



Fluent[®] Gx Mix

and Pierce Workstation.

Extraction of non-biological forensic samples

The *Fluent Gx Mix and Pierce Workstation* enables users to develop workflows in forensic investigations. Samples that come from crime scenes are unique and irreplaceable, and may be used in legal proceedings to help determine the final judgment between prison or freedom. As crime scene samples are scarce and cannot be replaced, any loss of material needs to be avoided. The *Fluent Gx Mix and Pierce Workstation* minimizes the risk of sample loss by adding extraction solvents directly to the sample collection tubes, and mixing in a controlled manner.



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KEY ADVANTAGES

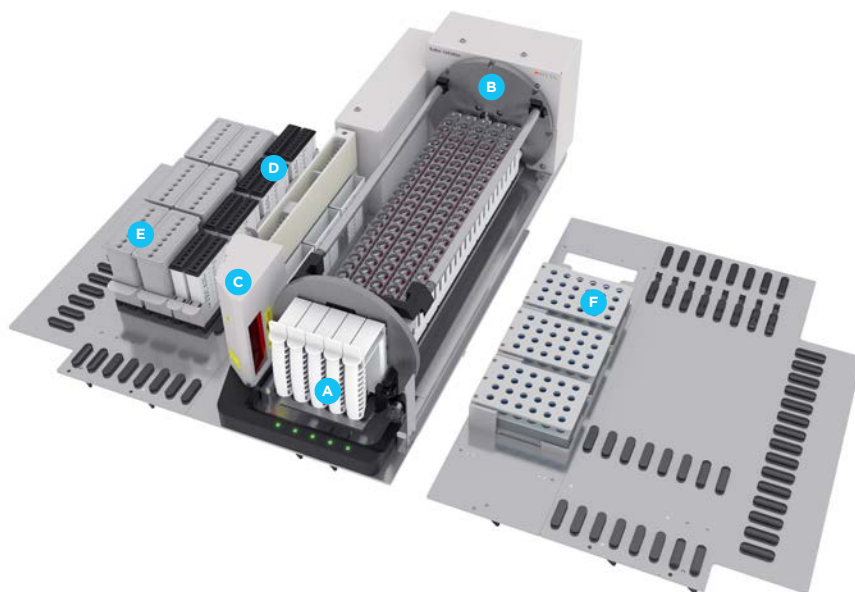
- **Easy operation**, even for less experienced users, with *Fluent Gx TouchTools™*
- ~1 hour 15 minutes **walkaway time** during a 120-sample run
- Automated barcode scanning for full **sample traceability**
- **Optimal extraction condition** provided by oscillating mixing using the *Tube Rotator™*
- Integrated **conductive liquid level detection (cLLD)** for **high pipetting precision**
- Standardized extraction conditions provide **reliable results**

EXAMPLE WORKDECK AND WORKFLOW OVERVIEW

1. Load **A Tube Runners** with primary tubes* into **B Tube Rotator**. Each sample is automatically registered by **C Fluent ID™** during loading.

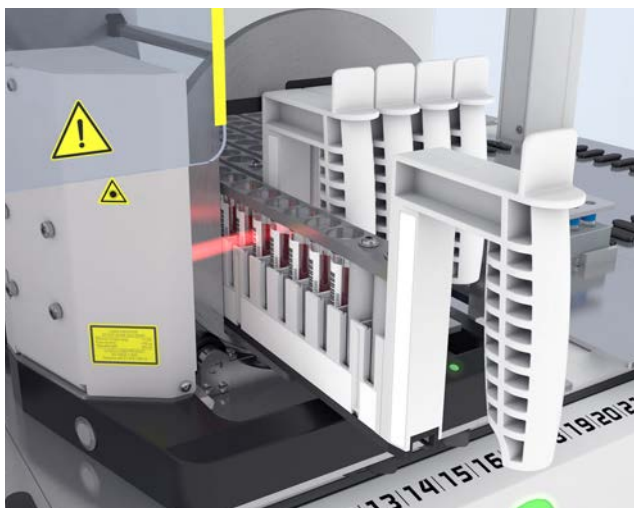
*Compatible primary tube formats: 12x75 mm, 13x100 mm, 16x100 mm

2. Stepwise addition of the protocol-specific **D extraction solvent** followed by careful cleaning of the **Tecan Piercing Tips™** (not shown) in the **E decontamination trough** to remove possible contamination.
3. The **Tube Rotator** enables efficient mixing by oscillating the samples.
4. After sedimentation, the **Tecan Piercing Tips** transfer the extraction solvent to capped glass vials - 1.5-2 ml - in the **F HPLC Vial Downholder Nest**** for GC-MS analysis.



*Verified with Greiner Vacuette® and BD Vacutainer® blood collection tubes
** Only available via Labwerx

Example workflow.



Guided loading and sample tracking

Primary tubes with samples collected at crime scenes are placed inside **Tube Runners**.

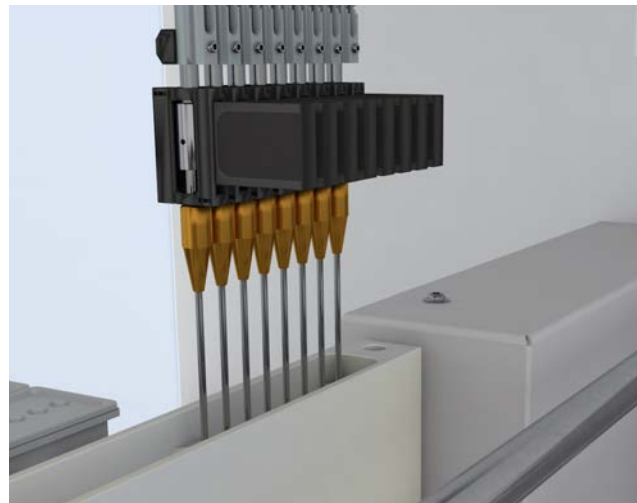
Barcodes on the side of each primary tube are scanned by a 1D barcode scanner as the **Tube Runners** are loaded into the **Tube Rotator**.

Colored LEDs on the active workdeck indicate the loading status of all primary tubes.

Stepwise solvent addition and cleaning

The **Fluent Gx** cleans and decontaminates the steel **Tecan Piercing** Tips before and after each addition of extraction solvent using a protocol such as the example below:

- 1) Tips washed with deionized water
- 2) 1 ml of deionized water added to all primary tubes
- 3) Tips washed with deionized water
- 4) 100 μ l ammonia added to all primary tubes
- 5) Tips washed with deionized water
- 6) 1 ml of butyl acetate added to all primary tubes
- 7) Tips washed with deionized water





Sample mixing for extraction

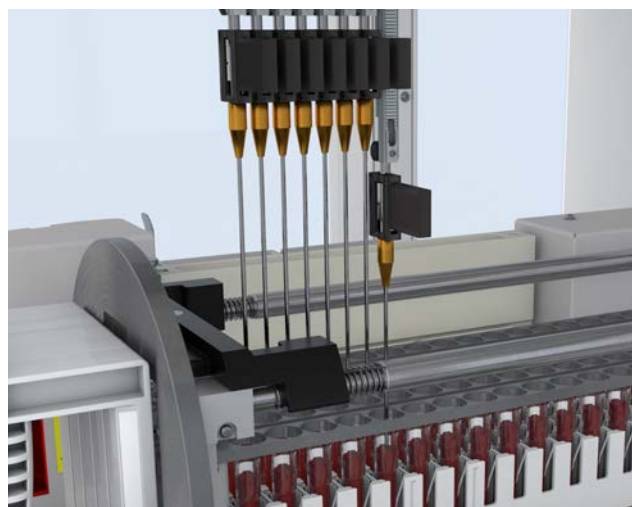
This example workflow uses open primary tubes. The **Tube Rotator** was set to oscillate the tubes from left to right for 20 minutes at an angle of 82° and maximal speed.

This setting provides a safe solution that optimizes the extraction of the material collected in the tubes, without spilling any sample material.

Sample transfer into capped GC vials

After oscillation, the **Tube Rotator** rests for 10 minutes to ensure proper phase separation inside the sample tubes. **Tecan Piercing Tips** then transfer the butyl acetate layers, including the analytes of interest, into capped GC vials.

Between sample transfers, the **Tecan Piercing Tips** are washed with deionized water to prevent carry-over and/or cross-contamination.



DISCOVER THE FLUENT MIX AND PIERCE WORKSTATION

SCAN ME



To learn more about the Fluent Mix and Pierce Workstation, scan the QR code or visit www.tecan.com/fluent-mix-and-pierce-workstation

The Fluent Mix and Pierce Workstation is based on the Fluent Automation Workstation – a fully automated laboratory liquid handling platform for general purpose use – and is configured for sample distribution. It is not linked to a particular assay, and Tecan is not responsible for any assay claims.

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