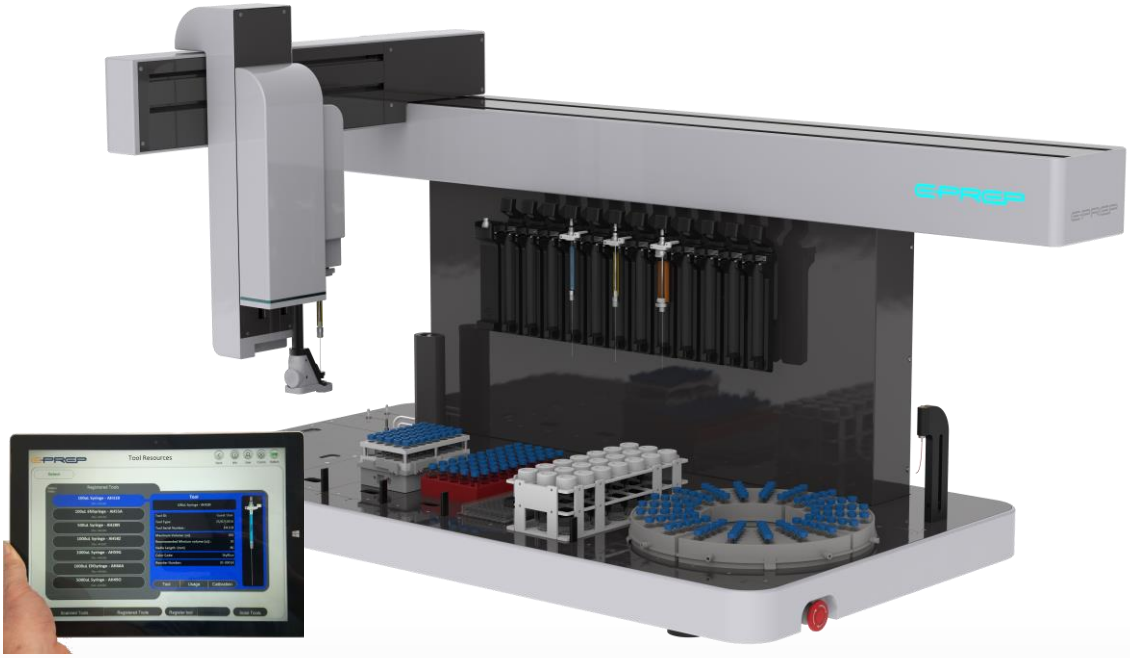
ePrep Sample Preparation Workstation



Robotic Sample Preparation for the Chromatography Laboratory

Easy, precise and affordable workflow automation

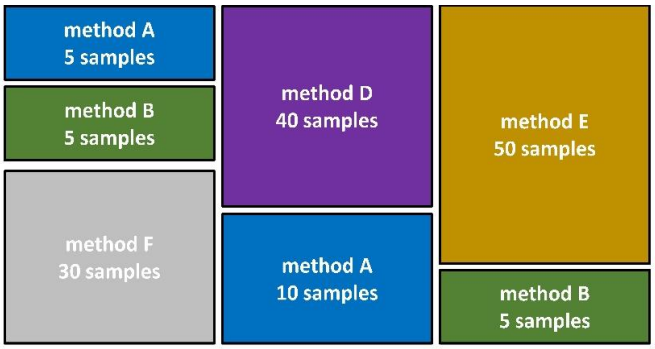
intelligent sample preparation

Highly Flexible and Adaptable

The ePrep Sample Preparation Workstation excels at automation of sample preparation for small-to-medium batch sizes typically used in the chromatography laboratory.

Rapid programming and modular configuration allows the ePrep to be setup and operational within minutes, even for the most complex Workflows. It takes around 15 minutes to develop and validate a Workflow from scratch, and far less if the Workflow has been previously developed and saved.

The ePrep workstation can perform a wide range of sample preparation processes to maximise output accuracy and efficiency.



All in a day's work – Flexibility in preparation methods
Typical analytical laboratories handle a range of sample preparation methods with varying batch sizes analysed on differing instruments.

Its independent operation improves flexibility and effectiveness in a laboratory setting. Samples can be prepared into Autosampler Racks, away from analytical instrumentation. Once the preparation is complete the rack can simply be transferred to the instrument, vastly reducing the complexity of sample preparation process.

Ease of Use

Use of ePrep's propriety touch screen software is designed to be **independent of user skill** and features Workflow validation checking, error feedback, and tool or rack identification scanning.

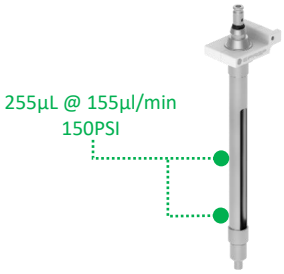
By using predefined Tasks, vial coordinates and parameters, the ePrep achieves simplicity in operation. Workflows are created and executed in just minutes using 'drag-and-drop' in the Workflow editor.

Complete Sample Preparation Workflow

ePrep can automate most Chromatography Laboratory sample preparation tasks. By using **analytical syringes** rather than pipettes, ePrep can precisely control micro volumes and flowrate at high pressure, which allows separation, filtering, and membrane tasks to be used in a workflow sequence.

Functions include:

- Precise Calibration Standard preparation
- Dilution
- Aliquot Sample
- Filtering
- Reagent Addition
- Mixing
- Micro SPE And more…

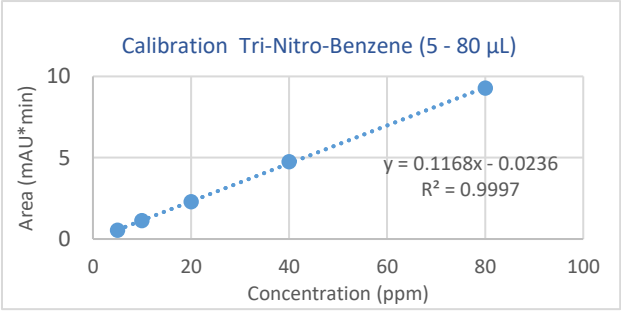


Analytical syringes can be employed for high efficiency microSPE, filtration, and membrane type tasks.

Precision, Accuracy and Validity

ePrep allows samples to be prepared the same way every time eliminating errors, saving time and avoiding repeats. Optimised Workflows can be saved and recalled for consistent method reproducibility. With typical accuracy and reproducibility of ≤ 0.3%, the improved data quality produced using the ePrep eliminates the need for duplicate and triplicate samples.

In addition, the ePrep's predefined wash and purge routines minimise the chance of cross contamination.



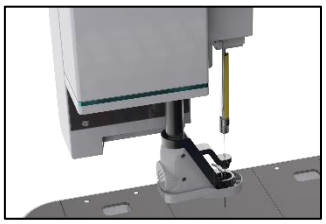
Calibration curve of Tri-nitro-benzene from an ePrep 5µL-80µL serial dispense. $R^2 = 0.9997$

Affordable Laboratory Automation

Quick to program, robust construction, flexibility, accuracy and user-friendly operation sit at the core of effective and efficient modern sample preparation. By achieving **all** these features in a single instrument the ePrep Work Station is **the essential instrument for laboratory** sample preparation.

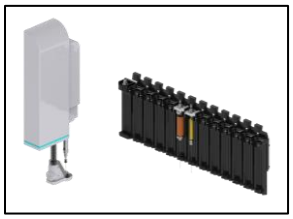
ePrep Features

ROTATING FOOT



Enables tool interchange, filter and SPE cartridge handling.

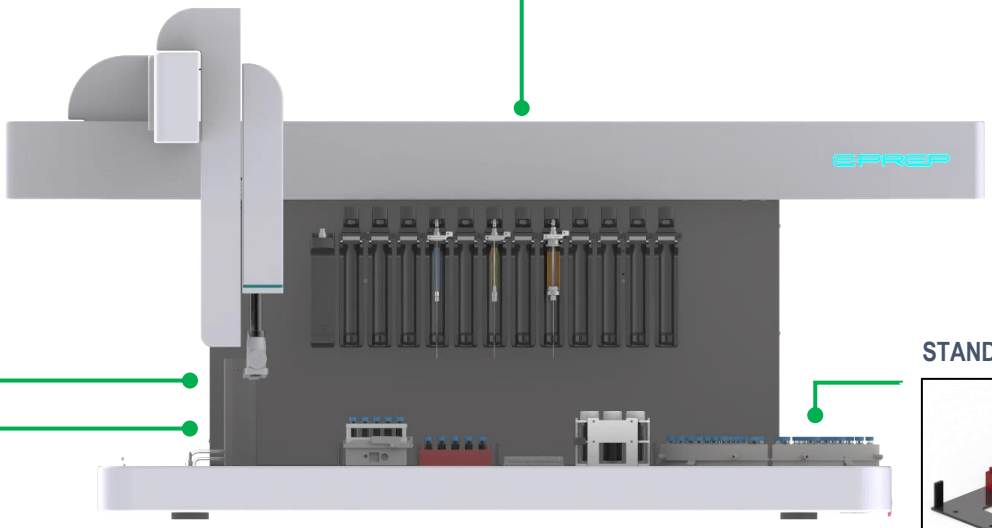
ROBOTIC TOOL CHANGE



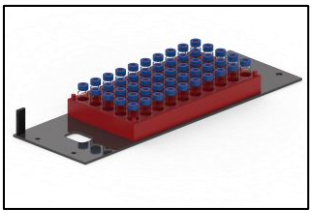
XCHANGE® technology enables automated and timely exchange of the necessary syringes and tools in a Workflow.

TABLET-BASED PROGRAMMING SOFTWARE

Workflows can be developed independent of user skill. Comprehensive software traces and records all liquid movements and is central to the use of ePrep in Chain-of-Custody samples.

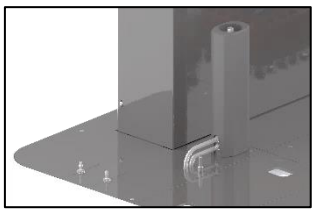


STANDARD LAB VIAL RACKS



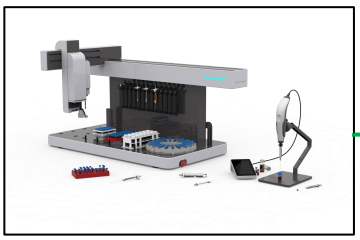
Workflows can include sealed vials, uSPEed cartridges, filters and other sample preparation elements.

SYRINGE WASH STATION



Syringe washing provides zero carryover, clean sample processing, and waste disposal.

ACCESSORIES AND CONSUMABLES

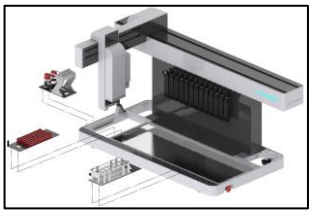


Designed to enhance automated sample preparation including: syringes, micro SPE cartridges, bulk solvent manifold, cartridge racks, vial transfer gripper, sample to detector direct interface.

INDEPENDENT OPERATION

Allows a single ePrep to feed multiple analytical instruments uninterrupted, maximising efficiency.

MODULAR DECK



Rapid configuration of vial racks, accessories and elements required for a range of sample preparation methods.

Tool Options

ePrep Needle Syringes
100µL, 1mL & 10mL
for liquid dispensing

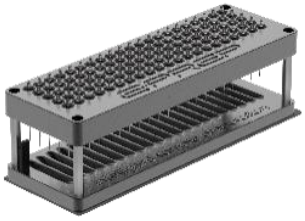
ePrep µSPEed Syringes
100µL, 1mL & 10mL
for µSPEed cartridges

ePrep Luer Syringe
2.5mL
for luer filters

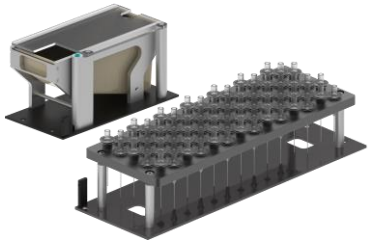
ePrep Disposable
Syringe 1mL
for zero carryover single use applications

ePrep Vial Gripper
for transfer of vials and Barcode read

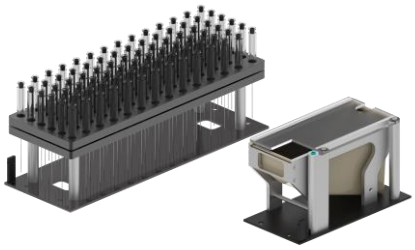
Popular Accessory Options



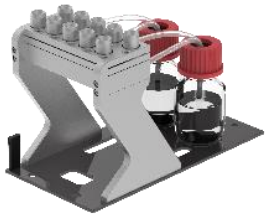
µSPEed microSPE Cartridge Rack



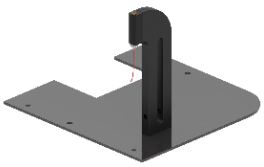
Syringe Filter Rack and Bin



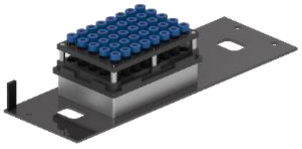
Single Disposable Syringes Rack and Bin



Bulk Solvent Manifold



µSPEed to (MS) Detector Interface

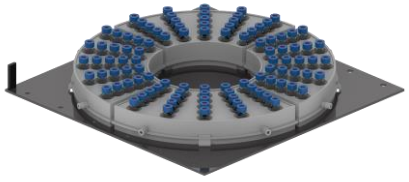


Vortex Shaker

Barcode Reader Module

Rack/Vial Adapter Plates

To allow the processing of samples from sample vials directly into autosampler racks, ePrep has a range of deck Adapter Plates for most common sample and instrument rack designs. These include **BelArt, Supelco, Wheaton, 96 Well Plates, Agilent, Shimadzu, Thermo, Waters and CTC-PAL**. Each Adapter Plate has a corresponding software profile for simple programming of vial identification and position within an ePrep Workflow.



Technical Specifications

Model	GL950X, P/N 01-0100-01 , ePrep Sample Preparation Work Station

LIQUID HANDLING AND SAMPLE PREPARATION

Liquid handling precision
Liquid: 0.3% RSD dispensed at 5% syringe volume position.
Mechanical: ±50µm plunger displacement precision.

Liquid handling accuracy
< ±1.0% of total syringe volume with an uncalibrated syringe
Syringes can be calibrated for greater accuracy.

Carry-over
For multi-use liquid handling tools an integrated wash station is used to control and eliminate carry over. The carry-over actually achieved depends on the syringe type, sample characteristics, and user set parameters in the software.

Volume range
Minimum volume: 5µL (precision of lower volumes is based on operating conditions). Maximum volume: 10mL per dispense with unlimited volume achievable using multiple aspirate/dispense cycles.

Flow rates
100µL syringe: 5nL/min - 18.0 mL/min
1mL syringe : 50nL/min - 33.0 mL/min
10mL syringe : 500nL/min - 36.0 mL/min

OPERATIONAL INFORMATION

Sample Capacity
Samples/Reagents can be contained in a wide variety of vial sizes and racks depending on deck configuration and application.
Typical dispense volumes of 100µL to 10mL.
Total 880mm x 330mm deck space.
Can be configured as 16 rack individual adapter plates with dimensions of 55mm x 330mm OR double adapter plates of 110mm X 330mm.
Supports range of vials from 96 well micro titer plates to 60mL bottles.

Laboratory
Sealed vial operation means a cover is not required. It is suggest well ventilated and climate controlled environment is used. If using toxic materials take appropriate safety precautions.

Tablet Controller and Software
Microsoft Touch Screen Surface Pro (Supplied) including ePrep's Axis rapid Workflow development software (English only) and lifetime updates.

Connectivity Tablet-to-Instrument
USB or Bluetooth

Data Security
Multilevel rights controlled by user login.
Software logs Date/Time, Output ID, Workflow ID, Processes. Log report formats in TXT and PDF.
21CFR Part 11 compliance.

Wash Station
Deck mounted syringe Wash Station. Pump driven with active waste removal. External solvent and waste reservoirs (reservoirs not supplied).

Asset Identification
RFID identification on syringes, tools and racks. Optional 1D and 2D bar code identification on vials.

Available Accessories (Optional)
Shaker, Gripper, Barcode Reader, Direct Detector Interface, Multiport Reagent Manifold, µSPEed Cartridge Rack.

SYSTEM INFORMATION

Instrument Dimensions (L x W x H)
1370mm x 694mm x743mm

Weight
65kg

Voltage
24V, 221W, 9.2A DC Power Pack; 100-240 Volt AC input; Requires country specific IEC C13 power cable (not supplied). Battery backup for continual operation included.

ePrep Connection ports
3 x Serial Comm Ports, 4 x Digital Output, 4 x Digital Input, 4 x Relay

Operating temperature
10 - 35°C, 0-80% relative humidity

Operating sound level
Typical 80dB

Compliance
CE, FCC, IC, RCM, RoHS, Safety EN 61010, EMC 61326

Warranty
12 months

Specifications are subject to change without notice

intelligent sample preparation

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Publication No.94-12001-02 Mar 2018