



MACSQuant® Flow Cytometers

# MACSPlex Filter Plate calibration

## Background

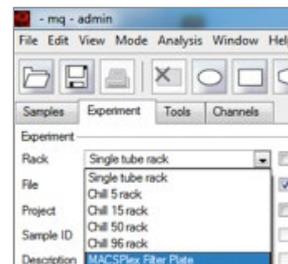
MACSPlex Assays have been designed for determining concentrations of soluble analytes in a single sample. The analysis is based on MACSPlex (MPx) Capture Beads, which display defined fluorescence properties and can be identified using standard flow cytometry techniques. MPx Capture Beads contain a cocktail of various fluorescently labeled bead populations, each coated with a specific antibody reacting with one of the respective cytokines within the sample. In combination with the Express Modes of the MACSQuant® Analyzers the MACSPlex Cytokine Kits are optimized for automated measurement of beads. They simplify flow cytometric analysis via predefined experiment settings as well as acquisition and analysis templates. They apply an automated gating strategy to populations of interest that will be automatically adjusted for each data file individually to achieve optimal results. The following protocol describes the calibration of the MACSPlex Filter Plate when using the MACSQuant Analyzer or the MACSQuant Analyzer 10.

## Materials

- MACSQuant Analyzer or MACSQuant Analyzer 10 (# 130-096-343)
- MACS® MiniSampler (# 130-092-535)
- MACS Chill 96 Rack (# 130-094-459)
- MACSPlex Cytokine 12 Kit, human (# 130-099-169) or MACSPlex Cytokine 10 Kit, mouse (# 130-101-740)

## Methods

1. Start-up the instrument.
2. Log in into admin account.
3. Place the Chill 96 Rack on the MACS MiniSampler with a MACSPlex Filter Plate.
4. Using MACSQuantify™ Software version 2.5 or higher, select **MACSPlex Filter Plate** in the **Rack** drop-down menu.



5. Select **Calibrate uptake unit** in the **Tools** side bar.



6. Start the calibration of the MACSPlex Filter Plate by pressing **Start Calibration**.



7. Carefully push down the needle to well H12 on the MACSPlex Filter Plate.

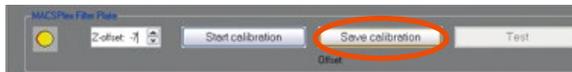
8. Carefully identify the center position in the well and the height where the needle touches the filter membran on the bottom of the plate.

9. Change the **Z-offset** value to -7.

**Note:** Use arrow buttons or type in -7.



10. Press the **Save calibration** button.



11. To validate the optimal calibration, select different wells in the Chill Rack monitor and press the **Test** button.



12. Deselect **Calibrate uptake unit** (see step 5) to start your measurements.



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