ICELL8® cx CELLSTUDIO™ Application Creation Quick Start Guide

The following information provides a high-level procedure to create application workflows in the ICELL8 cx CELLSTUDIO Software. These instructions assume familiarity with the CELLSTUDIO Application Editor.

For more detailed information about designing an application tailored to your sample and experimental goals or if using custom primer indexes, please refer to the full instructions in the ICELL8 cx Single-Cell System User Manual.

Enter the Application Editor

1. From the main CELLSTUDIO software interface, select **Utilities > Application Manager…**
2. In the *Application manager* window, click on [New].

Configure Properties

1. In the *Application Editor* window, click [Edit] to bring up the *Properties* window.
   - "Dispense pattern type": the largest area of the chip the application will dispense to
   - "Barcode folder"
     - 'None/PrePrinted'—if the application doesn't include an index dispense step
     - Barcode folders—either from prevalidated indexing products or user-defined custom barcode files
   - "Chip type": Specify the chip-type that will be used with the application.
2. Click [OK] to save and continue.

Chip type options mapped to the product name and cat. number.

Chip type	Product name	Cat. No.
250 nl (v)	ICELL8 250v Chip	640183
250 nl (flat)	ICELL8 cx Blank Chip - 250 nl FB	640193
	ICELL8 cx 3' DE Chip	640199
	ICELL8 cx TCR Chip	640200
350 nl	ICELL8 350v Chip	640019

Configure Sample Dispense

1. Click [Add dispense step].
2. In the *Dispense type* window, click on the type of sample the application will use as input (Cells, RNA, or DNA).

NOTES:
- If using cells that will be imaged, this dispense must be first.
- For more guidelines about how to configure for PLUS dispense, refer to the user manual.

- "Name of reagent"—Cannot be edited
- "Dispense volume"—the volume of sample that will be dispensed from the source plate into the ICELL8 chip wells
- "Ask user to remix source plate before aspirating"—check to add pauses in the dispense cycle to allow for resuspending the sample plate, i.e., in the case of a solution that settles quickly
3. Click [OK] to save and continue.

Configure Reagent or Index Dispense

1. Click [Add dispense step].
2. Click on a "Reagent" option or "Index_1" or "Index_2" to add a reagent or index primer, respectively, to the dispense workflow.
   - "Name of reagent"—Names may only contain alphanumeric characters, underlines, hyphens, and/or spaces
   - "Dispense volume"—the volume of the reagent that will be dispensed into the ICELL8 cx chip wells
   - "Apply filter file"—created by CellSelect software or manually. For more information, refer to the user manual.
   - "Ask user to remix source plate before aspirating"—check to add pauses in the dispense cycle (see previous section)
3. Click [OK] to save and continue.
4. Repeat Steps 1–3 as necessary for each reagent and/or primer dispense in the workflow.

Save the Application

1. Click the [Save…] button in the upper, left-hand corner of the *Application Editor* window.
2. In the *Save as…* window, type in a name to identify the application. Names should only include characters, digits, and spaces.
3. Click [OK] to save.
4. Click on the close window button (☒) to return to the application manager window.

Return to the Application Manager

The *Apps* list in the *Application Manager* window should display the new application, and the "Visible" box will be checked.

1. Verify the "Visible" box is checked to ensure it is enabled for use when using the ICELL8 cx Instrument. If it is not selected, click on the box so it is checked.
2. Click [Done] to exit the *Application Manager*.

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