

Fluent Liquid Handler



About

The Fluent Liquid Handler is a state-of-the-art automated liquid handler designed to streamline workflows, optimize assay precision, ensure consistency, and free staff up for more valuable tasks. It has exceptional liquid level detection and dead volume reduction to conserve samples and reagents, as well as fantastic low-volume pipetting. The customizable modular system known as the Patented Dynamic Deck™ is equipped with a **Q-Instrument BioShake**, **Tecan Hydrospeed**, **Tecan Tevacs**, and **GFPickolo Colony Picker**. It is controlled with **FluentControl**, a user-friendly software with a drag-and-drop interface to create programs that are executed at a push of a button. There is real-time monitoring to see progress, as well as error notifications.

Equipment reservation

- Create a Core Lab Management System (CLMS) account at clms.cnsi.ucla.edu.
- Go to BioPACIFIC Materials Innovation Platform.
- Book TFS Laboratory Automation System and/or Tecan Fluent Liquid Handler

User Notes

- Wipe off and decontaminate equipment surfaces and labware with 70% ethanol before and after running the automation protocols. Do not use bleach.
- Check waste chute for Tecan Fluent before use. Liquid handling protocols use a lot of disposable tips and waste fills up quickly.
- Return any LBF labware (i.e. pre-labeled troughs, unused plates, or buffer stocks) to their original locations in the lab space.

Instruments on the Deck

Q-Instrument BioShake



About

The BioShake Q1 is the most effective thermoshaker for 48/96/384 well microplates. It has fully adjustable temperature and mixing between -20°C and 99.9°C and from 200 rpm to 3,000 rpm respectively. The temperature accuracy is better than $\pm 0.2^\circ\text{C}$ with surface uniformity better than $\pm 1.0^\circ\text{C}$. It has a patented locking mechanism ensuring safe and effective mixing even at the highest frequencies.

User Notes

- When programming the BioShake using FluentControl ensure to clamp the plate before shaking and unclamp the plate after shaking

Tecan HydroSpeed



About

The HydroSpeed plate washer is designed for fast, parallel washing of 96 well plates. This avoids time delays between different wells for uniform results. The settings are adjustable including the wash head positions, speed settings, and vacuum level. It is especially useful for cell washing, bead assays, and ELISA assays.

User Notes

Before use: Make sure to check that the waste is empty.

After use: Make sure to empty waste by:

1. Removing the waste bin on the low shelf of the table from the tubing
 2. Dispose of contents as appropriate for the respective contents (i.e. bleach as necessary)
 3. Rinse the waste bin
 4. Put the waste bin back on the shelf and reattach to the tubing
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Tecan Vacuum Separator (Te-VacS)



About

Integrated with the Fluent, the Te-VacS is used for automatic rapid separation or purification of biological molecules. It can be used for all nucleic acid purification applications such as:

- extraction of plasmid DNA
- purification of PCR products and cycle sequencing products
- purification of genomic DNA from blood, body fluids, cells, tissue, micro-organisms, or plants

Its use is not limited to nucleic acid processing.

User Notes

Before use: Make sure to check that the waste is empty.

After use: Decontaminate the vacuum block using 70% ethanol and make sure to empty waste by:

1. Removing the waste bin on the low shelf of the table from the tubing
2. Dispose of contents as appropriate for the respective contents (i.e. bleach as necessary)
3. Rinse the waste bin
4. Put the waste bin back on the shelf and reattach to the tubing

For more information see:

[tevacscleaningprotocol.pdf](#)

GFPickolo Colony Picker



About

The GFPickolo is a fully automated microbial colony picker. It uses a camera and a program that allows finding, filtering, and sorting colonies based on size, shape, color, isolation distance, and circularity. The GFPickolo is also specifically equipped to pick colonies with the strongest, weakest, average, or largest fluorescent signal. This tool is specifically useful for cloning plasmids containing GFP. It works with petri dishes, multiwell plates, and omnitrays. It also has several picking modes such as scooping, scratching, and multihit, utilizing agar height detection. Inside the Fluent, once the colonies are picked, they can be automatically transferred to a multiwell plate for further experimentation.

User Notes

FluentControl Software



About

FluentControl is used to program the **Fluent Liquid Handler**. It is easy-to-use, drag-and-drop software that does not require any programming expertise. A 3D editor is to configure the worktable. It has a built-in auto-context check feature to review methods as they are created, and there is even a 3D simulator to check a finalized method before actually running it. Protocols can be saved for repeated use.

User Notes

Make sure to **save** your work!

Referece Documentation

Fluent

fluentoperatingmanual.pdf

fluentreferencemanual.pdf

fluentliquidhandler-guide.pdf

BioShake

bioshakeoperatingmanual.pdf

bioshakeproductsheet.pdf

HydroSpeed

tecanhydrospeed_user_manual.pdf

Te-VacS

tevacsooperatingmanual.pdf

Pickolo

FluentControl

fluentcontrol_3.6_manual.pdf

fluentcontrolbrochure.pdf

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<https://bpm-wiki.cnsi.ucsb.edu/dokuwiki/doku.php?id=lbf-fluent>

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