



# LoopiX Cloud Software

Control software for the LoopiX<sup>®</sup> automated devices

## User's Manual

Version 1.0 – March 2024

To be used with LoopiX<sup>®</sup> devices only

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## 1 Overview

**Workspace (Domain):** A private domain for the LoopiX Cloud where all informational and analysis data is hosted. A single administrator manages the workspace.

**Firmware:** firmware built into the LoopiX<sup>®</sup> that enables it to operate. LoopiX<sup>®</sup> firmware can be updated via a USB connection to a computer.

**SaaS:** (Software as a Service), online software hosted on a cloud and available from a browser. SaaS software requires no downloading or installation before it can be used.

## 2 Prior Information

This user's manual is the propriety of Loop Dee Science World Wide. Any copy or reproduction without Loop Dee Science World Wide's prior approval is strictly prohibited. All users must read the manual before using the LoopiX Cloud software, to ensure full understanding of the associated materials and processes.

This user's manual is intended solely for the LoopiX Cloud software and not the LoopiX<sup>®</sup> device. The LoopiX<sup>®</sup> device user manual is available at the following link:

[www.loopdeescience.com/downloads](http://www.loopdeescience.com/downloads)

## 3 Technical Support

Loop Dee Science provides customer support for all questions, technical issues, and services related to LoopiX Cloud software. For assistance, please contact our support team:

Adress:           Support technique  
                      Loop Dee Science  
                      100 rue Philippe LIVRY-LEVEL – 14760 Bretteville sur Odon.

Phone:           +33 231 730 791 (9:00 à 17:00 / UTC+2)

Mail:             [support@loopdeescience.com](mailto:support@loopdeescience.com)

## 4 General Introduction

LoopiX Cloud software is a SaaS interface for control, data acquisition, and communication with LoopiX<sup>®</sup> devices. The LoopiX Cloud software is intended for LoopiX<sup>®</sup> users and to be combined with the LoopDeetect detection kits range.

The main features of the LoopiX Cloud software are as follows:

- Remote computer-based communication and control of LoopiX<sup>®</sup> devices to conduct molecular biology analyses.
- Analytical data obtention, storage and centralisation.
- Set up and programming LoopiX<sup>®</sup> devices.

This software is designed to work only with LoopiX<sup>®</sup> devices.

LoopDeeScience World Wide will not be held responsible for any degradation of the materials supplied in case of wrongful use of the software. Read this manual carefully before using the LoopiX Cloud software is paramount.

## 5 System Requirements

LoopiX Cloud software must be used with a computer having the following characteristics:

Operating System:

- Mac OS 10.14 (Mojave) or above
- Windows 10 or above

Supported Browsers:

- Microsoft Edge Version 113.0.1774.3 or above
- Google Chrome Version 113.0.5672.127 or above

Bluetooth 5.0 or above. (In the event of incompatibility, we recommend using the “ASUS BT 400” Bluetooth Dongle).

LoopiX® Device:

- AMLOS-ENS-43 or above
- Firmware 20240124\_143000 or above

We strongly advise you to install updates as soon as available.

## 6 Connecting to the LoopiX Cloud

The software is available at the following link: <https://cloud.loopdeescience.com>

Please see your administrator to create a session.



## 7 Home Page

The software always starts on the “**Home**” page:

The screenshot shows the LoopDee Science Home page. A callout box labeled "Name of the Workspace (Domain)" points to the "Loop Dee Science" logo in the top right corner. Another callout box on the left points to the navigation menu, which is detailed in a separate diagram. A third callout box on the right points to the user profile dropdown menu, which is also detailed in a separate diagram.

**Navigation Menu:**

- Pilot
- Menu
- « History » Menu
- « Batches » Menu
- Workspace (Domain)
- « Informations » Menu

**User Profile:**

- Click on logo to change your password or log off your session.
- Loop Dee Science
- Julie GONDOUIN  
jgondouin@loopdeescience.com
- Change password
- Log out

## 8 Workspace administration (Domain)

The workspace administrator has access to all the 'control' functions. (LoopiX control tools and analysis data acquisition). The administrator can also:

- Create control users to enable access to the control menu and the operator results history.
- Access all results generated by operators already linked to the workspace.
- Access all results generated by operators previously linked into the workspace.

### 8.1 Add new user:

- Click on the “ Informations” menu.
- Then click on «  ».
- Add user's name, E-Mail, and password:

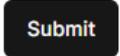
< Création d'un utilisateur

User name

E-Mail

Password

**Submit**

- To finish, click on «  ».
- The user will receive the necessary information in an automated E-Mail.

NB: A license includes one sole administrator and 4 operator profiles. There is one sole administrator profile for one workspace. To add “operators” licenses, contact your reseller.

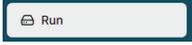
## 9 Software Operations

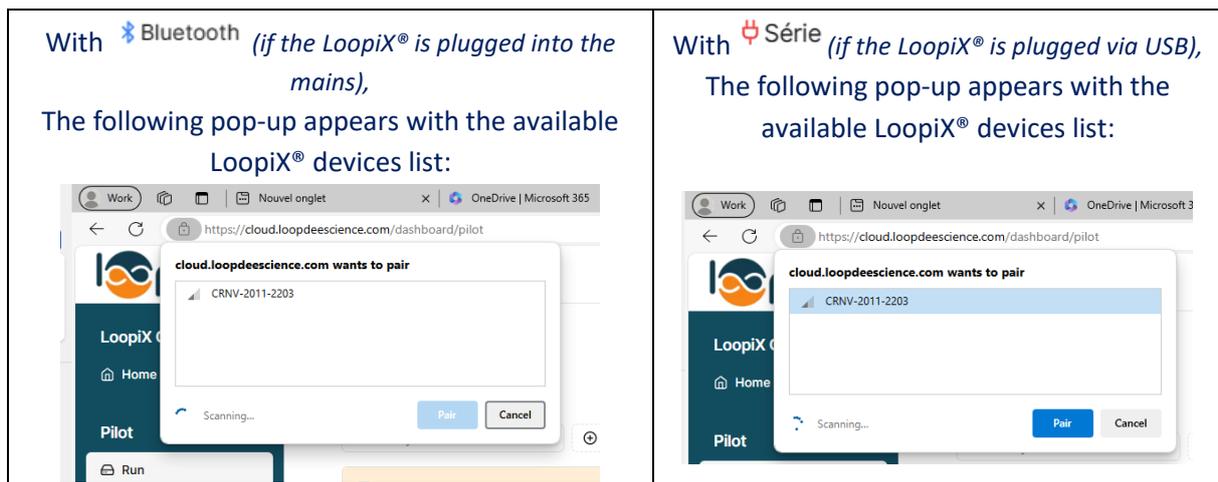
### 9.1 Connecting the LoopiX® device to the software

Requirements:

- LoopiX® must be plugged in and in the computer's Bluetooth range.

#### 9.1.1 Connecting one to several LoopiX® to the software

- a. From the «  » menu click on «  »:



- b. Select the needed LoopiX® devices.
- c. Click on «  » to pair the device.  
LoopiX® devices show up in the «  » menu.

NB: A LoopiX® connected to a Bluetooth device will no longer be visible to other devices.

**Connected devices** 

Search by device  ⊙ Status

<input checked="" type="checkbox"/>	Device	T°C	Pilot.table.columns.analysis	Batch	Sample type	Mode	Status
<input checked="" type="checkbox"/>	CRNV-2009-2017	30.01	<input type="text" value="Norm analyse"/>	<input type="text" value="Lot"/>	<input type="text" value="Type d'échantillon"/>	BLUETOOTH	  

**Caution:** Do not in any circumstances run an analysis with a LoopiX® plugged in on the USB port of the computer, as it may damage your computer. You will need a specific adaptor to be able to control a LoopiX® from your computer's USB port.

#### 9.1.2 Logging LoopiX® out of the software

A LoopiX® will sign out of the device in the following cases:

- By the user knowingly signing out by clicking on « ... », then «  Déconnecter » / "log out".
- Software complete shut down
- The computer is out of the LoopiX® devices Bluetooth range

- Shutting down the computer or the device

In all cases above, logging out will not impact the operation or status of LoopiX® devices in any way, as they operate in autonomy.

**In the event of an unintended logout make sure to reconnect the LoopiX® WITHOUT pressing the front panel button, as it will make it change mode.**

## 9.2 Batches: Batch Management

### 9.2.1 Register a new batch

- Starting from “**Home**”, click on the “**Batches**” menu:

The screenshot shows the 'Your Lots' page in the LoopiX Cloud interface. On the left, a dark sidebar contains navigation options: Home, Pilot, Run, History, Batches (highlighted), Domain, and Informations. The main content area has a search bar 'Search by name' and a table with the following data:

Batch name	Date added	Use-by date	
DEM999999A/1	24/10/2023	31/12/2099	...

Below the table, it says '0 of 1 row(s) selected.' and 'Rows per page 10 Page 1 of 1'. An orange button '+ Enregistrer un lot' is located in the top right corner.

- Click on « **+ Enregistrer un lot** » / “**register a new batch**”
- Fill in the batch number on the bag label and click on “**Ajouter**” / “**add**”:

**Enregistrer un lot**  
Vérifiez bien que le lot que vous enregistrez est correctement écrit.

Code-Barre ||||

SAL260723A1

Annuler **Ajouter**

- The batch is automatically saved after a few seconds and the batch list is displayed as follows:

The screenshot shows the 'Your Lots' page after a new batch has been added. The table now contains two rows:

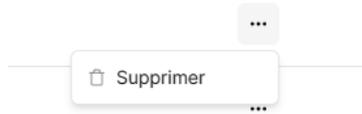
Batch name	Date added	Use-by date	
DEM999999A/1	24/10/2023	31/12/2099	...
SAL260723A1	14/06/2024	26/07/2024	...

Blue boxes highlight the new row's data. Callout boxes with arrows point to these fields:

- Batch number (pointing to SAL260723A1)
- Date batch was added to software (pointing to 14/06/2024)
- Expiry batch date (pointing to 26/07/2024)

### 9.2.2 Erase a batch

- a. In the «  Batches » menu, click on « ... » of the batch you want to erase. The following message pops up:



- b. Click on the «  Supprimer » icon to erase the batch. The erased batch will no longer appear in the «  Batches » menu and will no longer be available in the «  Pilot » page.

### 9.2.3 Search an existing batch

In “Batches” menu, fill in the necessary information in the “**Name Search**” window:

#### Your Lots

<input type="text" value="SAL"/>	<input type="text"/>	Reset X
<input type="checkbox"/>	Batch name	Date added
<input type="checkbox"/>	SAL260723A1	14/06/2024

0 of 1 row(s) selected.

### 9.3 Meaning of LoopiX® state logos on the software

Logo	Status	Meaning
	Standby mode	The LoopiX® device is on standby, ready to run an analysis
	In operation	Load configuration or Checkup
	In operation	An analysis is underway, at the amplification stage
	In operation	An analysis is underway, at the thermal lysis extraction stage
	Pending	The LoopiX® device is awaiting an intervention to complete the analysis
	Outcome	The analysis is complete, with a negative result.
	Outcome	The analysis is complete, with a positive result.
	Error	The standby period has been exceeded, the LoopiX® device is in error. You need to restart the current analysis.
	out of order	The LoopiX® has broken down, contact Loop Dee Science support team.

## 9.4 Performing analysis with a LoopiX®

### Requirements:

- Have at least one batch of kit registered in the software (cf. chap. 9.2.1)
  - Have at least one LoopiX® on standby, connected to the software (cf. chap. 9.1.1)
- a. Carry out testing according to the LoopDeetect kit's corresponding protocol.
  - b. From the « **Pilot** » menu in « **Run** », select the LoopiX® that will perform the analysis:
  - c. Fill in the following information:

Device	T°C	Pilot.table.columns.analysis	Batch	Sample type	Mode	Status
<input type="checkbox"/> CRNV-2009-2017	30.07	Sample 123456-001	SAL260723A1	Type d'échantillon	BLUETOOTH	 ...

Sample number

Write the batch number as the one on the reaction bag label. (Previously registered in the software (cf. chap. 9.2.1))

To be determined according to the protocol of in-use kit

**Amplification:** The LoopiX® amplifies the target.

1. **Amplification:** The LoopiX® amplifies the target directly
2. **Lysis + Amplification:** The LoopiX® extracts the sample with thermal lysis and then amplifies the target.

- d. Press «  » to start the analysis.

NB: The software sends to the LoopiX the analysis parameters according to:

- o The Analysis type (Lysis then amplification or Amplification alone)
- o The target to be analysed (defined by the batch number of the kit used)

- e. LoopiX® state changes, the analysis process has started

NB: It is possible to stop analysis in progress by pressing the «  » button.



**Caution, this action cannot be reversed.**

9.4.1 Case of a sample already extracted:

a. **The LoopiX® amplifies the target directly:**

<u>LoopiX Cloud</u>	<b>LoopiX® status LED</b>
	Flashing yellow LED 

b. **The LoopiX® then reads and interprets results:**

<u>LoopiX Cloud</u>	<b>LoopiX® status LED</b>
Positive result:  Negative result:  Results are automatically added in the LoopiX cloud history.	Continuous red LED  Continuous Vert LED 

9.4.2 Case of a sample not yet extracted:

a. **The LoopiX® extracts the sample by thermal lysis:**

<u>LoopiX Cloud</u>	<b>LoopiX® status LED</b>
	Flashing red LED 

b. **Post completing lysis, the LoopiX® pauses:**

<u>LoopiX Cloud</u>	<b>LoopiX® status LED</b>
	Flashing blue LED 

c. **Carry out the protocol as per the LoopDeetect kit instructions**

d. **Press on «  » or press on the LoopiX® front panel button.**

e. **The LoopiX® amplifies the target:**

<u>LoopiX Cloud</u>	<b>LoopiX® status LED</b>
	Flashing yellow LED 

f. *Lastly, the LoopiX® reads and interprets the result:*

LoopiX Cloud	LoopiX® status LED
Positive result: 	Continuous red LED 
Negative result: 	Continuous green LED 
Results are automatically added in the LoopiX cloud history.	

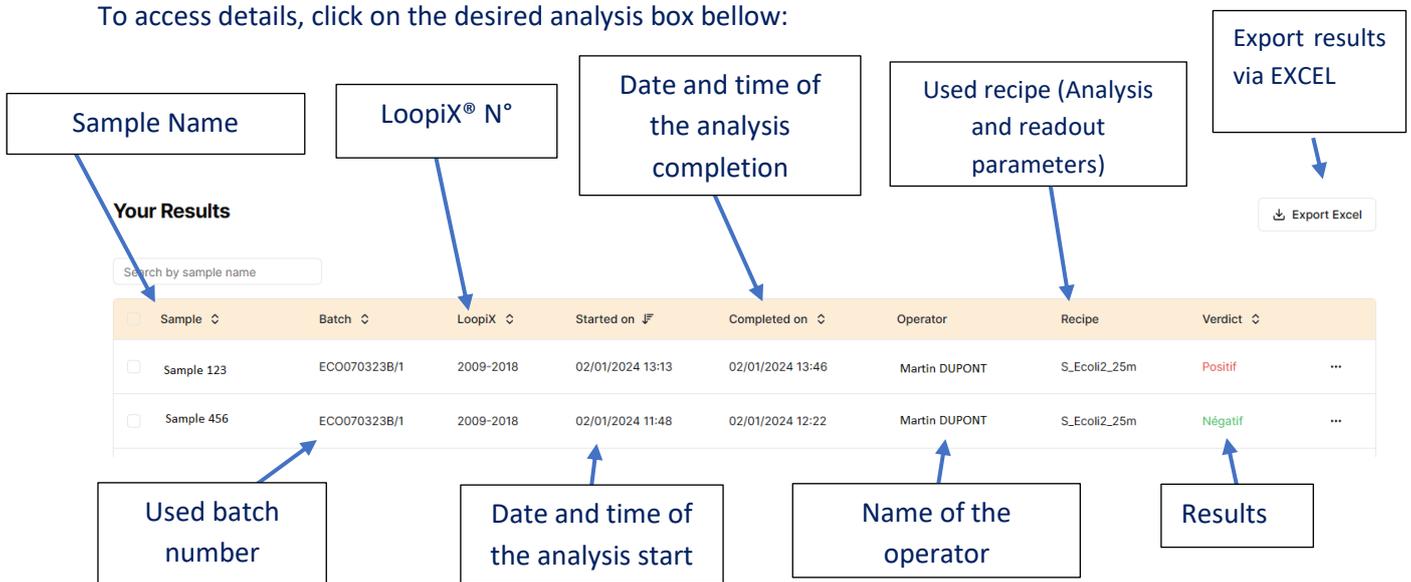
## 9.5 History

To access history, go in the navigation bar and click on the “**History**”.

You can find analysis results in chronological order (most recent to oldest) in the « **History** » menu.

A result is automatically incremented as soon as a the LoopiX® in verdict mode is connected to the software. In addition, when connected to the software, the software retrieves automatically results of the last analysis performed with a LoopiX®.

To access details, click on the desired analysis box bellow:



The screenshot shows a table of analysis results with the following columns: Sample, Batch, LoopiX, Started on, Completed on, Operator, Recipe, and Verdict. Callouts point to specific fields:

- Sample Name**: Points to the 'Sample' column.
- LoopiX® N°**: Points to the 'LoopiX' column.
- Date and time of the analysis completion**: Points to the 'Completed on' column.
- Used recipe (Analysis and readout parameters)**: Points to the 'Recipe' column.
- Export results via EXCEL**: Points to the 'Export Excel' button.
- Used batch number**: Points to the 'Batch' column.
- Date and time of the analysis start**: Points to the 'Started on' column.
- Name of the operator**: Points to the 'Operator' column.
- Results**: Points to the 'Verdict' column.

Sample	Batch	LoopiX	Started on	Completed on	Operator	Recipe	Verdict
Sample 123	ECO070323B/1	2009-2018	02/01/2024 13:13	02/01/2024 13:46	Martin DUPONT	S_Ecoli2_25m	Positif
Sample 456	ECO070323B/1	2009-2018	02/01/2024 11:48	02/01/2024 12:22	Martin DUPONT	S_Ecoli2_25m	Négatif

NB: Data generated by the LoopiX® software are stored on a secure server owned by Loop Dee Science. The data remains the sole property of the user/company. Under no circumstances will Loop Dee Science or any other intermediary will use the data generated by the software without the user's consent.

## 10 LoopiX® running parameters

Prerequisite: The LoopiX® must be connected to the software.

- From the « **Pilot** » menu, in « **Run** », click on « **\*\*\*** » of corresponding LoopiX®.
- Click on « **Détails** »:



## 11 LoopiX App results synchronization

The analysis results of tests using the LoopiX app can be displayed in the LoopiX cloud. To do so, download the App on a smartphone, and connect to the workspace using the same login and password as the LoopiX cloud.

When the connection is successful, the workspace name appears at the top right of the “**Pilot**” menu screen.

**Caution:** Data synchronization only works from the LoopiX app to the software LoopiX Cloud, not the other way. This entails that the history of results obtained from the LoopiX cloud interface will not be apparent on the LoopiX App.

## 12 Troubleshooting

The LoopiX® does not appear during Bluetooth roaming / Bluetooth connection is failing	<ul style="list-style-type: none"><li>- The device is out of the LoopiX® range</li><li>- LoopiX® are not all plugged in</li><li>- LoopiX® has not been set up with a basic configuration.</li><li>- Other devices have Bluetooth on thus blocking the LoopiX detection</li><li>- The in-use browser is not compatible</li><li>- Computer's Bluetooth isn't available or compatible</li></ul>
No batch can be added	<ul style="list-style-type: none"><li>- The computer's internet connection isn't turned on</li><li>- Wrong spelling of the batch number</li></ul>
Results cannot be shared	<ul style="list-style-type: none"><li>- The computer's internet connection isn't turned on</li><li>- The sending application (mail/drive application, etc.) is not set up properly or not working.</li></ul>

## 13 Document history / Versions follow-up

Revision	Date	Feedback
1.0	March-24	Initial public review