# Curiox C-FREE™ Pluto ALPHA System User Manual

C-FREE PLUTO ALPHA SYSTEM [CF-PLU-ALPHA-96-01]

While the information in this manual is considered accurate, Curiox Biosystems Pte. Ltd. disclaims all liability for errors and reserves the right to modify specifications without notice.

IMPORTANT NOTICE

Adherence to all instructions in this User Manual is crucial. Non-compliance may lead to the invalidation of your service contract.

Curiox Biosystems Locations

| | | | |
|---|---|---|---|
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Chapter 1

# General Information

## Chapter Overview

- General Information
- Introduction to the Pluto ALPHA System
- Distinctive Features
- Technical Specifications
- Chemical Compatibility
- Safety
- CE Mark
- Customer Service and Technical Support
- Equipment Storage and Shipping

# General Information

This user manual provides technical guidance, installation instructions, operational procedures, and troubleshooting information for users of the Pluto ALPHA System. It covers the following areas:

- Installation, setup and operation
- Operating principles and functional modes
- Safety features and operational precautions
- Troubleshooting and maintenance procedures

# Introduction to the Pluto ALPHA System

Welcome to your new equipment equipped with Curiox C-FREE™ technology. The Pluto ALPHA System uses a gentle process for washing cells and staining in your sample preparation workflow. This manual will guide you through every aspect of your Pluto ALPHA System to ensure its seamless integration into your laboratory. With the Pluto ALPHA System, you enhance not only the precision, but also the efficiency of your research endeavors.

# Distinctive Features

The Pluto ALPHA System is distinguished by several key features that set it apart in the field of sample preparation:

**Curiox C-FREE Wash Technology**: Integrating the latest advancements in cell washing, the Pluto ALPHA System employs Curiox C-FREE Wash technology, which maximizes cell viability and stain resolution. This technology ensures higher stain indices for cleaner resolution of cell populations, crucial for precise analytical outcomes.

**Compact Footprint**: The Pluto ALPHA System boasts a compact footprint for easy fit into laboratory spaces.

**Industry standard 96-Well Plate Format**: The system utilizes SBS format 96-well plates, ensuring seamless integration into existing workflows with minimal adaptation required. This feature ensures protocol transferability and ease of use, particularly for labs already using this format.

The Pluto ALPHA System is your partner in delivering efficient, reliable, and reproducible results, making it an indispensable tool for modern laboratories focused on cell analysis.

# Technical Specifications

| Description | Specification | | |
|---|---|---|---|
| Physical | | | |
| Dimensions (D x W x H) | 335 mm x 447 mm x 480 mm<br>13.2 in. x 17.6 in. x 18.9 in. | | |
| Weight | 35 kg / 77.1 lbs. | | |
| Electrical | | | |
| Mains Voltage Requirement | 100 - 240 V (± 10% in nominal V) | | |
| Equipment Ratings | Input Voltage | 24.0 V | |
| | Input Current | 10 A | |
| Environmental | | | |
| Indoor or Outdoor Use | Indoor | | |
| Operating Temperature Range | 4 - 28 °C | | |
| Operating Humidity | < 80%, non-condensing | | |
| Operation | | | |
| Deck capacity | 3 deck spaces | | |
| | | | |
| Pipette | | | |
| Pipetting principle | Air displacement | | |
| Volume<br>(Test condition: Water) | Volume | Tolerance | |
| | 25 µL | ± 5 µL | Final volume (Laminar Wash) |
| | 50 µL | ± 10 µL | Final volume (Pluto Wash, 'Moderate') |
| | 250 µL | ≤ +1% | Pluto wash volume |
| Wash Performance | | | |
| Flow rate at nozzle | 5-20 µL/s | | |
| Wash sequence | 96 wells simultaneous washing | | |
| Final volume | Pluto Wash: 50 ± 10 µL ("Moderate" wash)<br>Laminar Wash: 25 ± 5uL | | |
| Initial Volume | | | |
| Laminar Wash plate | Min.: 25µL Max.: 150µL | | |
| Curiox microtiter plate | Min.: 50µL Max.: 250µL | | |
| Curiox deep well plate | Min.: 50µL Max.: 1600µL | | |
| User Interface | | | |
| Display | 7-inches | | |
| Input control | Touchscreen | | |
| External Interface | | | |

| Description | Specification | | |
|---|---|---|---|
| 1x waste fluid outlet connector (white) | Discharging of liquid waste | | |
| 1x USB Type A | Port for software updating | | |
| 1x USB Type B | Port for external control by PC | | |
| Labware | | | |
| Pipette tips | **Type** | **Laminar Wash** | **Pluto Wash** |
| | 250 µL non-filter, non-sterilized | Compatible | Compatible |
| | 250 µL non-filter, sterilized | Compatible | Compatible |
| Curiox supplied Plates (SBS format) | Pluto Standard 96 wells, U-bottom, 250µL<br>Pluto Deep Well, 96 wells, U-bottom, 1.6mL(max)<br>Laminar Wash plate, 96 wells | | |
| Accessories | | | |
| Tips Rack | Multi-use rack for 96 pipette tips. Can be autoclaved. | | |
| Tips Refill tool | 8 - 96 pipette tips | | |

# Chemical Compatibility

The fluid-contacting components of the Pluto ALPHA System are constructed from materials selected for their resistance to common chemicals. However, some disinfectants should not be used for decontamination. Table 1-1 provides details on material composition and compatible reagents. To prevent corrosion and damage, avoid prolonged contact with incompatible reagents.

***Table 1-1:*** *Chemical compatibility between the component materials and accessories in the Pluto ALPHA System, including common reagents and disinfectants. (Adapted from: CP LabSafety www.calpaclab.com, US Plastic www.usplastic.com/catalog/files/charts/Tygon%20CC.pdf accessed Jan 2023)*

| Component | Material | Approved Chemicals | Incompatible Chemicals |
|---|---|---|---|
| Internal Base Structure | Stainless Steel (304) | Ethanol, Benzene, Chloroform, Acetaldehyde, Propylene Glycol, Isopropanol, Formaldehyde, Phenol, Grease, Potassium Permanganate, Hydrogen Peroxide | Hypochlorite bleach, Sulfuric Acid |
| Minor Components of Main Equipment Body | Delrin (Polyoxymethylene) | Ethanol, Benzene, Soap Solutions, THF, Formaldehyde, Propylene Glycol, Isopropanol, Potassium Permanganate | Acetic acid, Grease, Ketones, Ozone, Phenol, Ammonia, Hypochlorite bleach, Iodine, Hydrogen Peroxide, Phosphoric Acid, Sodium Hydroxide (>50%) |

| Component | Material | Approved Chemicals | Incompatible Chemicals |
|---|---|---|---|
| Tubing of Internal Equipment Structure | Silicone | Ethanol, isopropyl alcohol, detergents, ethylene glycol, propylene glycol, formaldehyde, formamide, sodium hypochlorite, hydrogen peroxide, sulfuric acid (<3M), ozone | Chloroform |
| Internal Structural Parts | Aluminum | Ethanol, Benzene, Propylene Glycol, Isopropanol, Formaldehyde, Ozone, Grease, Phenol, Hydrogen Peroxide | Hypochlorite Bleach, Soap Solutions, Sulfuric Acid, Potassium Permanganate, Phosphoric Acid |
| External Structure | | | |

# Safety

## User Attention Notifications

This manual uses several user attention phrases, each designed to draw a specific level of attention:

| | |
|---|---|
| **NOTE** | Provides useful information. |
| **IMPORTANT** | Highlights the information is essential for proper operation of the equipment. |
| **CAUTION** | Alerts Users concerning potential hazards that could cause injury and/or damage to the equipment. |
| **! WARNING !** | Warns Users of a serious risk of physical injury if precautions are not followed. |

## Chemical Hazards

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**! WARNING !**

Handle with care. Exposure to chemicals used in this process can cause serious injury.

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**Understand Safety Data:** Before storing, handling, or using chemicals, thoroughly read and understand the Material Safety Data Sheets (MSDSs) provided by the chemical manufacturer.

**Minimize Exposure:** Avoid direct contact and inhalation of chemicals. Always wear appropriate personal protective equipment (PPE) such as safety glasses, gloves, and protective clothing. Refer to the MSDS for more safety guidelines.

**Sealed Containers:** Ensure all chemical containers remain tightly closed when not in use.

**Monitor for Leaks:** Regularly check for chemical leaks or spills and promptly follow the manufacturer's recommended cleanup procedures listed on the MSDS if an incident occurs.

**Follow Regulatory Requirements:** Adhere to all applicable local, state, provincial, or national regulations concerning the storage, handling, and disposal of chemicals.

## Radio Interference

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**CAUTION**

This equipment is not intended for use in residential environments and may not provide adequate protection against radio reception in such environments.

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## Chemical Waste Hazards

**Review Safety Data:** Ensure you read and comprehend the Material Safety Data Sheets (MSDS) from the chemical manufacturers before storing, handling or disposing of chemical waste.

**Use of PPE:** Avoid contact with chemical waste. Follow institutionalized laboratory standard operating procedure (SOP) for handling chemical waste. Always wear suitable personal protective equipment (PPE), such as safety glasses, gloves, and protective clothing, when handling hazardous substance.

**Handle with Caution:** Exercise caution when emptying waste bottles. When emptying the waste bottle, take standard lab precautions.

**Proper Disposal:** Dispose of contents following your SOP and local regulations — ALPHA is designed to fit seamlessly into your lab's compliance practices.

## Material Safety Data Sheets

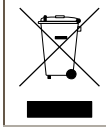
Affix warning labels to all chemical containers according to institutionalized SOP and regulatory requirements.

Material Safety Data Sheets (MSDS) offer essential safety information for the storage, handling, transportation, and disposal of chemicals. It is advisable to periodically update your laboratory's MSDS records.

For Material Safety Data Sheets for Curiox reagents, please contact us at 650-226-8420 (US) or +65 6507 0361 (international). Alternatively, you can contact the chemical manufacturer directly or visit their website for more information.

## Safety Labels

A safety label with a safety alert symbol is attached to the Pluto ALPHA System to warn users of potential safety hazards. This symbol is universally recognized and prompts users to exercise caution when operating the equipment.

| Symbol | Description |
|---|---|
|  | Pinch point hazard. Keep hands clear. |
|  | Separate collection of electrical and electronic equipment. |

| Symbol | Description |
|---|---|
|  | Potential Biohazards. Some buffers or specimens may pose a biohazard. Adequate safety precautions should be taken as outlined in the specimen's package insert. |

## Safety Features

Door Access

The access doors prevent the user from accessing/reaching into the interior of the equipment while it is in operation.

Power Disconnect

Plug can be quickly disconnected when the power adapter is positioned where it can be easily accessed.

Power Supply

The equipment features a universal power adapter that supports input voltages from 100 to 240 V, converting to an output of 24 V DC at the power jack.

Stop Button

Pressing the 'Stop Operation' button during a wash cycle immediately halts the machine. It returns to its home position once the 'Recover' button is activated.

Machine Homing

If power is lost during a cycle and then restored, the equipment automatically returns to its home position.

## Safety Precautions

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**! WARNING !**

Ensure the liquid waste tube is securely fastened to the equipment before operation. Failing to do so will result in spillage of liquid waste onto the tabletop and/or inside of the equipment during washing operation.

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Always keep the area around the power supply clean and dry to avert any potential electrical hazards.

- During operation, refrain from touching and/or inserting hand(s) into the equipment, except when interacting with the display panel.
- If an unexpected error occurs, reset the equipment by switching the power off and then back on.

## General Precautions

- Only use the specified labware with the Pluto ALPHA System.
- Only use the power adapter cord supplied with the unit for electrical supply.
- In the event of spillage inside the Pluto ALPHA System, power OFF the equipment first BEFORE proceeding to do a wiping down.
- Retain the original packaging material for potential future shipping needs.
- Don't open or remove the equipment casing or motor parts; this will void the warranty, affect calibration and may cause irreversible damage to the equipment.
- For any service needs, contact support@curiox.com

## Prior to System Operation

Make sure all users of the Pluto ALPHA System have:

- Received training on laboratory safety practices/SOP.
- Been instructed on specific safety protocols for operating this equipment.
- Been trained in handling biohazards if biohazardous materials are to be used with the system.
- Read and understood all relevant Material Safety Data Sheets (MSDS).

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**CAUTION**

Do not operate the Pluto ALPHA System in ways not specified in this User Manual. This equipment is safe when used according to stipulated instructions in this document.

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# CE Mark

This equipment fulfils the requirements of the CE mark.

Directive 2014/30/EU Electromagnetic Compatibility

This device has been type-tested by an independent, accredited testing laboratory and found to meet the requirements of EN 61326-1:2021 for Emissions and Immunity.

Verification of compliance was conducted to the limits and methods of the following:

1. EN 61326-1: 2021 Emissions
    a. Harmonics Current Emission (Class A)
    b. Voltage Change, Fluctuations and Flicker
    c. Conducted Disturbance (Group 1 Class A)
    d. Radiated Disturbance (Electric Field) (Group 1 Class A)

2. EN 61326-1: 2021 Immunity
    a. Electrostatic Discharge
    b. RF Electromagnetic field
    c. Electrical Fast Transient/ Burst
    d. Voltage Surges
    e. RF Continuous Conducted disturbance
    f. Power Frequency Magnetic Fields
    g. Voltage Dips & Interruptions

Directive 2014/35/EU Low–Voltage Device

This device has been verified and found to meet the requirements of Directive 2014/35/EU “electrical electronic equipment designed for use within certain voltage limits”.

Directive 2011/65/EU Restriction On the use of Hazardous Substances (ROHS 2)

This device has been verified and found to meet the requirements of Directive 2011/65/EU “restriction on the use of certain hazardous substances in electrical and electronic equipment”.

Directive 2012/19/EU Waste Electrical and Electronic Equipment (WEEE)

Dispose of the device according to Directive 2012/19/EU, on “waste electrical and electronic equipment (WEEE)” or local ordinances.

# Customer Service and Technical Support

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# Equipment Storage and Shipping

It is recommended to disinfect the equipment by wiping it down with 75% ethanol before storage and/or transportation. For long-distance transportation, ensure all moving parts are secured and packed in shock-proof packaging. It is recommended to retain the original packaging material for future transportation needs.

Stow the equipment in a regulated storage environment: Temperature: 4-28ºC, Humidity <80% RH, non-condensing.

The equipment must be transported in its original packaged state, kept upright, and protected from tumbling and rain/moisture. Be careful to handle the equipment with care during transportation.

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**CAUTION**

For your safety, keep hands away from moving parts during operation. The touchscreen is the only area to interact with while ALPHA is running.

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Chapter 2**:**

# System

## Chapter Overview

- Introduction
- System Overview
- Wash Cycle Process

# Introduction

This chapter provides a detailed overview of the Pluto ALPHA System components and describes the phases of the washing process.

# Functional Description

The Pluto ALPHA System features a touchscreen control panel located on the top-front side of the equipment. The main components of the Pluto ALPHA System are illustrated in the following figures.

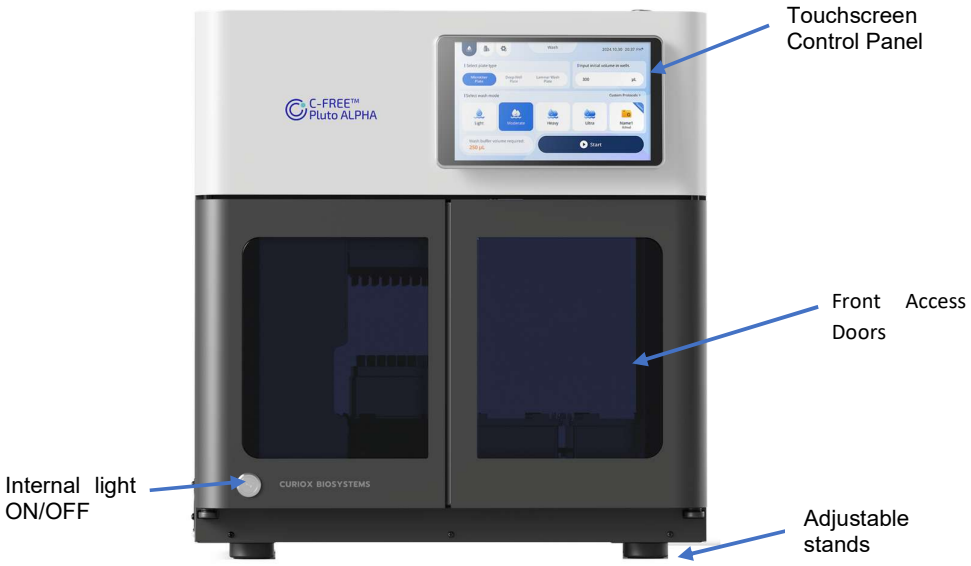


**Figure 2-1:** Front view of the Pluto ALPHA System

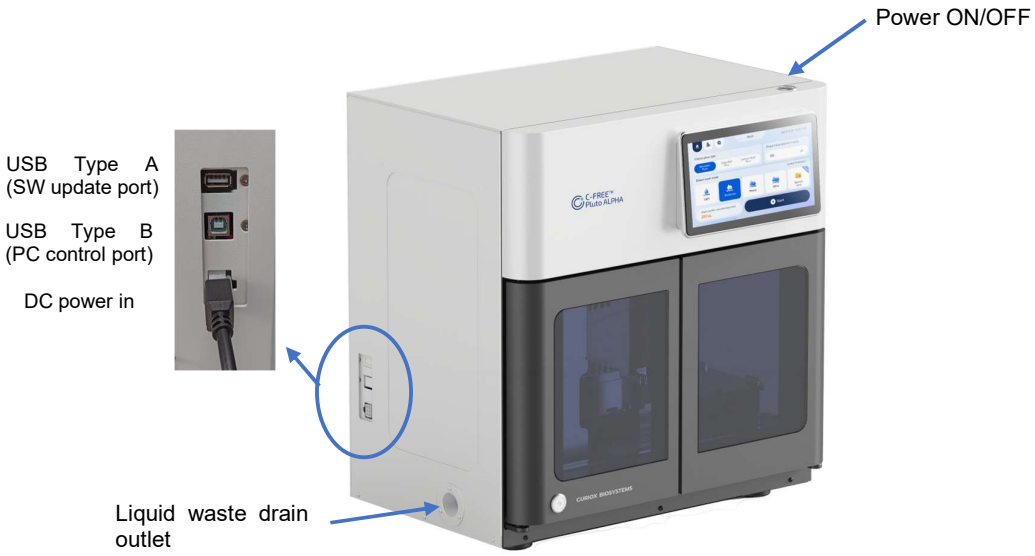


**Figure 2-2:** Lateral (left side) view of the Pluto ALPHA System

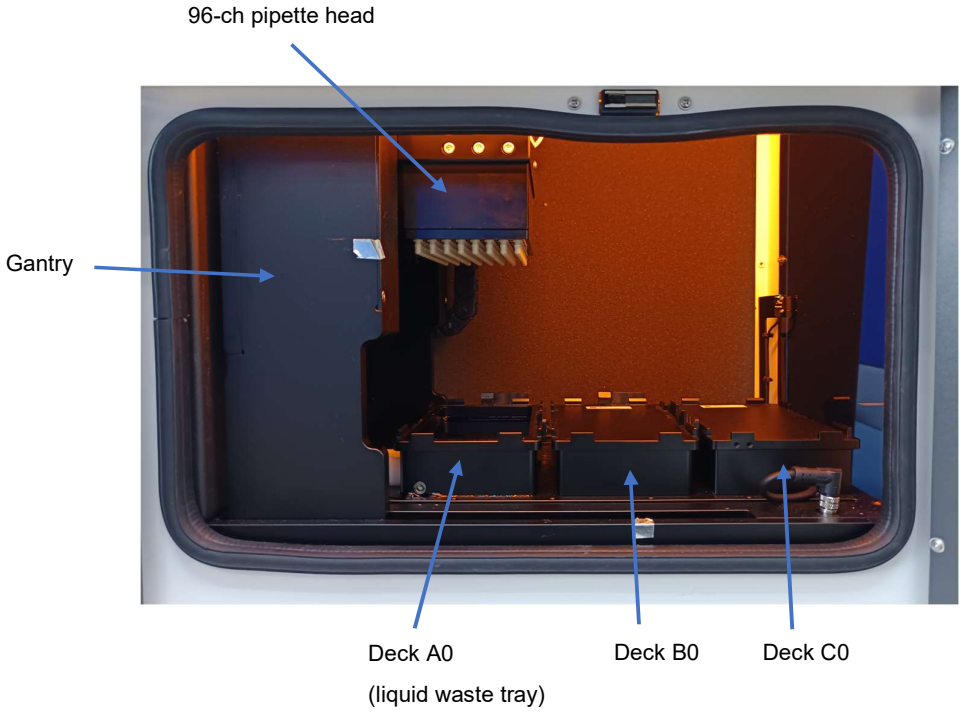


**Figure 2-3:** Internal overview of equipment

## Accessory

**Figure 2-4**: Tips Rack

## How to use the equipment

1. See Chapter 3 to install and setup the equipment.
2. Transfer pipette tips from disposable tips box to the Tips Rack. Place the filled Tips Rack at Deck A0 inside the unit, over the liquid waste tray.
3. Manually transfer the sample(s) and reagent(s) into an experiment plate. There are 3 types of experiment plate that the user can choose to use:
    a. Pluto MTP (Standard / MicroTiter Plate),
    b. Pluto U-bottom DWP (Deep Well Plate) OR
    c. LW (Laminar Wash) plate.
4. Place the experiment plate at Deck C0 inside the unit. Please note that this equipment does not support stacking of the labware.
5. Setup the equipment by first selecting the corresponding experiment plate type on the touchscreen (Pluto MTP, Pluto DWP or LW plate).
6. Next select the desired wash mode on the touchscreen: Light, Moderate or Heavy
7. Enter the sample volume.
8. The system will automatically calculate and display the required wash buffer volume on the screen for user's verification.
9. Ensure the Wash Buffer plate has sufficient wash buffer volume (see step 9) and placed it at Deck B0.
10. Close the Front Access Doors, press the [Start] button to begin the wash. Liquid waste is discharged to an external waste collection container under Deck A0, through an attached tube during the wash.
11. At the end of the wash, the system homes the pipette head and displays the status on the display.

Chapter 3

# Setup

## Chapter Overview

- Installation
- Preparation for Operation
- Startup Sequence
- Startup Sequence Fluidic Verification

# Installation

Move the equipment to an appropriate location for storage upon receiving the shipment. The equipment is delivered with pre-installed decks and 96-ch pipette head. The following items are included in the equipment's packaging:

- 1x Tips Rack. Can be autoclaved.
- 1x Tips Refill tool
- Power Adapter (Output 24V, 10A) with power cord
- 1x Waste tube and tube cap for waste liquid discharge.
- Quick Start Guide
- Postcard with QR Code for User Manual
- Declaration of Conformity (for CE compliance)

Remove the equipment from the packaging and place it on a tabletop.

Connect the waste tube provided in the packaging to the liquid waste outlet located on the left side of the equipment. Connect the other end of the waste tube to the tube cap provided and secure it to a waste collection container on the floor.

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**CAUTION**

For effective waste liquid drainage:

- Waste collection container must be placed on the floor.
- Waste tube must be below the waste liquid line in the bottle
- **Using the full waste tube may result in sagging and inadequate drainage performance. Any excess tubing should be trimmed, and the tubing must be routed in a straight path to the waste bottle to prevent bends or kinks**

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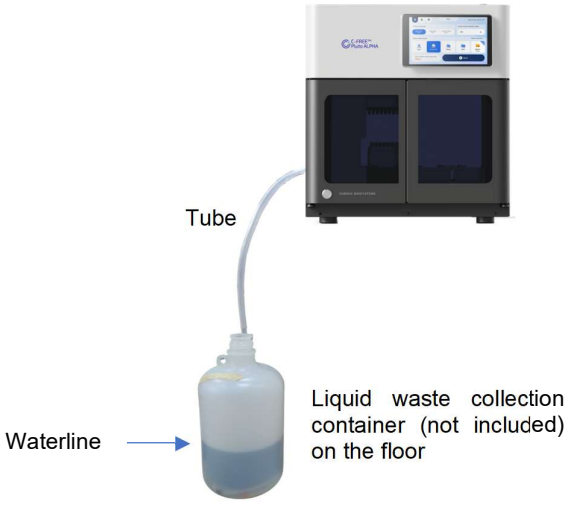


**Figure 3-1:** Install liquid waste collection

Connect the power adapter to the equipment's DC power socket.

Make sure the equipment's Front Access Doors are closed before powering on the equipment by pressing the Power ON/OFF button located on the top, right corner of the equipment.

Wait for the equipment to complete its initialization after powering on.

Wait for the gantry to stop moving before opening the Front Access Doors.

Place the loaded Tips Rack over the liquid waste tray at Deck A0.

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**CAUTION**

Do not place the tips box inside the equipment instead of the Tips Rack. Tips from the tips box must be transferred to the Tips Rack.

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Place the rest of the labware inside the equipment according to the figure below. The position of the designated labware is fixed (not configurable). All the labware cannot be stacked.

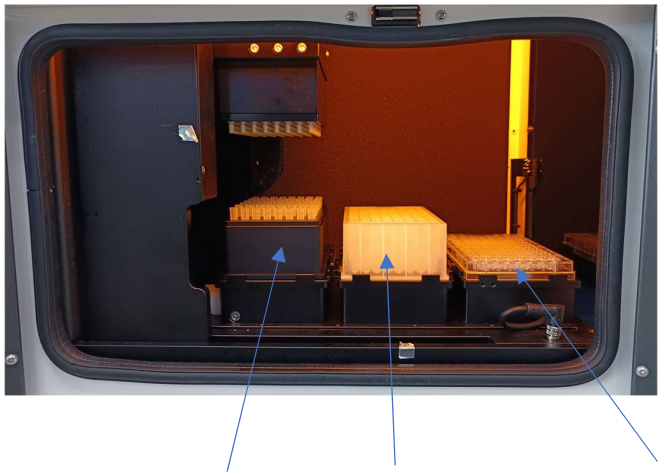



**Figure 3-2:** Deck layout and labware position

This equipment does not need to be position-calibrated before use.

Liquid volume calibration is not required before use.

The equipment is now installed and is ready for use.

# Preparation for Operation

1. (Re) Fill pipette Tips Rack
    - Transfer the pipette tips from the pipette tips box into the Tips Rack. Use the Tips Refill tool provided in the accessory to aid in the transfer.

2. Fluidic Verification:
    - It is recommended to perform a fluidic verification with the Curiox's Fluidic Verification Kit (sold separately) when the equipment is used for the first time or after prolong period of unuse

3. Machine Installation in a Cold Room:
    - If the machine is installed in or moved to a cold room, it is recommended to allow the equipment to acclimatize for at least 3 hours before proceeding with Fluidic Verification. Re-Verification is recommended if the equipment is moved out of the cold room.

Chapter 4

# Operation

## Chapter Overview

- Operational Safety
- Operation Page
- User Interface
- Service
- Settings
- Timer
- Daily Shutdown Procedure
- Washer Maintenance
- Error Codes

# Before Operating the Pluto ALPHA System

Make sure the Pluto ALPHA System is placed on a flat surface/tabletop within the temperature and humidity levels specified in the "Technical Specifications".

# Operational Safety

The Pluto ALPHA System is equipped with built-in safety features designed to prevent operations under unsafe conditions.

### Power Supply

The universal power adapter accommodates an input range of 100 - 240 V, providing an output of 24 V DC to the Pluto ALPHA System.

### Stop

Pressing the ‘Stop Operation’ button during a wash cycle immediately halts operations. The machine returns to its home position once the ‘Recover’ button is activated.

### Machine Homing

If power is interrupted during operation and then restored, the machine automatically returns to its home position.

### Safety Precautions

In addition to the built-in safety features of the Pluto ALPHA System, operators should follow these precautions to ensure their safety and maintain the accuracy of experiments.

- Remove the plate from the fluidics chamber immediately after washing to prevent drying, which can stress cells and compromise biological integrity.
- Maintain a dry area around the power supply to prevent electrical hazards.
- Refrain from touching the machine during operation, except for interactions with the display panel.
- In case of an unexpected error, reset the machine by turning the power off and then back on.

# Main menu

The main menu contains the functions that are commonly used by the user to set up and perform washes.

- “Select plate type”

  Sets the experiment plate type for the wash operation. A plate type must be selected before a wash mode can be selected. Options for plate type are, ‘Microtiter Plate’, ‘Deep Well Plate’, ‘Laminar Wash Plate’

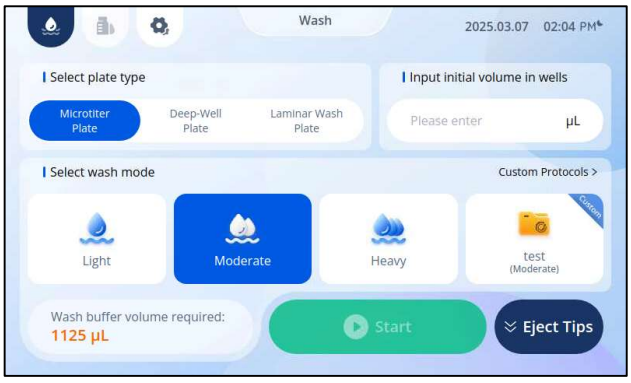
- “Input initial volume in wells”

  Sets the initial volume (in µL) of the sample in each well of the experiment plate. Tap on the field to display a keypad for direct value entry. The lower and upper limits depend on the selected plate type (in µL) respectively.

| Plate type | Minimum Vol (µL) | Maximum vol (µL) |
|---|---|---|
| Microtiter Plate | 50 | 250 |
| Deep Well Plate | 50 | 1600 |
| Laminar Wash Plate | 25 | 150 |

- “Select wash mode”

  Sets the wash mode. There are three fixed, preset wash modes: Light, Moderate and Heavy.

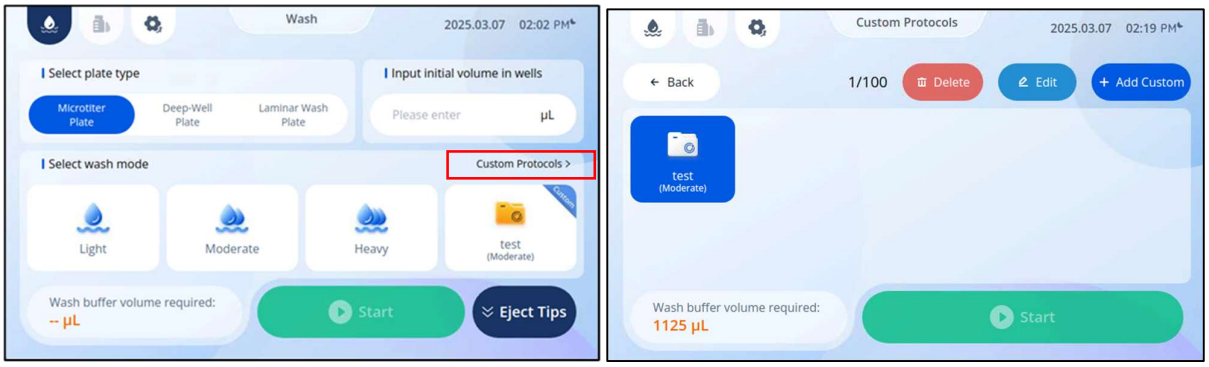


# Custom Protocols

The **"Custom Protocols"** menu displays a list of custom protocols created by the user. These protocols are associated with specific experiment plate types.

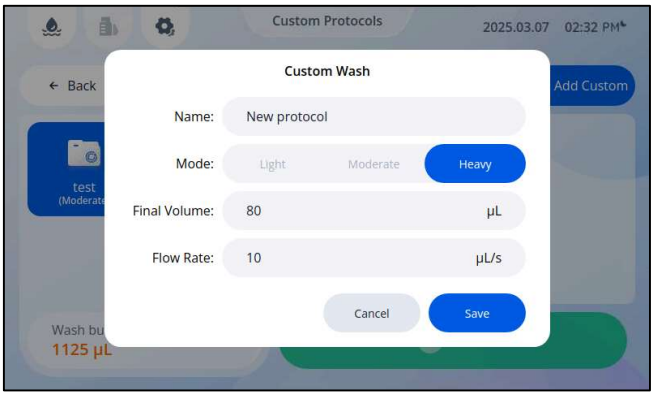
To access the list of custom protocols, the user must first select an experiment plate type from the main menu. Once a plate type is chosen, the user can open the **"Custom Protocols"** list by selecting the **[Custom Protocols]** button in the **"Wash"** menu.

Users can create, edit, and delete custom protocols. Each experiment plate type can have/store up to 100 custom protocols.



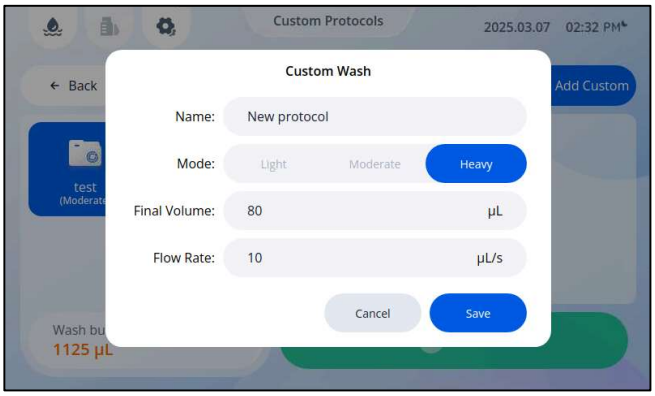

- "Add Custom"

  Creates new custom protocol attached to selected plate type. Tap on "Name" field to input custom name. Tap on "Mode" field to select wash mode. Tap on "Final Volume" field to set custom final volume (default: 50 µL). The lower and upper range is dependent on the plate type selected. Tap the "Flow Rate" field to set custom flow rate during the wash. Custom protocols can only be saved once all 4 fields have been set.



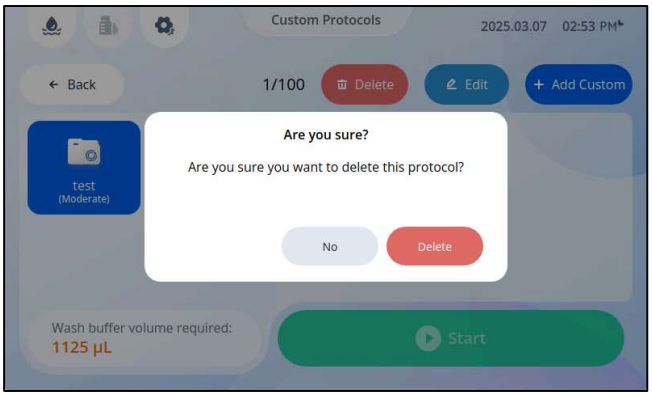
- “Edit”

  Edits existing custom protocol attached to selected plate type. Custom protocols can only be saved once all 4 fields have been set.



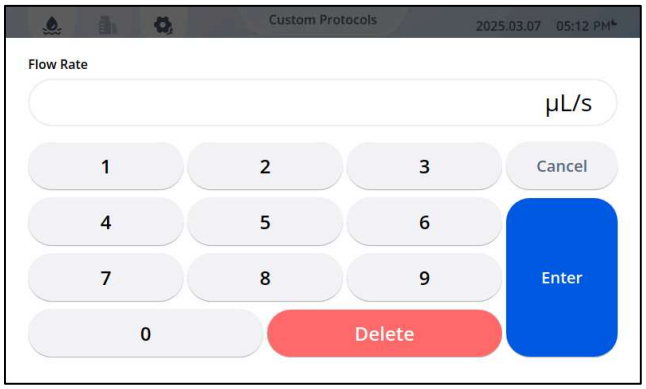

- “Delete”

  Deletes existing custom protocol attached to selected plate type. User will receive a warning prompt to confirm deletion. Deletion of custom protocol is permanent.




- “Flow Rate”

  Sets the dispensing and aspirating fluid flow rate in µL/sec. Tap on the text field to reveal a keypad for direct value entry. Tap “**Enter**” to confirm the value entry.

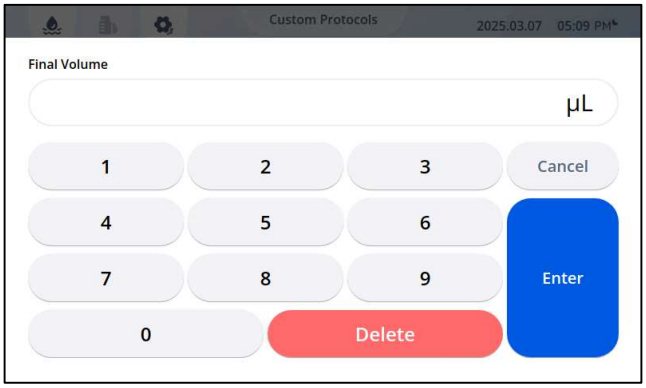


- “Final Volume”

  Sets the final/returned volume (in µL) required in each well in the plate after the wash(es) are completed. Tap on the text field to reveal a keypad for direct value entry. The lower and upper limits are dependent on plate type (in µL).

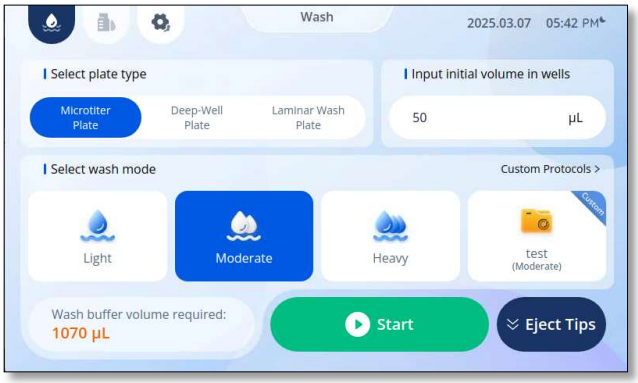
  The factory default final volume setting for Pluto Wash is 50 µL.

  The final volume of Laminar Wash is fixed at 25 µL and is not user customizable.




- “Wash” Button

  Press the [Wash] button to begin the wash cycle. During the wash, a pop-up page displays the progress of the wash.




- “Pause”, “End” & “Recover”

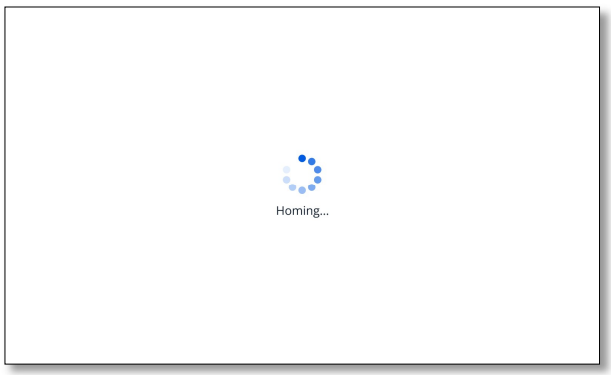
  When the washing operation is in progress and should a need arise to pause the wash process, the user can select the [Pause] button to temporarily halt the washing operation.

  User can choose to continue with the wash process by pressing on the [Resume] button.

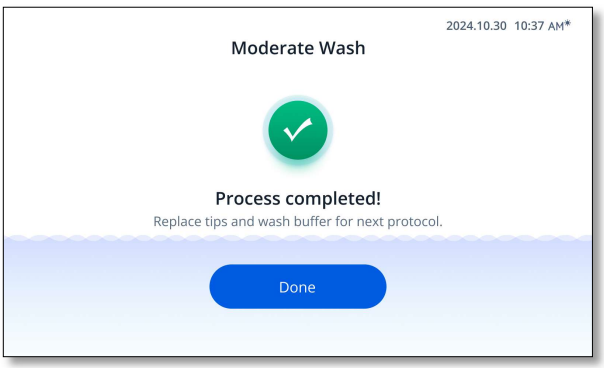
  User can alternatively choose to end the wash process by pressing on the [End] button.

  User will be subsequently prompted to select the [Recover] button in the following screen to home the fluidics. The touchscreen will go back to the “Wash” main menu upon successful recovery from stopped operation.



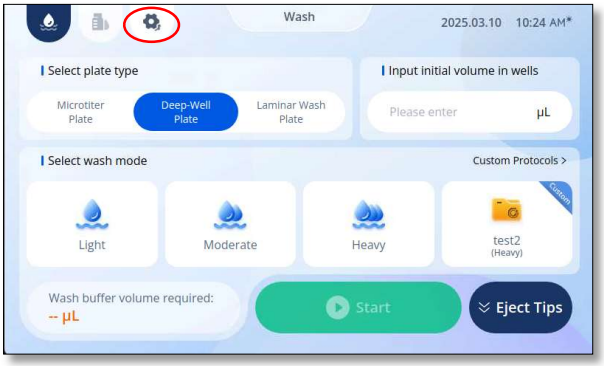



After the wash cycle is complete, a page will indicate the completion of wash. User is also reminded to replace tips and wash buffer.



# System Settings

Click on the top left corner of the screen for quick access to additional system functions. Tapping this icon opens a menu with various informational and setting options, including Set Date and Time, User Manual, Change Language, Version Information and Export Log.

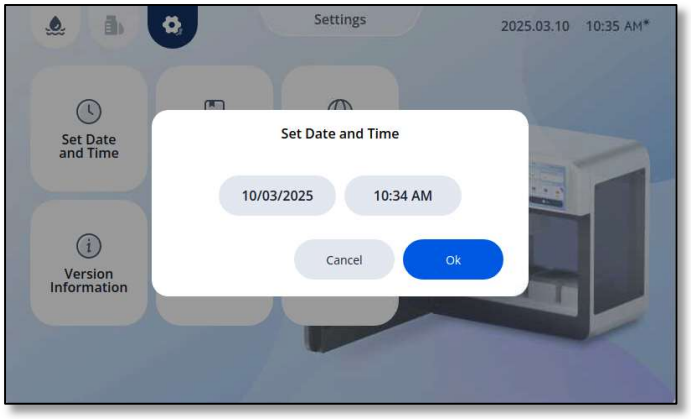



# Settings

The “Settings” page offers key options for adjusting system details and accessing essential information.

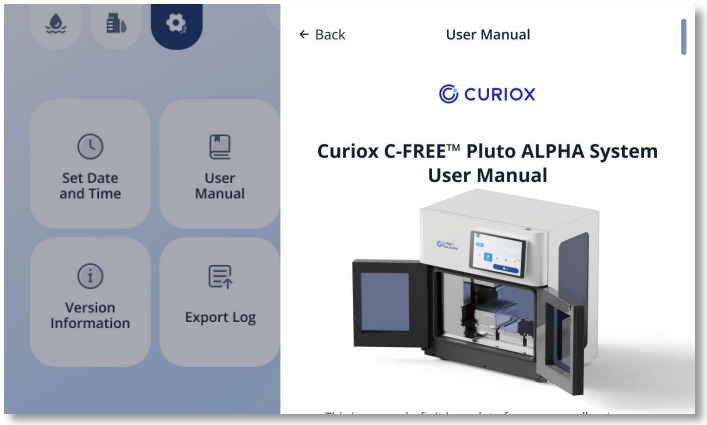
## Set Date & Time

Users can change the system's date and time settings. The equipment uses real-time clock for accurate event logging/timestamping. Users can input the desired Date and Time in the fields provided and confirm the settings by selecting the [Ok] button.



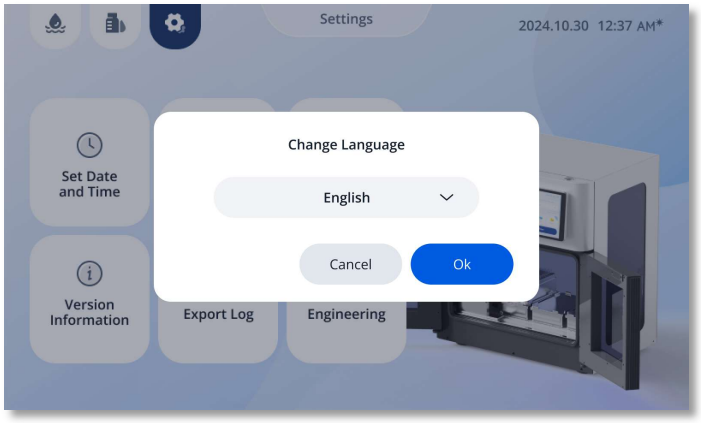

## User Manual

Provides convenient, on-screen access to a PDF version of the Curiox C-FREE™ Pluto ALPHA System User Manual. This digital format enables users to quickly refer to comprehensive instructions, troubleshooting guides, and detailed system information directly within the interface.



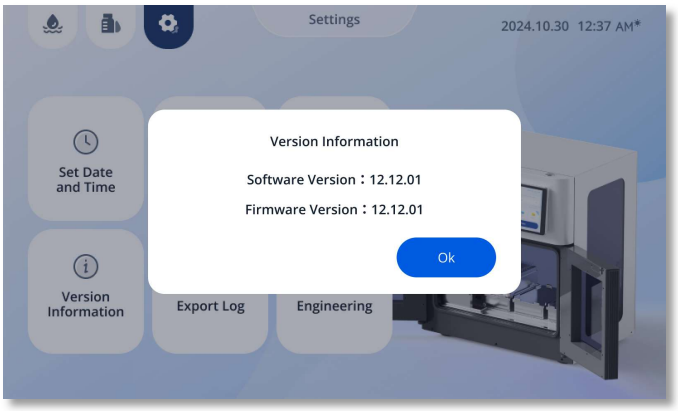
## Change Language

Users can choose their preferred language for the system interface. By selecting a language and pressing the [Ok] button, users can set the interface to their chosen language. Only English and Chinese languages are currently supported.



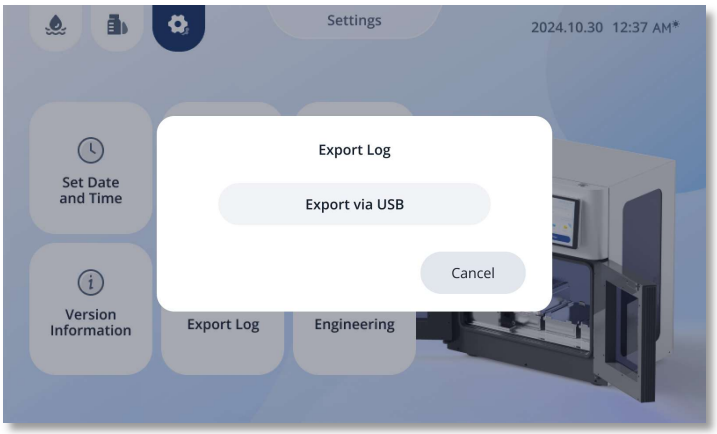

## Software & Firmware Version

Provides information on the current versions of the system's software and firmware. Users can also select [Ok] to exit the page after reviewing the version details.



## Export Log

ALPHA automatically logs every action for traceability. Export the record via USB to include in your lab's audit trail. The [Export Via USB] button allows users to export the system log history data when a USB is connected to the machine.



Chapter 5

# Maintenance and Troubleshooting

## Chapter Overview

- Maintenance Schedule
- Common Problems for Troubleshooting
- Technical Support
- Decontamination Procedure

# Maintenance Schedule

Keep your Pluto ALPHA System running smoothly and efficiently by following this recommended maintenance schedule.

| Action | Daily | Weekly | Monthly | As Required |
|---|---|---|---|---|
| Wipe all surfaces of the unit enclosure with a cloth moistened with 70% ethanol | ✓ | | | ✓ |
| Send unit to Curiox Biosystems for service. Decontaminate washer and complete Appendix B. | | | | ✓ |

# Common Problems for Troubleshooting

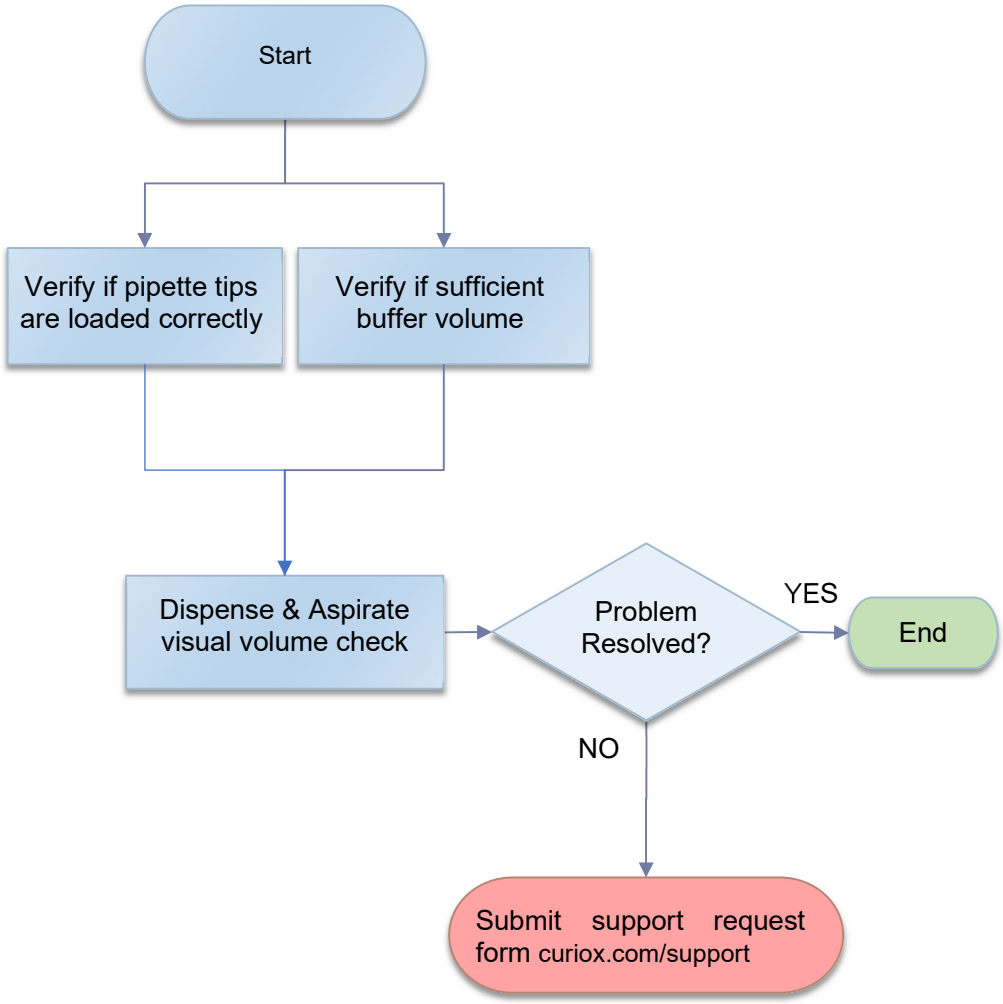
**Problem 1: Display panel is not lit up / Machine has no power / Failure to initialize / Motor error**

Possible cause: Power is not switched on, Pluto ALPHA System is not plugged into electricity supply, or the wrong power adaptor is being used.

- Ensure the power jack is properly connected to the equipment and that the power is switched on.
- Make sure the correct adaptor is used and that it is working.

## Problem 2: Failure to dispense and aspirate properly / Inconsistent residual volume

The flowchart below should be used to troubleshoot this process.



# Technical Support

Kindly visit us at curiox.com to submit a support request form or email us at sales@curiox.com if you require technical support or advice.

# Decontamination Procedure

For environmental health and safety reasons, it is imperative that users decontaminate the surfaces of the Pluto ALPHA System prior to transport to a different laboratory, or back to Curiox Biosystems for servicing and maintenance. The step-by-step procedure below is a generic decontamination guide, using chemicals which are compatible with the materials in the Pluto ALPHA System.

1. Remove all biological contents from the Pluto ALPHA System. Then turn off the equipment and unplug from the power supply
2. before disconnecting the power jack.
3. While wearing gloves, clean all surfaces of the Pluto ALPHA System with warm soap solution. This initial step in decontamination is important as it ensures that any surface microbes will not contaminate and reduce the efficiency of the chemical disinfectant in the next step.
4. Moisten (do not soak) a cloth with 70-85% ethanol. Wipe all surfaces of the Pluto ALPHA System enclosure. Wait for 20 minutes.
5. Moisten a cloth with deionized water and wipe all surfaces previously cleaned with ethanol. Dry the wet surfaces with a clean cloth. Ensure all used cloths are disposed of in a biohazard bag/container.
6. **If intended for transport:** Seal the machine in an airtight bag prior to transport. If you intend to return the device to Curiox Biosystems for servicing or maintenance, please fill out the Acknowledgment of Decontamination form found in Appendix A).

Appendix A

# Acknowledgment of Decontamination

# Acknowledgment of Decontamination Form

Decontamination is required prior to returning the Pluto ALPHA System to Curiox Biosystems for reasons such as servicing and maintenance. It is required that you fill out this form to acknowledge that decontamination has been conducted on the equipment. Not doing this may result in the return of the equipment to your address for decontamination.

| | |
|---|---|
| PRODUCT SERIAL NO. | |
| CONTACT INFORMATION | |
| Dr./Mr./Mrs./Ms.<br>(Please circle accordingly) | JOB TITLE |
| NAME | EMAIL ADDRESS |
| COMPANY | PHONE NUMBER |
| DECONTAMINATION INFORMATION | |
| DECONTAMINATION METHOD | |
| DECONTAMINATION DATE | |
| ACKNOWLEDGEMENT | |
| I hereby acknowledge that this piece of equipment has been decontaminated and sealed in accordance with the procedure recommended in this manual prior to shipment to Curiox Biosystems. To the best of my knowledge, the equipment is safe to handle by the receiving personnel.<br><br>Name _____<br><br>Signature and Date _____ | |

Appendix B

# Purchase Information and Feedback

# Purchase Information and Feedback Form

| PURCHASE INFORMATION | |
|---|---|
| PRODUCT SERIAL NO. | |
| PURCHASED BY | PURCHASED FROM |
| COMPANY | DISTRIBUTOR |
| ADDRESS | DATE OF PURCHASE |
| PHONE | DATE OF DELIVERY |
| FAX | |
| CONTACT INFORMATION | |
| Dr./Mr./Mrs./Ms.<br>(Please circle accordingly) | JOB TITLE |
| NAME | EMAIL ADDRESS |

| FEEDBACK (PLEASE CHECK/COMMENT ACCORDINGLY) | | | | | |
|---|---|---|---|---|---|
| | Excellent | Good | Average | Poor | Comments |
| User Guide Overall | | | | | |
| System Ease of Use | | | | | |
| System Reliability | | | | | |
| Operating Costs | | | | | |
| Overall Experience | | | | | |

For more information, visit **www.curiox.com** or contact sales**@curiox.com**

# Trademark



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