready for the results to be recorded.
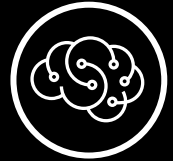
The CO-Prep software application also offers the option to create sample queues, so that multiple set up plates can be prepared in advance. This facilitates increased sample throughputs and delivers additional walkaway time.

Barcode reader and tablet not supplied as standard.

Key Features

Simple, intuitive software

Sample tracking from swab to result
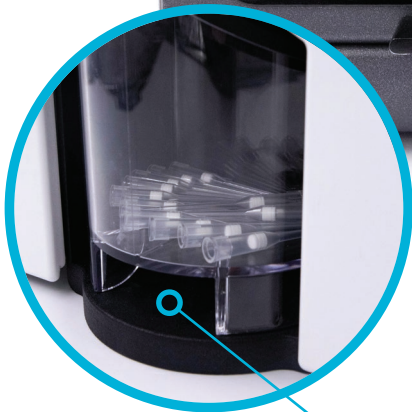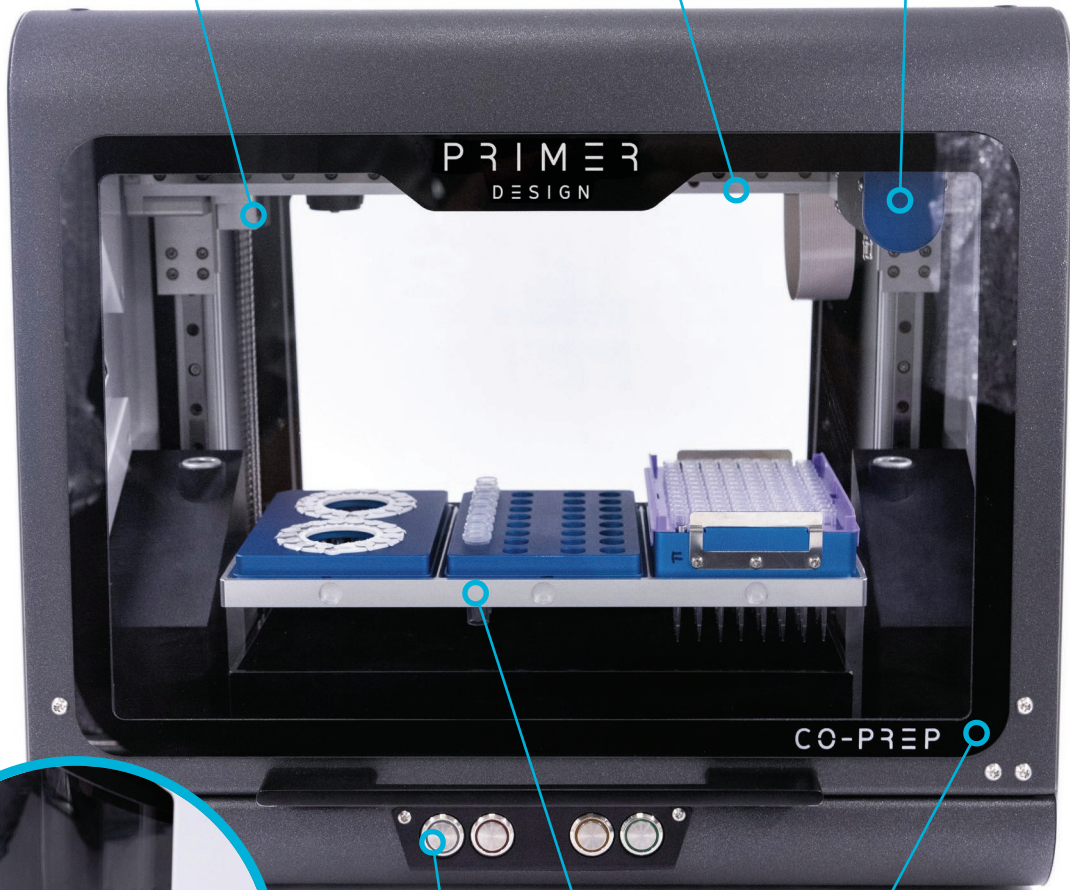
Small footprint

Accurate sample transfer

UV Light

Gantry for Moving Linear Stage

Built in UV Light

Magnetic Pipette Module

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CO-PREP

Safety Door Interlocks

Configurable Sample Deck

Status Lights and Audio Alerts

Tip Waste Disposal

Wi-Fi and Ethernet Connectivity

The System

The CO-Prep features three separate zones for each step in the automated liquid handling process:

1. TARGET PLATES

Zone 1 is used for the target plate. Depending on the instrument platform being used, the CO-Prep is provided with a q16 target plate which can hold 2 x q16 magazines, and a q32 target plate which holds 1x q32 magazine.

2. SAMPLE PLATES

Zone 2 is used for the sample setup plate, which holds the patient samples. The samples would be in the sample preparation buffer tubes provided in the PROmate test kits.

3. PIPETTE TIPS RACK

Zone 3 holds 96 pipette tips. The system is validated to work with specific robotic pipette tips.

Zone 1:
qPCR Target Plate

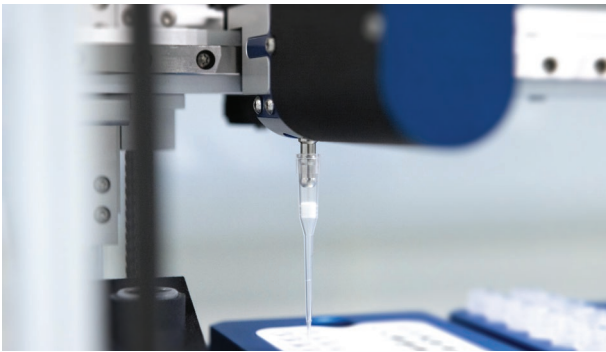**Zone 2:**
Sample Setup Plate

Zone 3:
Pipette Tip Rack

Pipette Module

The CO-Prep features a user changeable magnetic pipette module, calibrated to ISO 8655 series. The pipette module is calibrated in the x, y and z directions, which coupled with a high-resolution encoder provides accurate feedback on positioning and prevents any step loss during sample preparation. The calibrated pipette module uses reverse pipetting for accurate and consistent pipetting.
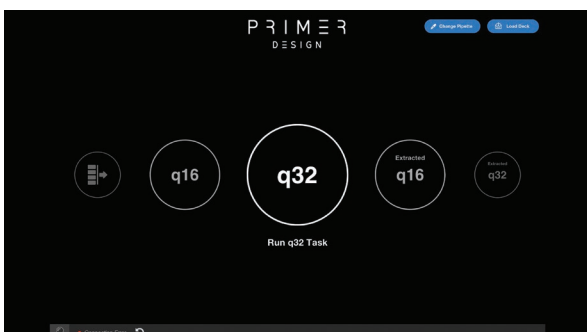
The magnetic connection allows the pipette module to be removed and replaced instantly, so there is no down time required for recalibration of the pipette modules.

Software

The CO-Prep software application has been designed for ease-of-use to allow runs to be quickly set up, queued, and executed within a simplified workflow requiring the minimum number of steps. The software application tracks and records samples, setup plates and unique magazine identifiers to ensure traceability of clinical samples. It shows run progress and provides alerts when sample preparation is complete.
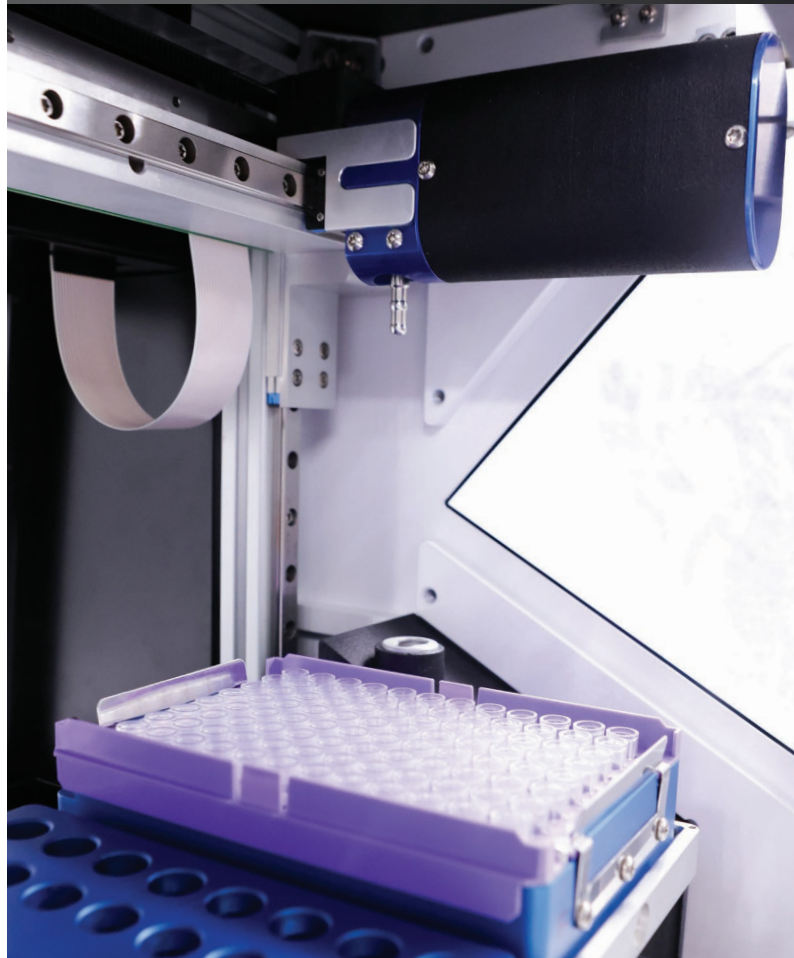
Please note that the CO-Prep system requires a PC/laptop/tablet to operate it, however it does not require a dedicated I.T. system. The same PC/laptop can run both the CO-Prep and the genesig software simultaneously.

Cleaning

The CO-Prep has an inbuilt UV light function to aid decontamination following cleaning.

The UV light can be set to run between 1 to 300 minutes and a record of this is saved in the CO-Prep software. The system has two tip waste containers which can easily be removed and cleaned.

Specification

Dispensing	
Pipette Tips	Specific robotic 50 µl filter tips
Pipetting Volume	Fixed 5 µl
Systematic Error	+/- 0.125 µl
Random Error	+/- 0.075 µl
Compatible Chemistries	PROmate COVID-19 (q16) PROmate COVID-19 (q32)
Run Time	
Automated set-up of 14 samples and negative control on q16 magazine	Less than 6 minutes
Automated set-up of 30 samples and negative control on q32 magazine	Less than 12 minutes
Physical Characteristics	
Weight	16 kg
Dimensions (w x d x h - door closed)	452 x 405 x 365 mm
Dimensions (w x d x h - door open)	452 x 405 x 598 mm
Power Requirements	110 VAC – 250 VAC input, 3 Amps, 24V DC system voltage
Connectivity	Ethernet port Wi-Fi USB 2.0 & 3.0
Software	
genesig Software Compatibility	genesig q16 version 2.10.5 or higher or genesig q32 software version 1.4.3 or higher
Requirements for device required to operate the CO-Prep*	OS Windows 10 Home/Professional, Memory 4Gb Ram, Storage 60Gb SSD, Processor Intel Core m3 or above

*A PC/laptop/tablet is required to operate the CO-Prep but Novacyt will not supply this.

Ordering Information

Order Number	Description
M00050	CO-Prep system, including instrument, software, q16 sample plate, q32 sample plate, q16 target plate, q32 target plate, Tip Adapter, Tip Rack Adapter, universal power supply AC-DC 24 VDC with UK plug
A00551	CO-Prep validated filter tips (pack of 4,800 tips)
A00085	USB C to USB3.1 adapter (to connect USB barcode scanner)
A00080	USB barcode scanner
A00555	Additional q16 sample plate
A00556	Additional q32 sample plate
A00553	Additional q16 target plate
A00554	Additional q32 target plate
A00557	Magnetic extraction adapter plate
A00558	Additional Tip Rack Adapter (standard)
A00559	Tip Rack Adapter (extraction)
A00551	Additional calibrated Pipette module

For more information or a FREE demonstration, contact us at enquiries@primerdesign.co.uk

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CO-PREP

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