RELEASE NOTES

VICTOR Kira™

Software version 1.2.20

1 General

Release date: December, 2025

Minimum requirements for browser version:

- Google Chrome
- Microsoft Edge (Chromium)

For optimal performance, use the latest version of your browser.

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2 Features and improvements

2.1 New features

- **Recalculation option**
  Changes to calculations can now be made to measurement results using the new Recalculate Results tab. This feature allows for quick adjustments without rerunning the protocol, streamlining post-run analysis.
- **PDF export**
  Results can now be exported in a read-only PDF format.
- **Factory Preset Protocols**
  The software now includes 30 factory preset protocols, developed and validated by Revvity's Field Application Specialists. These ready to use protocols help users start measuring immediately and also provide a foundation for building custom protocols.
- **Multi export of results**
  Users can now export multiple results at once, as long as the export is configured in the protocol. The new **Export** column of the results table displays an icon to indicate which results are ready for export.
- **Dual FI Options**
  Users can now configure and perform Fluorescence Intensity (Monochromator) measurements using dual excitation wavelengths, dual emission wavelengths, or excitation-emission pairs. This new functionality supports assays such as FRET, ratiometric measurements, and other dual-emission protocols.
- **Well Statistics (Kinetic)**
  Users can now calculate statistics (e.g., average, %CV) for kinetic protocols. Kinetic statstics can be added to measurements with kinetics in step 4 of the Protocol wizard (Calculations).
- **Translated UI**
  Users can now choose between English and Simplified Chinese from **Settings** > **Languages**. This selection overrides browser language preferences and applies verified translations across the full UI.
- **Fast Cooling**
  When temperature control is turned off, the **Fast Cooling** option starts automatically. You need to click the **Eject** button (or press **LOAD / EJECT** on the instrument) to move the plate carrier outside, enabling faster cooling. During fast cooling, the status light will blink orange and noise of fans can will increase. Once fast cooling is complete, the orange light turns green and the process stops automatically. To finish fast cooling prematurely, click the **Load** button (or press **LOAD / EJECT** on the instrument).

- **Well Scan**:
  - **Well Scan Protocol Config FI & ABS**
    Added **Well Scan** measurement mode for FI and ABS measurement operations. Users can now configure spatial scans within individual wells to capture localized signal variation. Parameters include scan pattern, number of points, and spacing, with built-in validation to ensure compatibility with plate geometry.
  - **Well Scan Live Run View for FI & ABS**
    The Run page features an updated plate map to support **Well Scan** measurements. When the run is in progress, the map shows the first scan point per well. After completion, users can select X and Y coordinates to view values from specific scan positions.
  - **Well Scan Results for FI & ABS**
    Results layout is updated to support **Well Scan** measurements. Users can now toggle between **Plate** and **Well** views to explore scan data by position or well. Display controls are grouped on the left for consistency across measurement types.
  - **Well Scan Export for FI & ABS**
    Well Scan results display in a compact grid format, grouping scan data by well and position in the export. Scan settings are included in the **Measurement Details** section.

2.2 Usability and interface improvements

- **Filter Protocol Grid**
  A new **Filter** button above the protocol grid makes it easier to find specific protocols. Filters can be applied by name, date, operation, and more. Users can add up to five per protocol, with each filter type allowed only once. Applied filters appear as removable chips above the grid, making it easy to see what is active and adjust as needed.
- **New Creator for Duplicates**
  Duplicated protocols now display the signed in user as the creator.
- **Scroll Bar**
  Scrolling is now available in the **Measurement Sequence** panel to improve visibility and acess to all measurement operations.
- **Settings > Edit Plate Type: Cancel behavior can be improved**
  The **Cancel** button in the **Plate Types** editor is now labelled **Reset** to reflect its actual function.
- **Calculations: Add hyphen between calculation and output name for better reading / visualization**
  A hyphen now separates calculation and output names for better readability and visualization when configuring calculations or reviewing calcuated results.
- **Export > File Name: Put entered/default name to end of File name**
  The user configurable **File name** now appears after other fields to help users organize and find files easier after export.

  Example: {ProtocolName}_{RunDate}_{RunTime}_**{Filename}**.{filetype}
- **Rename abs excitation scan**
  To reduce confusion, the ABS **Excitation Scan** is now labeled as **Wavelength Scan** and **Spectrum Scan**.
- **SW Update incl Pyrunner**
  Users can now update both the Kira and PyRunner software through **Settings** > **Update Software**, without assistance from Revvity service.

- **Standard Curve Result: Merge Calibrator and Group Table**
  For standard curve results, Calibrator and Group data now appear in a single view with one row per well. Pagination has been replaced with scrolling for smoother navigation.
- **Improve UX for adding kinetics to measurement cycle**
  Helper text has been enhanced to provide clearer guidance when configuring kinetic measurement operations.
- **New defaults for Standard Curve Calculation**
  Improved default text for X and Y axis of standard curve calcuations. Default axis titles now display “Concentration” for the X axis and “Signal” for the Y axis.
- **Improved Validation Rules for serial fill for Controls and Standards**
  The **Concentration** field in the Plate Mapnow includes enhanced input validation and clearer error messaging when configuring the Standard and Control wells.
- **Improve UX for ABS pathlength correction and measurement optimization protocol configuration**
  The UI now clearly indicates when Pathlength Correction and Measurement Height Optimization are applied by updating the checkbox behavior and layout. Pathlength Correction fields appear only when enabled, and labels identify when measured or optimized values are in use.
- **Update export UI text to be inclusive of both appended and prepended values**
  Updated UI text in the Export configuration to reflect that values may be added to the beginning or end of the file name. The label now reads: "Select values to include in the file name."

2.3 Data accuracy and analysis enhancements

- **Remove Max from Axis Scale for Standard Curve Calculation**
  Previous maximums for X and Y axis scaling have been removed to allow users to create better visualiations of their data.
- **Add ODraw to results file for Absorbance Pathlength Correction**
  Export now includes ABS ODraw results in export when Pathlength Correction is applied.
- **Display of measurement/calculation results and concentrations (number conventions)**
  Measurement and calculation results now follow standardized formatting rules across the UI and export. FI and LUM values display as rounded integers. Abs values round to three decimals, and values greater than 5 will be displayed as NaN and excluded from calculations. Scientific notation is now limited to specific views. In the run view, numbers with 5 or more digits will be truncated with an ellipsis, with the full value displayed on hover. Exported values are capped at 20 decimal places. These updates improve readability, consistency, and support accurate interpretation of results.
- **Run and open a Result: Operation cards for plate and well kinetiks cannot be differentiate**
  Kinetics Measurement cards now label each cycle as "Plate Kinetic Cycle #" or "Well Kinetic Cycle #" to help users distinguish between measurement types.
- **Protocol grid: Wavelengths column empty if operation is inside kinetics**
  Measurement operations within Kinetics now correctly display the selected wavelengths in the **Wavelength** column of the Protocols list.
- **Improve Live View Well Kinetic: busy indicator stays at last cycle when first well is measured**
  When a run is in progress, the measurement card now displays a busy icon and the current cycle number for kinetic measurements. After completion, users can now view indivuidual cycles using a dropdown.

- **UX: Standard Curve Calculation Results > option to exclude outliers**
  Outliers can now be excluded from standard curve calculations in the **Calculated Results** tab. Excluded wells are listed on the export.
- **Signal saturation or non-linearity warning**
  The software now displays a warning when FI measurements exceed linear range or approach detector saturation. Affected results appear in red in the Data and Graph tabs, and a summary is included in the standard Export.
- **Update pathlength correction result to only 2 decimal places**
  Pathlength correction optimization result now displays 2 decimal places, rounded for accuracy.
- **Streamline Export Sections**
  Export is updated to only include relevant and populated sections.

2.4 Instrument control

- **Transport Locking in UI**
  Users can now lock the plate tray from **Settings** > **Transport Locking** before moving the instrument. This feature prevents internal movement and protects components during transport when used with the Kira transport plate.

3 Bug fixes

3.1 Protocol definition > Measurement Sequence

- To prevent users from unintentionally leaving an active scan, access to other screens is now restricted during Pathlength and Measurement Height Optimization. The wizard remains available, along with essential controls like **Load** and **Eject**.

3.2 Run & Results

- The software now correctly shows as "Busy" when a paused protocol is still in progress. Previously, it was possible to re-run the protocol while it was paused. This is no longer allowed.
- When a protocol paused mid-run, the **Run** tab incorrectly showed all measurement operation cards as finished if the user navigated away and returned. The icons now display correctly without needing to resume the run.

3.3 Export

- Improved list format export to ensure accurate placement of kinetic measurement data under the correct operation columns.
- List exports from Absorbance excitation scans with more than 771 data points now display all values correctly. Previously, the last columns were missing or misaligned due to a formatting issue. This did not affect other export types or scan types.

3.4 Settings

- Settings options **Backup and Restore**, **Create Service Report**, **Reinitialize Instrument** and **Update Software** are now disabled while a run is in progress. Previously, some actions could still be performed despite appearing inactive, which could lead to data issues.

3.5 Temperature

- The software update no longer resets internal temperature configuration parameters. The target temperature can now be maintained within a stable range. For detailed specifications, please refer to the user manual.

4 Known issues

4.1 Status bar

Known issue	Workaround
Invalid temperature input accepted: The system currently accepts a target temperature of 0 °C, even though cooling is not supported. This may lead to undefined instrument behavior. Values from 1 to 9 °C are correctly blocked.	Avoid entering 0 °C as a target temperature. Use only supported values between 10 and 65 °C.

4.2 Preset Protocols

Known issue	Workaround
Preset protocol “FI Bottom Well Scan” is shown for instrument configuration without FI bottom: On instruments without FI Bottom hardware, the “FI Bottom Well Scan” protocol may still appear in the list of protocols after update. Running this protocol results in an error state.	Do not run the preset protocol 'FI Bottom Well Scan' on instruments that are not configured with FI Bottom. If the protocol is accidentally executed, recover from the error state by reinitializing the instrument.

4.3 Run page

Known issue	Workaround
Paused protocol shows "completed" icon in measurement card: If a measurement is paused and the user switches tabs, then returns to **Run** view, the measurement cards may show a "completed" icon. Please note that measurements after the **Pause** operation are not completed at this time, and measurement should be resumed.	No workaround

4.4 Protocol definition > Measurement Sequence

Known issue	Workaround
Old kinetic protocols created with a version lower than 1.1 may contain artifacts of the **Shake while waiting** option. The **Shake while waiting** option inside a kinetic operation was removed in 1.1 because it was not functional. Therefore, when you upgrade an existing VICTOR Kira system from 1.0.7 to 1.1, existing kinetic operations may contain artifacts from this removed option when you look into the protocol settings via **Modify**. You can still run such protocols without any issue, but the export file will contain these artifacts. It is recommended to replace such protocols with new ones.	There is no workaround. The only option is to replace this protocol with a new one.
Misleading validation message for Well Scan: The **Distance between points (mm)** field may trigger the following validation message: "Enter a value from 0.1 to 0.9". This message does not reflect the actual upper limit, which is calcuated based on plate dimensions and the number of measurement points. Despite the incorrect message, the validation logic is functioning correctly and will prevent invalid values from being saved.	Users can manually validate the upper limit using the formula: $\mathbf{Limit} = \frac{(1.1 \times WellØ)}{(\mathbf{MaxPoints} - 1)}$ MaxPoints = max number of points in x or y direction Distance = distance between measurement points WellØ = smallest well diameter at either top of well or bottom of well

4.5 Protocol definition > Calculations

Known issue	Workaround
Using more than one unit of measure for concentration is ignored in standard curve calculation: When using the plate map feature of the software to define a dilution for a standard curve calculation and more than one unit of measure is used for your concentration, this is ignored by the software and may affect calculated results.	Use only one unit of measure for your concentration.

4.6 Save and/or exit protocol

Known issue	Workaround
Exit or continue without saving will not remove a previously added operation: Once an operation is added either to measurement sequence or calculation sequence, this is saved automatically and the option to either exit or continue without saving will not remove the operation from the sequence. The option to either exit or continue without saving will only discard the changes of input values.	No workaround, but if a required input is missing, this protocol is invalid and cannot be measured.

4.7 Results

Known issue	Workaround
Wavelength scan in kinetic measurements: Large data sets like excitation and emission wavelength scans inside a plate or well kinetic measurement can cause issues. Results on the **Data** tab may show incorrect values.	It is not recommended to use excitation and emission wavelength scans inside a plate or well kinetic measurement. Exported data and data on the **Run** page are always showing correct values.
Incorrect plate overview in summary: When switching between results with different plate formats (e.g., 384 well to 96 well), the **Plate Overview** may display an incorrect format. This occurs if a 384 well result is selected and then deselected before selecting a 96 well result. The issue is limited to the **Plate Overview** display and does not affect the underlying data.	If you want to view the **Plate Overview** correctly, refresh the **Results** page or reselect the desired result ,after selecting a result with a different plate format.

4.8 Export

Known issue	Workaround
Missing sample type label in export: For protcols using the Sample Type Statistics calculation with Sample Type = All Samples, the standard layout export may omit the “Unknowns” label in the Details of Calculations section, even though the calculation results are included. This is a minor display issue and does not affect the numerical data.	No workaround.
Scan pattern parameter missing in export: For protcols using **Well Scan** as the measurement mode, the **Scan pattern** is omitted from the Details of Measurement Sequence section of the exported file.	In some cases, the scan pattern may be inferred from the measurement result. • Round scan patterns typically show "–" values at the grid corners, indicating positions that were skipped. • Rectangular scan patterns show values across the full grid without skipped positions.

4.9 Settings

Known issue	Workaround
Display of a newly created plate type does not fit into the given frame in protocol wizard step 2: When you add a newly created plate type to a protocol and the display does not fit into the provided frame in step 2 “Plate Map” of a protocol wizard, the plate type does not have matching values stored to the database. Please check the stored values for **Well diameter**, **Well spacing** and all **Well Coordinates** for the plate type.	To avoid this, please duplicate factory preset plate types and edit to adjust the parameters as needed.
Success notification does not always appear after Backup and Restore: In some cases, restoring a backup completes successfully but does not show a confirmation message in the UI. The system may appear unresponsive, even though the restore has finished in the background.	If no confirmation appears after the restore, reopen the browser. If the restore was successful, the data will be available.

5 Useful hints

5.1 Calculations

- **Excel may display basic calculations in date format:**
  When exporting results with a basic calculation, the equation is stored in the results file. This may be displayed in date format in Excel.

5.2 Miscellaneous

- **Screen size may limit function:**
  When using the software on a screen size smaller than specified, some features and/or buttons may be hidden from view.
  Adjust the zoom level in your browser settings by clicking the "..." in the top right-hand corner of the browser window.
- **Cannot delete protocol once it is measured:**
  Once a protocol has been used in a measurement, it cannot be deleted from the database. This is true even if the associated measurement results have been deleted.
- **Decimal separator is always period (.):**
  In the exported file, the decimal separator defaults to period (.) regardless of other settings. The correct decimal separator will be displayed in the user interface, but a period will be used in the exported file.