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1 General

Release date: May 2025

Minimum requirements for browser version:

- Microsoft Edge (Chromium): ≥ version 119
- Google Chrome: ≥ version 119

2 New features and improvements

2.1 Software update

- You can now update your software directly from any **version 4.0 or higher** to 5.2 without needing to follow a stepwise installation process.

2.2 Plate Map

- The **Plate Map** editor has undergone a significant redesign to enhance its operation logic and visual arrangement to make it easier to create complex plate maps. For details please see VICTOR Nivo Software Manual, section 3.3.1.1 "Plate Map tab".

2.3 Calculations

- **Well Statistics calculations** are now available for kinetic measurements in the protocol editor, allowing the calculation of **Average, Standard Deviation, %CV, Sum, Median, Maximum and Minimum** values for repeated measurements of a well. Well Statistics are now also available in the **PDF Report** export option.
- The **Stop** button during **stacker kinetic assays** now offers multiple choices: stop immediately, stop after the current plate or stop after the current cycle. If you choose to stop after the current cycle, all remaining plates in that cycle will be measured before stopping. This feature helps you conclude kinetic assays based on the real-time data displayed, ensuring all necessary measurements are captured.
- Formerly, the calculated **Concentration (average)** of a set of replicates has been displayed as "N/A" in a **PDF Report**, even if only one of the replicates was an outlier. Now, the concentration is backfitted correctly if the average value is still within the limits. The same applies to the backfitting of the standards.
- **Kinetic measurement operations** can now also be used in basic arithmetic calculations (**General Calculation**). You can use the new **Cycles** dropdown field to select a single cycle or all cycles.
- **LLD (Lower Limit of Detection)** calculation has been improved. For further details see VICTOR Nivo Software Manual, section "Calculated Results".

2.4 Dispenser

- In dispensing operations, you can now select an **Aspiration mode** to define the volume that it aspirated into the syringe:
 - **Single-well:** Aspiration volume = dispensing volume required for one well
 - **Multi-well:** Aspiration volume = maximum syringe volume, i.e. multiple wells can be processed before the syringe has to be refilled

For well kinetics, **Single-well** aspiration mode is always used so that the timing during execution of the operation is the same for all well measurements. Multi-well aspiration mode would cause a longer delay for some wells when the syringe is filled.

- To ensure the highest quality, the dispenser parameters have been optimized for both speed and minimal volume options.
 - The **minimum dispensing volume** for dispensing operations has been changed to **3 µl** to increase the precision and accuracy of the dispenser.
 - The **default dispensing volume** has been changed to **3 µl**.
 - The number of available **dispensing speeds** has been reduced to three from the previous five. These speeds are available:
 - Medium (100 µl/s)
 - Fast (300 µl/s)
 - Maximum (500 µl/s)

The dispensing speeds "Slow (67 µl/s)" and "Gentle (33 µl/s)" are no longer available. If you run old protocols that still have the slower dispensing speeds set, an error message is shown, prompting the user to change the dispensing speed.

2.5 Export

- Raw data from a **measurement without calculations** can be exported as **PDF Report** now. Be aware that Absorbance spectrum scans are not supported for this feature.
- The **PDF Report** export format now has the following new options available:
 - **Well Statistics:** Well statistics calculation results for kinetics measurement operations.
 - **Measurement Parameters:** All measurement parameters for every operation in the protocol.
- **Automatic export**
 - In **Automatic Export Settings** you can now create up to five separate **export configurations**, each with different settings. All five configurations can be enabled simultaneously.
 - **PDF export format:** In addition to the previously available export formats Excel (XLSX) and CSV, the **PDF** export format is now also available. As with the manual export, you can select the components to be included in the report.
 - **File name template:** You can now define a naming pattern for the exported files. The template field can be edited manually, or template variables can be added by clicking on **Add File Name Variables**. The following variables are available:
 - [InstrumentSerialNumber]: The serial number of the instrument.
 - [ProtocolName]: The name of the measurement protocol.
 - [ProtocolOwner]: The name of the owner of the protocol.
 - [MeasurementDate]: The time and date when the measurement was finished.
 - [ExportDate]: The time and date when the measurement result was exported.

If no file name template is defined, the default template [ProtocolName]_[MeasurementDate] is used. We recommend that you include an element that uniquely identifies every automatic export file, such as the measurement time or export time.

3 Bugfixes

3.1 Kinetic measurements

- Resolved **timing issues in well kinetics** where the first few cycles had shorter intervals than set for intervals less than 2 seconds. Subsequent intervals now maintain the correct timing.
- If in a kinetics protocol the **measurement time** is longer than the **cycle time**, an error message will now be shown correctly.
- **Timing issues** for the first few cycles in plate kinetics have been resolved. For a short interval time (< 2s), the first intervals could be shorter than set.

3.2 Dispenser

- **Priming** is no longer needed for dispenser operations every time the connection to the user interface is interrupted. Only if the dispenser syringe has been emptied, a new priming is required.
- The dispenser is now checked and prepared at the beginning of the measurement, rather than at the dispensing step. This resolves the issue of **irregular timing during kinetic measurements**.
- Well kinetic bottom measurements with a dispense step no longer show a **short delay** between the end of the dispensing step and the start of the measurement.
- Well-Kinetic measurements with a set cycle time and dispensing steps no longer show **irregular timing** in the form of shorter cycles.

3.3 Miscellaneous

- After a software update (no Enhanced Security), the **admin password** is no longer reset to the default password ("Advanced").

4 Known issues

This list covers known issues with the VICTOR Nivo software version 5.2.0.

4.1 Kinetic measurements

Known Issue	Workaround
In kinetics measurements the initial temperature for the first cycle is shown for all cycles in the result file.	Make sure the temperature is stable before starting the measurement. It is also possible to set up the protocol with consecutive end point operations with a "Delay" operation in between. If each repeat is defined as an operation, the temperature at the beginning of the operation is recorded.
In the results of Well Kinetic measurements the parameter "Time (s)" refers exclusively to the first measured well. Other wells can have deviating time points.	Due to the irregular timing in kinetic measurements, the true measurement time points for all measured wells is available in the export format "List - full data with times".

4.2 Filter warnings in Luminescence protocols

Known Issue	Workaround
Misguiding filter warning for Luminescence assays: Nivo warns about a "non-ideal filter selected for the application" though the filters are just perfect for the BRET experiment under consideration.	No workaround

4.3 Nivo Diagnostics

Known Issue	Notice
ABS wavelengths scan has new pass criterion (Nivo with Spectrometer only): The pass criterion for ABS wavelength accuracy has been changed to +/- 3 nm (previously +/- 2 nm). These changes make the ABS wavelength scan more robust to potential outliers.	Please note that the Nivo Diagnostics measurements are not intended to be performance benchmarks, but rather proof the primary functionality of the measurement technologies. The performance of the instrument is not compromised.
In the diagnostic results, the test plate version 1.1 is displayed for FI Top & FI Bottom scans when you open the results recorded with an earlier software version (Results from Nivo < 5.1, Baseline from Nivo < 5.1).	In this context, the test plate version 1.1 indicates the version of the test that was performed, not the version of the test plate.

4.4 Enhanced security

Known Issue	Workaround
A locked (inactive) user account is enabled again if a security admin does increase the account lockout threshold. The reason for this is that the software applies the increased logout threshold immediately.	The security admin must ensure that the chosen security settings are reasonable for his working environment and that they should not be frequently changed in short time intervals. Make sure that no locked account is present if the account lockout threshold is changed.
If the Audit Trail shows a date from the 1970s under " passwordChanged " in the user details, it simply means that the user's password has never been changed.	No workaround

4.5 Internal memory limit & data management

Known Issue	Workaround
When installing the VICTOR Nivo software, the data from the previous versions is only hidden on the internal memory, but no space is freed up. After installation, this old data can no longer be accessed or deleted and reduces the free space on the internal memory.	We recommend deleting old data before updating the software. See also VICTOR Nivo Software Manual, section "Freeing up internal memory".

4.6 Export

Known Issue	Workaround
If a protocol contains multiple kinetic cycles or more than one measurement operation per cycle, the exported PDF report will display only the data table from one operation.	No workaround
Please note that generating automatic exports may take some time. Multiple automatic exports can significantly extend the measurement duration, as the software UI remains inactive until all exports are completed.	No workaround

Known Issue	Workaround
<p>In Automatic Export Settings, it is not clear whether you still need to set a password or whether it has already been set, since the password field is always empty after an export has been confirmed.</p>	<p>If you copy an export, make sure to re-enter the password. Otherwise you cannot confirm or test the export.</p>

4.7 Stacker

Notice

To perform a software update, please follow the instructions in chapter 5 “Software update”, page 8 and note the following additions in step 8:

- If you have installed a stacker module and connected it to the VICTOR Nivo, you must also disconnect the power cord of the stacker module when restarting the device until the blue LED light on the power supply unit has turned off.
- Then, reconnect the power supplies of the VICTOR Nivo and the stacker module, and switch on the VICTOR Nivo reader via the power button.

Known Issue	Workaround
<p>The plastic cap of the magazine sensors at the back of the magazine platform may break off if the magazines are used incorrectly.</p>	<p>Always lower the magazines on the platform first and then carefully slide them horizontally backwards. Do not try to load the magazines from top to bottom. Furthermore, safety metal pins next to the sensor are located on the magazine platform to avoid damage to the sensors. The sensors are also fully functional without plastic cap.</p>
<p>Exporting the results from a single plate right after a stacker measurement is only possible for the last measured plate.</p>	<p>Go to the RESULTS page, select the measurement and click Export. From there you can export the results from any single plate or from all plates.</p>

5 Software update

Important before updating the software

- Check the software version that is currently installed on your instrument (see the bottom of the browser window). If it is lower than **version 4.0**, please reach out to your local Revvity service engineer for support in upgrading the software.
- The user interface is optimized for Google Chrome™ and Microsoft Edge™ (Chromium). Microsoft Internet Explorer™ and Microsoft Edge™ (Legacy) are explicitly no longer supported. Please make sure you are using the latest version of your browser.
- The **Automatic Export Settings** are reset during a software update. Therefore, make a note of the settings before updating the software and restore the settings manually afterwards.
- The **admin password** will be reset during the update (not in Enhanced Security mode). Please set the desired password again after the update.

1. Delete any no longer required data to free up internal memory. It is important to do this **before** installing the update. See also VICTOR Nivo Software Manual, section “Freeing up internal memory”.
2. Download and unzip the setup package **SetupVICTORNivo_5.2.0.X.zip**.
3. Copy the setup file **SetupVICTORNivo_5.2.0.X.exe** to the PC connected to the VICTOR Nivo.
4. Make sure that the VICTOR Nivo is switched on and connected to the PC (via LAN or WiFi).
5. Close the user interface (web browser).
6. Double-click the setup file and follow the VICTOR Nivo setup wizard.
The update process is started.
Do not switch off or disconnect the VICTOR Nivo while the update is running.
Wait until the update is complete before proceeding.
7. Clear the cache of your web browser:
 - a. While in your browser, press **Ctrl + Shift + Del** simultaneously to open the appropriate window.
 - b. Select the check boxes **Cookies and other site data** and **Cached images and files** and click the **Clear Data** button.
8. Restart the VICTOR Nivo:
 - a. Press and hold down the power button on the reader for at least 3 seconds until the light of the button goes out.
 - b. Unplug the power cord until the blue LED light of the power supply has turned off.
 - c. *If stacker module installed:* Unplug also the power cord of the stacker module until the blue LED light of the power supply has turned off.
 - d. Reconnect the power supplies and switch on the reader.

9. Return to the PC and complete the VICTOR Nivo Setup Wizard.
 - a. Confirm that you have cleared the browser cache and restarted the reader (select check boxes).
 - b. Complete and finish the wizard.
10. Open the VICTOR Nivo software in your browser and sign in. In order to ensure data security, the VICTOR Nivo has to be initialized after the software update.

Notice

Please check regularly for software updates on our website:

<https://www.revivity.com/multimode-plate-reader-software-downloads>