

**NT8® Release Notes**

Last Updated: 11 March, 2022

Version 4.4.1

March 11, 2022

Added:

- A dialog box to inform you that 24-well plate type currently is not compatible with Plate Copy experiment.
- A dialog box that appears when adding 24-well plate type to the Task List for the first time. This acts as a reminder that users should only fill the protein sample into certain wells of the Protein Tray, i.e. wells number 2, 4, 6 and 8.

Version 4.4 (BETA)

February 24, 2022

Hardware Improvements

Improved Dispensing Feature: Accommodating 24-Well Plate Dispensing Needs

The NT8 hardware now supports 24-well plate dispensing, which includes both sitting drop and hanging drop experiments. The 24-well plate is particularly useful to scale up crystal size by setting up larger protein drop sizes. Moreover, it brings additional convenience during crystal harvesting when performing a hanging drop experiment, where crystals won't bond to the bottom of the plates because of gravity. For more streamlined experiments, the waste station is redesigned to accommodate the 4-tip ejection process, which is a critical sequence in 24-well plate dispensing.

Software Improvements

NT8 Control Software Made More Versatile to Accommodate 24-Well Plate

Aside from the hardware, the NT8 Control Software has also been made more convenient to further support the use of 24-well plates. The software is improved in the following ways:

- **Optimized Plate Type Settings Following 24-well Plate Dispensing**

The **New Plate Type** wizard has also been optimized so you can modify the **Number of Rows** and **Number of Columns** in order to create a new plate definition for a 24-well plate type.

- **More Intuitive Waste Station Task**

For better usability, you now have the option to prepare the number of tips according to the plate type in use. A dialog box will appear when you add a **Waste Tips** task, prompting you to choose the appropriate tips disposal action needed for your next **Dispense/Aspirate** tasks. Choose the **Dispose only 4 tips** option if your next task is to dispense into a 24-well plate and it'll be reflected as the **Prepare Tips** task in the **Task List** panel.

- **Enhanced the Protein Source Interface**

Every time you run an experiment using a 24-well plate, NT8 will show the confirmation message below to make sure you are only filling into the correct wells of the Protein Tray. This behavior also appears when you select this plate type for the first time on any Plate Stations. This helps prevent any protein loss. The Protein Source Station image on the software also has blue indicators to provide visual cues about which wells the tips are aspirating from.

Note: Starting from this version onwards, NT8 supports the use of 24-well plate dispensing as well as creating a new plate definition with 4 rows.

Added:

- A dialog box to inform users that the high volume tips cannot be used for 24-well plate dispensing.

- A dialog box to inform users that the LCP head cannot be used for 24-well plate dispensing.
- A dialog box to inform users that a 24-well plate cannot work with RM Integration yet and is coming soon.
- A dialog box to inform users that the LCP experiment is not supported by the 24-well plate types.
- A dialog box to inform that users cannot assign a Wash Tip task while there are only 4 tips attached to the NT8 head. All of the 8 tips must be attached in order to keep NT8 hardware safe.
- **Prepare Tips** task is automatically added to the **Task List Panel** for 24-well plate dispensing after adding an **Aspirate/Dispense** task.

Improved:

- The liquid detection sensor when aspirating from a Deep Well plate. Now, NT8 will start detecting liquid based on the Deep Well height configuration of a plate type in use.
- *(V3 Hardware only)* The description in the error message that appears when the Z brake skips.

Fixed:

- An issue where the NT8 Control Software kept switching to simulation mode even though the user selected **No** in the confirmation message.