# MetaXpress® 6 Software Guide

Batch Exporting Summary Measurements

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# Chapter Purpose

The purpose of this chapter is to guide the user through batch exporting summary measurements for one or more plates through the **Plate Data Utilities** dialog. Summary measurements refer to measurements regarding the entire image (i.e. total nuclear count, % positive cells, etc.)
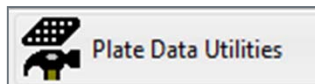
To batch export cell-by-cell data, refer to the corresponding chapter.

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# Setting Up Export of Image Measurements

1. Open **Plate Data Utilities**
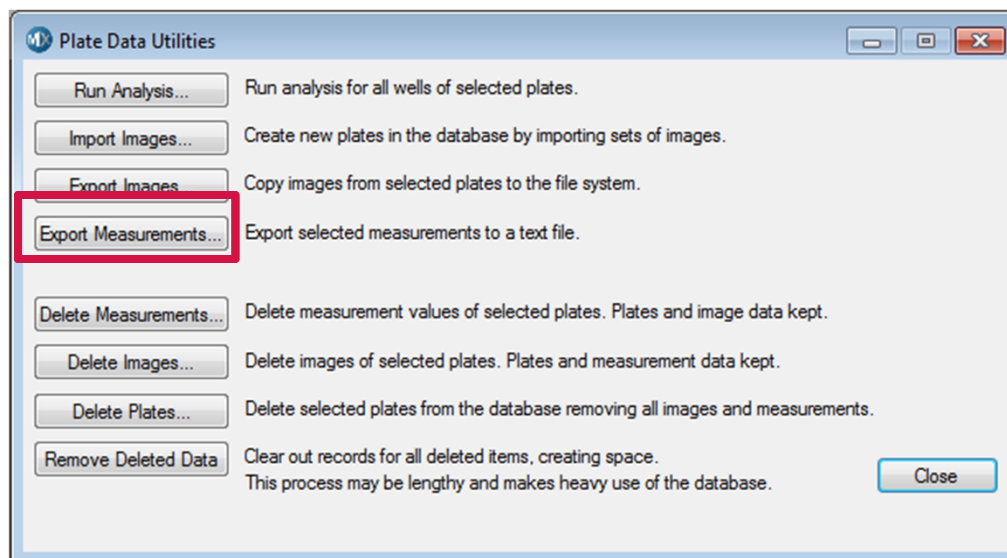   - In the main toolbar click on

   

   **OR**
   - Under the **Screening** menu, select **Plate Data Utilities**

2. Click on the **Export Measurements** button

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# Setting Up Export of Image Measurements

3.  The **Export Measurements** dialog will appear
    *   Select **Image Measurements**
    *   For **Cell Measurements** (cell-by-cell data), refer to corresponding chapter
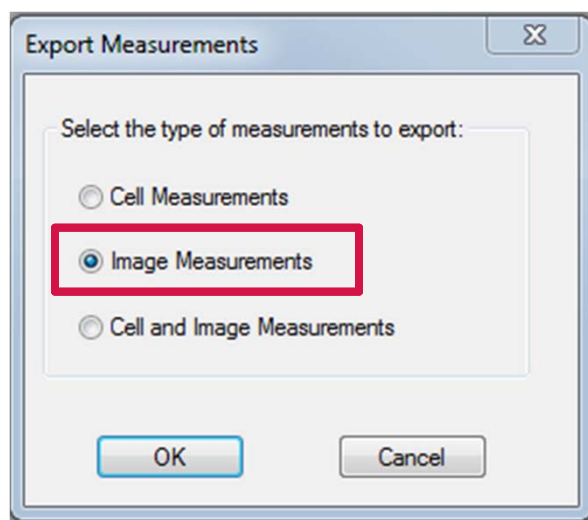
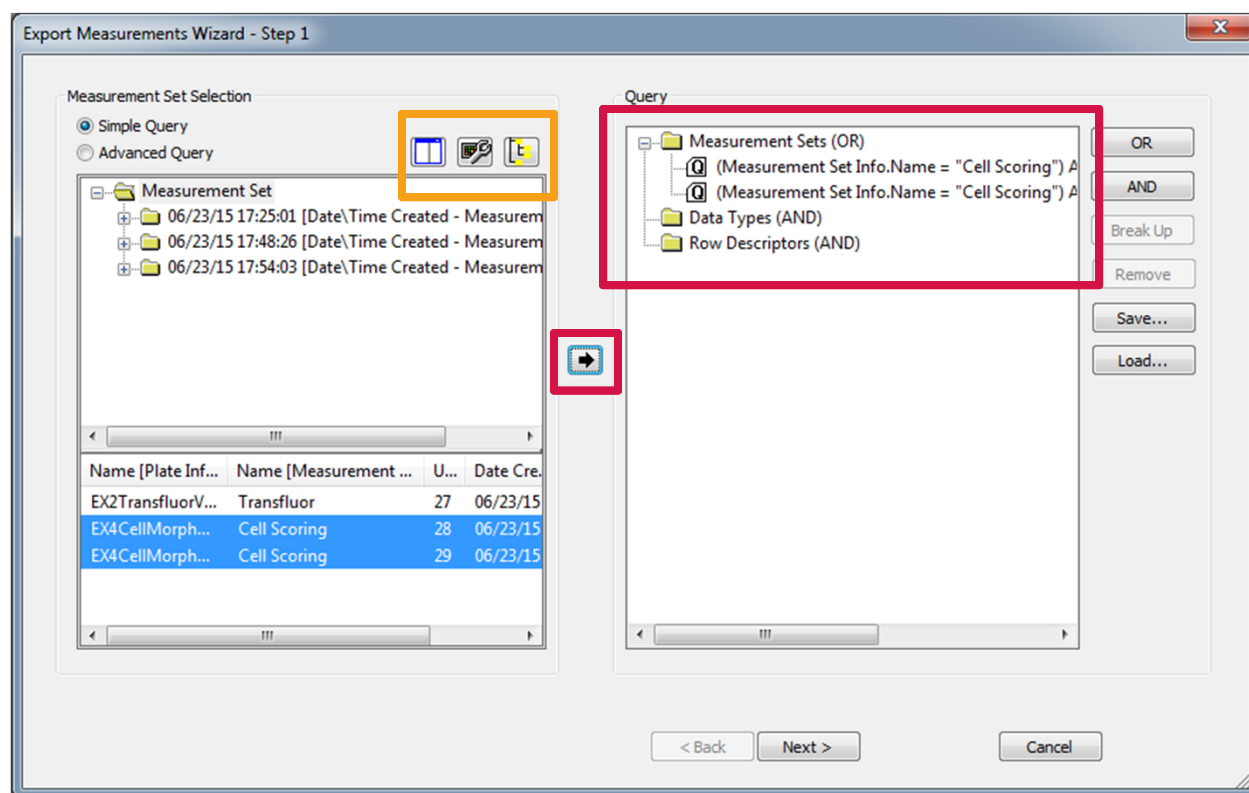# Setting Up Export of Image Measurements

5. In the **Export Measurements Wizard – Step 1** dialog
   - Highlight the plate(s) of interest and double-click or click the black arrow to add them to the query pane
   - Click the **Next** button

*NOTE* You can use the Ctrl or Shift keys to select multiple plates.

Use the **Configure** icons to change:
- Appearance of the Wizard
- How plates are organized and displayed in folders
- Identifying shown for the measurement sets

*NOTE* Only plates that have been analyzed will appear in this dialog

# Setting Up Export of Image Measurements

4. If you do not wish to filter your data, skip Step 5 and click the **Finish** button

5. In the **Export Measurements Wizard – Step 2** dialog you can filter data based on the measurements made in the analysis
   - Expand the **Data Types** folder under the Data Types Section
   - Expand the **Image Measurement** tree
   - Double-click on the measurement of interest and the **New Query** dialog will appear
   - Select an **Operator** from the drop-down menu and enter the desired value
   - Click **OK**. The output file will contain only measurements that meet the query
   - Continue this process for any other measurements then click **Finish**
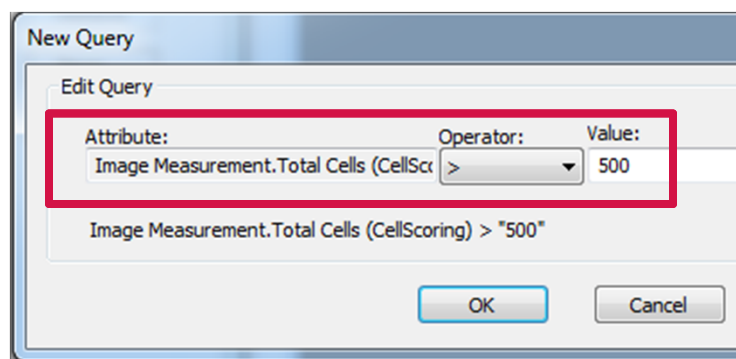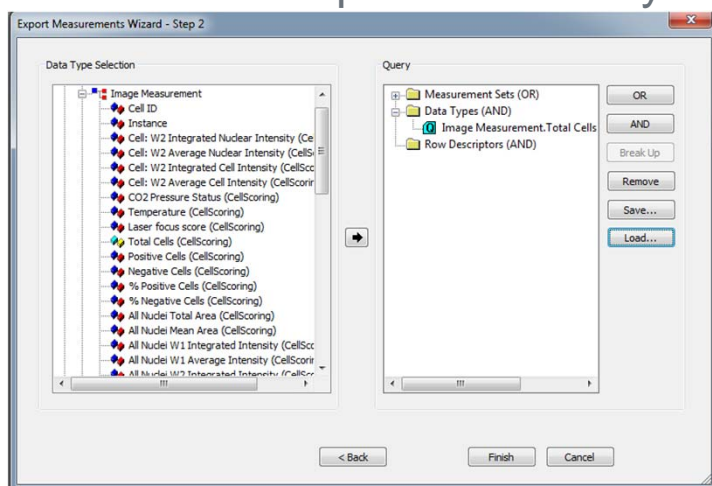


In the above example, only data from wells that have more than 500 cells will be exported

# Setting Up Export of Image Measurements

6. In the **Configure Data Export** dialog, select how the rows and columns are organized
   - Rows are organized based on plate information (i.e. Plate ID, Well ID, Site ID, etc.)
   - Columns are the measurements from the analysis completed on the plate
   - Double-click or highlight and use the arrow keys to move parameters from the Types section to the Selected sections.

# Configuring Data Export



*NOTE* You can click on the Name column header to sort the choices alphabetically

- Order matters! Data exported is hierarchal
- It is suggested to start from the top level of plate information (i.e. Plate ID) and then proceed down (i.e. Well ID, then Site ID).
- Always use **Image Measurement** or **Image Attribute** types
- DO NOT use **Annotation** types

- Move measurement(s) of interest to the right-hand pane to be included in the export.
- DO NOT include any measurements that are preceded by **Cell:**. These measurements are cell-by-cell data and should be exported as Cell Measurements (refer to corresponding chapter).

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# Configuring Data Export



- If you have acquired multiple sites and would like to export the data for each site, include **Site ID** as part of the Row organization
- However, if you would like to combine the site data into a single value for the well (see below), remove **Site ID** from the list.

- Choose the appropriate calculation from the **Apply Calculation** drop-down menu. Select **None** if you would like the raw data
- If you have acquired multiple sites, select the appropriate calculation from the drop-down menu, This will be applied to all the measurements selected.
- Only one calculation can be applied at a time. To apply multiple calculations, you will need to run multiple export operations.

7. Click on the **OK** button when you have finished configuring data export

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# Configuring Data Export – Example



Generates table where data from each image (site) is in a separate row

| Plate ID | Well Nam | Site ID | MEASURE | Nuclei (Gr | Granules ( | Granules Per Cell ( |
|---|---|---|---|---|---|---|
| 50 | A01 | 1 | 13 | 0 | 0 | 0 |
| 50 | A01 | 2 | 13 | 532 | 145 | 0.272556 |
| 50 | A01 | 3 | 13 | 306 | 93 | 0.303922 |
| 50 | A01 | 4 | 13 | 0 | 9 | 0 |
| 50 | A01 | 5 | 13 | 270 | 154 | 0.57037 |
| 50 | B02 | 1 | 13 | 212 | 418 | 1.971698 |
| 50 | B02 | 2 | 13 | 307 | 345 | 1.123778 |
| 50 | B02 | 3 | 13 | 636 | 347 | 0.545597 |

Generates table where measurements for each individual image (site) are combined into one value for the whole well

| Plate ID | Well Nam | MEASURE | Nuclei (Gr | Granules ( | Granules Per Cell |
|---|---|---|---|---|---|
| 50 | A01 | 13 | 221.6 | 80.2 | 0.2293696 |
| 50 | B02 | 13 | 461.4 | 317.6 | 0.8897796 |
| 50 | C01 | 13 | 352.8 | 119.8 | 0.3792968 |
| 50 | D02 | 13 | 396 | 639 | 1.7135644 |

*NOTE* You can click on the Name column header to sort the choices alphabetically

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# Setting Up Export of Image Measurements

8.  Export Options

    a)  Click on the **Configure Columns** 🗇 icon to select additional plate information that is exported for each plate in the header.  Recommend including **Name [Plate Info]**.

    b)  Click on the **Browse** button to navigate to a directory to save the .txt file.

    c)  Enable **Export all measurements to one file** and name the file if you would like to export all plates to one .txt file. Otherwise, a separate .txt file will be created for each plate and named according to the selections in Step 8.

    d)  Under **Export Options** select **ATF**. This will create a tab delimited file with identifying info for each plate

    e)  Click on the **OK** button
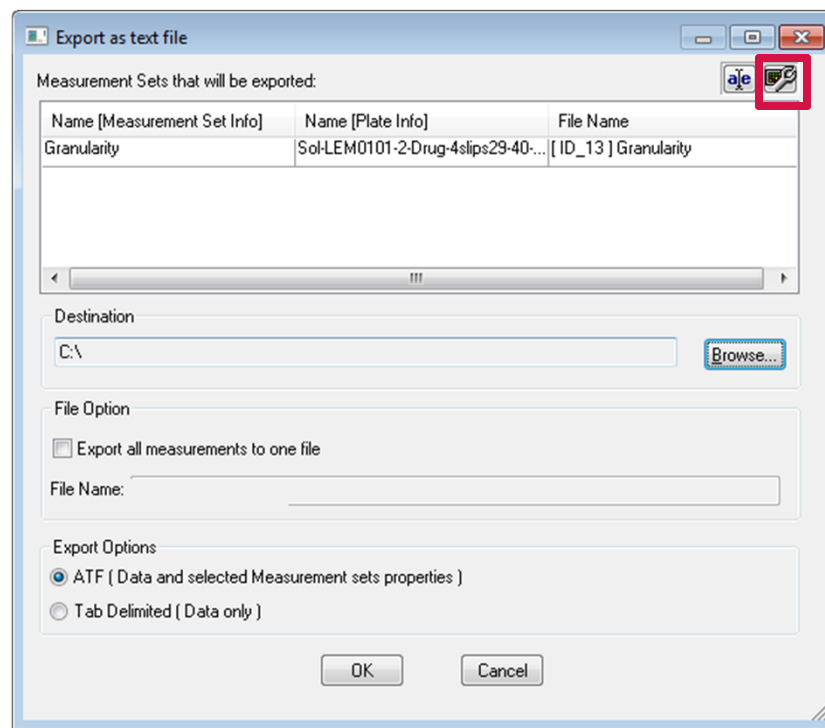
# Setting Up Export of Image Measurements

13. You will be given the option to save a summary of the export. This file contains information related the .txt file(s) saved in the previous step.
    - Click on the **Save Summary** button to save the report
    - Click on the **Close** button to complete the process and exit out of the wizard
    *NOTE: This file is only a summary report and cannot be used to repeat the exporting process

14. You can now open the .txt file in Microsoft Excel

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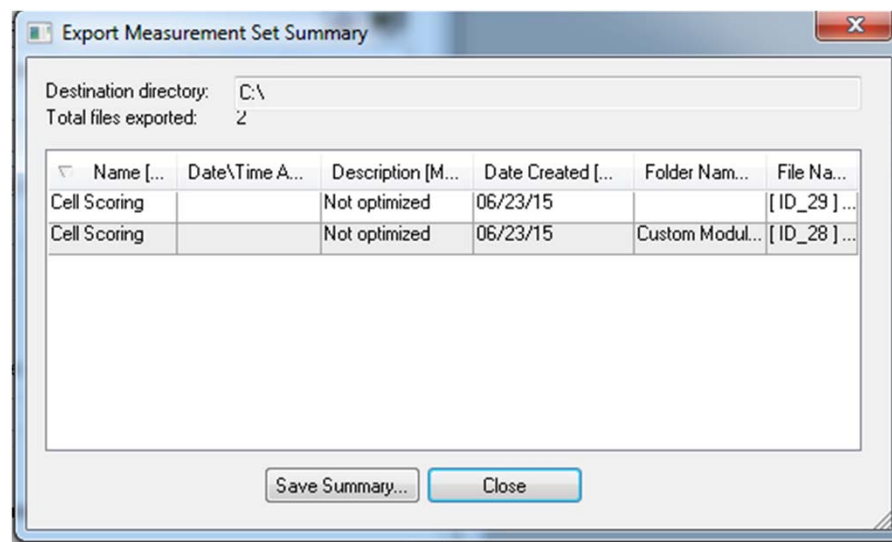
# Support Resources

- F1 / HELP within MetaXpress® Software

- Support and Knowledge Base: http://mdc.custhelp.com/

- User Forum: http://metamorph.moleculardevices.com/forum/

- Request Support: http://mdc.custhelp.com/app/ask

- Technical Support can also be reached by telephone:
  - 1 (800) 635-5577
  - Select options for Tech Support → Cellular Imaging Products → ImageXpress Instruments

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