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Sample Carrier Application (Zeiss 710)

Tool Group Multidimensional Acquisition: Positions - The Sample Carrier application is used to image specimens (typically cells) which are grown in sample carriers like plates with a set number of wells.

Acquisition Setup

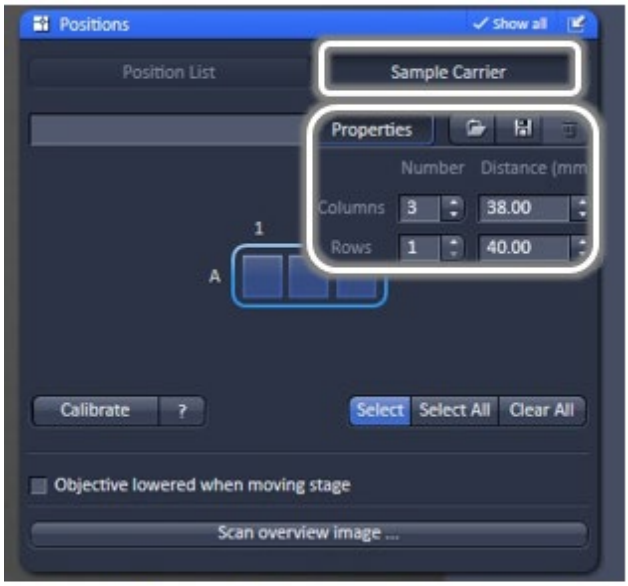
1. Move to the center position of your well plate, and scan Live, while adjusting Gain and Offset settings (use Range Indicator) to optimize image quality.

2. Check *Positions* in the Multidimensional tool group, then open the Positions tab.

3. Click on the S*ample Carrier* tab.

4. Define the sample carrier by clicking on Properties. Set number of Columns and Rows of the sample carrier and the Distance in mm between the individual wells which is assumed to be equidistant within rows or columns:

   e.g. *96-well plate: ~ 9 mm*
   6-well plate: ~ 39.2 mm



Sample Carrier Application for imaging multi-well plates

5. To assign the actual position of the stage with a position in the sample carrier, move to the center well in the actual plate under the microscope then click *Calibrate*.

6. Click the field in the sample carrier representing this well of the plate (highlighted in blue); click *Select*.

7. Click on other wells desired for imaging, or click *Select All* to image all wells in the sample carrier. *Clear all* deselects all positions.

8. If you are imaging fluorescence, you can use the **Autofocus** feature:
    - Select the wells to image
    - Open the Focus Devices and Strategy tab
    - In Autofocus Mode, choose Fluorescence from the dropdown list.

      When Fluorescence is selected, the autofocus looks for the brightest fluorescence signal using the present imaging configuration.
    - Slightly defocus your image and *Test Autofocus*.
9. Click on *Start Experiment* to image selected wells.