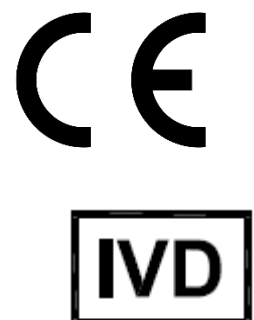


# VIDIIA LAMP Platform User Guide for Research

For Research using the VH-6 Device  
and VH-App.

November 2024

*For in vitro diagnostic use*



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## **Section 1: Intended Use**

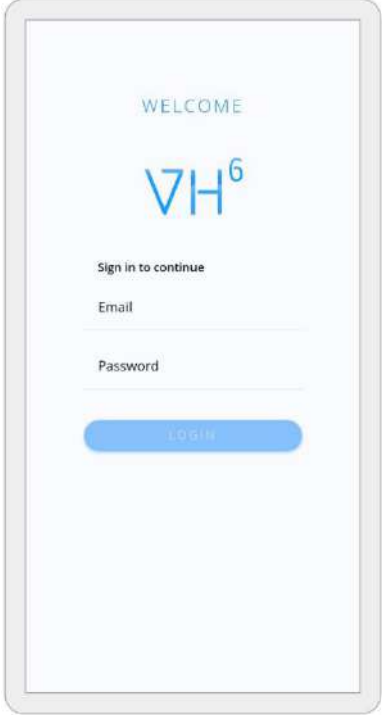
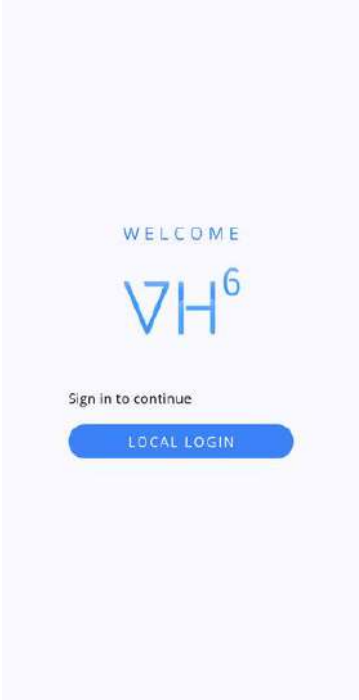
This VIDIIA VH-App Guide is for those doing R&D, if using with a commercial test kit please refer to the VH-App Guide for Diagnostics.

The purpose of this guide is to inform the users on test operation using both the VH-App and VH-6 device, in conjunction with VIDIIA training.

The VIDIIA VH-App and software platform have been designed as an end-to-end software ecosystem, that reduces human errors when collecting samples and performing tests.

The VH-App must be downloaded before any testing commences, for test set-up on the device and detailed artificial intelligence readouts. The app must be downloaded onto an android phone that is dedicated for use ONLY with this testing process.

## Section 2. Sign-in to App

	<p><b>The first time you log-in on the app:</b></p> <p>Ensure the phone is connected to the internet and sign into the VH-App using log in details provided by the VIDIIA technical team.</p>
	<p><b>If you have logged into the app before:</b></p> <p>If you have logged into the app once, you won't need internet access again to log-in.</p> <p>Click the "Local Login" this will prompt you to verify your identity using your local password, fingerprint or face ID.</p>

### Section 3. VH-App orientation

The VH-App is split into three sections: Lab Bench, Lab Book and Settings.

Lab Bench is where all your ‘live’ tests are before you have uploaded them to the cloud. This should be used for starting tests and getting results.

Lab Book is where your previous tests go after you have uploaded them to the cloud. These can be reviewed either on the app or on the cloud.

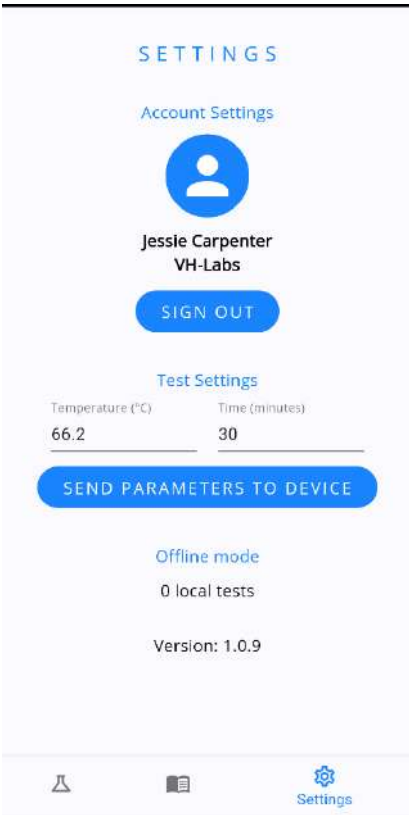
Settings is where you control the next tests time and temperature of amplification, as well as upload completed tests to the cloud.

### Section 4: Performing a test

Prior to commencing the testing process, you must turn on the VH<sup>6</sup> device by connecting it to the mains.

### Section 5. Checking the temperature and time requirements

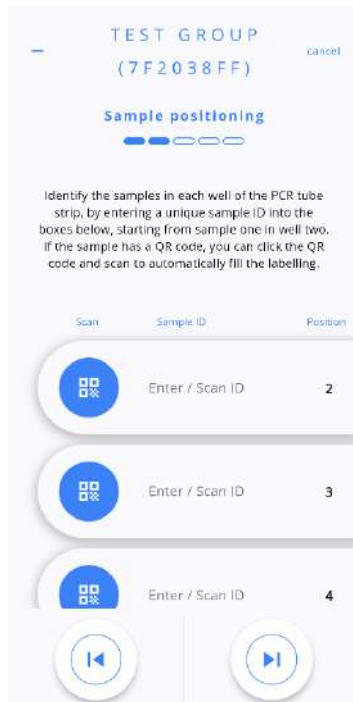
The test time and temperature should be checked before starting each test. The parameters in the settings section of the VH-App will be what is sent to the device when the next test is started. As the device is isothermal, the settings can be sent in advance to the device so it can prepare to get at the right temperature before a test.

	<p><b>Settings:</b></p> <p>Click the “<b>Settings</b>” button on the bottom menu. This section on the app will allow you to change the temperature and time of the test.</p> <p>The devices are set to run constantly at the same temperature as the last test done on them.</p> <p>To ensure the temperature of the device you are next going to test on is correct temperature, put the correct temperature in the settings and click “<b>Send Parameters to Device</b>”. This will prompt you to scan a device. Scan the device you need these settings to be sent to. Do this for multiple devices if needed.</p>
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## Section 6: Starting a test

To get most of the VIDIIA-AI amplification curves, track sample results and more, you need to set-up the test on the companion app.

<p>The screenshot shows the 'LAB BENCH' app interface. At the top, there is a search bar and a QR code icon. Below that is a prominent 'START NEW TEST' button with a plus sign. Underneath, there's a 'Sort by: STATUS' dropdown. A section titled 'IN PREPARATION' contains a table with columns for 'STATUS', 'ID &amp; Status', and 'Time remaining &amp; Date'. Two test entries are visible: one with ID 'F269C862' and another with 'F7798701', both in 'Preparing' status. At the bottom, there are navigation icons for 'Lab Bench', a list, and settings.</p>	<p><b>Starting a new test:</b></p> <p>Click on 'Lab Bench' to access START NEW TEST screen.</p> <p>Press the "START NEW TEST" button to move to the next screen.</p>
<p>The screenshot shows the 'TEST GROUP (7F2D38FF)' screen. It has a 'cancel' button at the top right. Below the group name is a 'Test kit registration' progress indicator with four steps, the first being active. The instructions read: 'Tap the QR code below and scan the QR code on the Mastermix: Once complete, tap the forward button to continue.' There are 'Scan' and 'Test kit ID' labels above a large input field with a QR code icon and the text 'Enter / Scan ID'. At the bottom, there are back and forward navigation buttons.</p>	<p><b>Test Kit Registration:</b></p> <p>If using Vidiia Mastermix – scan the QR code on the packaging to allow for batch tracking.</p> <p>If not using Vidiia Mastermix click the forward arrow (a test ID will be automatically generated).</p>



## Sample Positioning:

Identify the samples in each well of the PCR tube strip, by entering a unique sample ID into the boxes below, starting from sample one in well two.

If the sample has a QR code, you can click the QR code and scan to automatically fill the

Click the forward arrow.



## Linking a VH<sup>6</sup> device to the test:

**IMPORTANT:** Before linking the device, you must ensure there are **NO BUBBLES** present in any PCR tube as these affect the camera function and will produce inconclusive results.



Choose the VH<sup>6</sup> you wish to do to the testing on

**IMPORTANT:** The VH<sup>6</sup> device should be thoroughly cleaned between **EVERY** testing cycle by using 70% alcohol disinfectant or equivalent on all surface areas and inside of wells using a swab or similar.

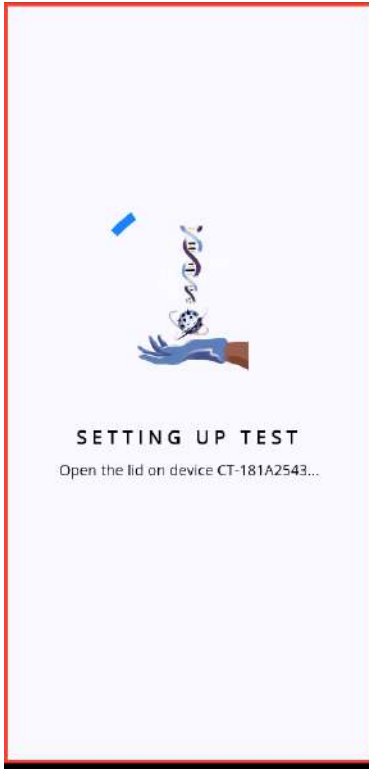
Press the QR button on screen and scan the QR code located on the top of the VH<sup>6</sup> device you are about to use. This will link the test you are about to complete with a VH<sup>6</sup> device.

Press the forward/arrow button at the bottom of the page once complete to go to the next screen.

Once complete, tap the forward button to continue.

	<p><b>Connecting to the VH<sup>6</sup> device:</b></p> <p>A pop-up window will then open on the VH-App to Connect to the device, using temporary Wi-Fi network (from the device).</p> <p>Click Connect, please note that there is a time-out on this prompt.</p> <p>The app will then allow you to set-up a test on the VH<sup>6</sup> device that you chose.</p>
	<p><b>Checking the block temperature:</b></p> <p>Once the connection the VH<sup>6</sup> device is successful, and before starting the test, the app will check the temperature of the device's heating block.</p> <p>If the temperature of the block is different to the one that you set up for the test, the app will give you the current temperature of the bock and an estimated heating time.</p> <p>Please note that if the heating time is too long, the app will abort the test. In that case, you will need to send the parameters again (in the Settings section).</p> <p>Once the block is at the right temperature, the setting up of the test will continue.</p>





## Setting up a test and placing the PCR strip:

The app will send all the test information to the device, and prompt you.

Read the changing text below the progress circle and follow the instructions.

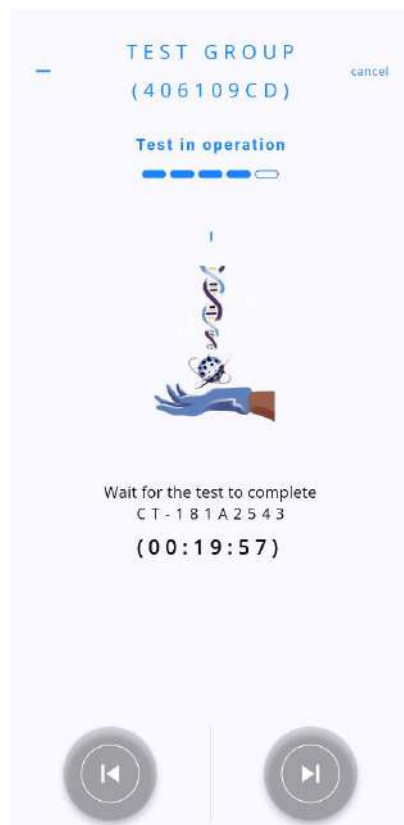
When prompted to open the lid of the device and put in the PCR strip ready to be amplified with the negative control on the left and the positive control on the right, as shown below.



Figure a. PCR Tube order inside VH<sup>6</sup>

**IMPORTANT:** All tube lids MUST be closed securely to avoid cross-contamination and air exposure.

Close the lid on VH<sup>6</sup> device, this should click when shut securely and automatically starts the test cycle.



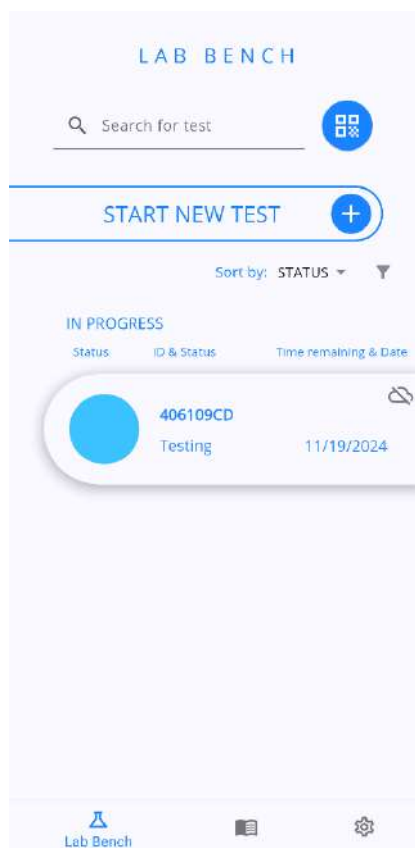
## Test in operation:

The device will have all the information for the test and the app will start a countdown to the test completion.

Click the minimise button to close (left top of the screen) the test and continue in the app while the test is running.

This will take you back to the “Lab bench” where you will be able to see all the tests that are in progress (“Testing”) and the ones that are completed but not yet uploaded to the Cloud.

By clicking on the tests, you will be able to see the progress and the remaining time.



## Section 7: Getting the results of the test.

Once the test is completed, the device will beep and display a note to connect the app. Please make sure that the device displays this note before trying to connect the app.

	<p><b>Select the test you want to get the results from:</b></p>
	<p>Go to the lab bench screen</p> <p>If you are unsure of the device associated with the completed test, click the QR code button and scan the QR code on the device you wish to get results from.</p> <p>This lists all the tests linked to this device. Click the live test you wish to get the results from.</p> <p>This will bring you to a screen showing that the test is completed. Press the forward button (arrow pointing to the right), for the app to fetch the results from the device.</p> <p>The app will show a screen indicating that it is fetching the results from the device, before displaying the test results.</p>

## Section 8. Analysing test results

**(406109CD)**  
CT-181A2543  
**TEST COMPLETED**

Sample ID	Result
Se gblock -3	Positive
Se gblock -4	Positive
Se gblock -5	Positive

**Test details and results:**

The app will display the test results, showing the AI-outputs: Percentages of Positive, Negative and Empty features for each sample, on the final picture taken by the device.

By Scrolling down, you will be able to see the AI-Amplification curves for each sample. These can be put in landscape mode by clicking on the square icon on the top left on the graphs.

In the landscape mode, it is then possible to select samples, to compare their amplification curves with the positive and negative controls ones.

A final output will also be displayed for each sample: Yellow/Positive, Red/Negative or Orange/Inconclusive (see on the left-hand side).

Open the VH<sup>6</sup> device and remove the PCR strip and dispose of it following the appropriate disposal route.

Press the green button on the front of the VH<sup>6</sup> device to reset before starting a new test. Wipe down the VH<sup>6</sup> to disinfect before starting a new test.

Results can be interpreted as follows:		
	Test Result	Explanation
<b>P/+</b>	POSITIVE Yellow	Sample contains amplified DNA or RNA.
<b>N/-</b>	NEGATIVE Red	Sample does not contain amplified DNA or RNA.
<b>I/?</b>	INCONCLUSIVE Orange	Not possible to determine if sample is either Positive or Negative – re-test necessary.
<b>X</b>	EMPTY TUBE	No test contents present in tube.
<b>E</b>	ERROR	VH <sup>6</sup> encountered an issue whilst running a test – re-test necessary.
<p><b>IMPORTANT:</b> It is <b>NOT</b> possible to retest a PCR strip containing samples already amplified.</p>		

## Section 9: Pushing Data to the Cloud

	<p><b>Uploading tests to the Cloud:</b></p> <p>On the “Settings” section of app, click on the “Upload Completed Tests” button and wait while the app takes you through different screens and uploads the tests data to the cloud.</p> <p>Once the upload is complete, the screen will resume back to the settings screen and the data can be reviewed on the cloud (see cloud user guide).</p> <p>The tests that have been uploaded to the cloud are available to the consult in the “Lab book” section of the app.</p> <p><b>IMPORTANT:</b> DO NOT LOG OUT of your device without syncing the tests to the cloud.</p> <p>Please note that tests history is only available on the device on which the tests were performed.</p>
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## Section 10: Important information about the VH<sup>6</sup> device





The VH<sup>6</sup> device should be turned on approximately 30 minutes before testing commences, this is to allow the device to reach the desired temperature.

After test completion and the operator is done with the results on the device screen, press the green button on the front of the VH<sup>6</sup> device to allow the connection of a new test with the device.

The VH<sup>6</sup> device should be thoroughly cleaned between **EVERY** testing cycle by using 70% alcohol disinfectant or equivalent on all surface areas and inside of the device wells using a swab or similar.

### Section 10.1: Power-down of the device

After testing, you must turn off the VH<sup>6</sup> device from the device's screen interface, to restart or power-down the device follow the below steps.

	<p>Press the right arrow to go through the Main menu device options, click the green tick button on the "Power" option.</p>
	<p>Then press the green tick button again for the "Shut down" option.</p>
	<p>Wait for the count down.</p>
	<p>Press either the green tick button to restart the device or turn off the device at the mains.</p>

#### For Technical Support:

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<https://vidiia.com/>