Miltenyi Biotec



MACSQuant® Instrument short instructions

Getting started

Before using the instrument for the first time, read the MACSQuant Instrument user manual and MACSQuantify™ Software user manual.

These short instructions are valid for the MACSQuantify Software 3.1 and later. They contain information about the software interface, start-up, shutdown, instrument monitoring, and required buffers and solutions.

Instrument start-up

Switching on the instrument

1 To turn the instrument to standby mode, switch on the power switch on the right-hand side of the instrument.
A red LED in the lower left corner of the touchscreen indicates that the instrument is in standby mode.

2 To start the MACSQuantify Software, tap the touchscreen.
A sign-in window is shown after a short initialization phase.

Signing in

1 Enter username and password.

2 Click **Login**.

Priming the instrument

1 To prime the instrument, click the **Power** button in the upper right corner of the software and select **Acquisition mode**.
Lasers are switched on and the fluidics system is rinsed.

The MACSQuant instrument can also be primed from the sign-in screen.

2 Let the optical bench warm up for at least 30 minutes before starting an acquisition.

3 To check the current laser and optical bench temperature, click **View > Hardware > Lasers and detectors**.

While the optical bench is warming up, it is recommended to perform a flush cycle followed by a clean program. Refer to the MACSQuant short instructions **Maintenance**.

Instrument shutdown

Switching off the instrument

Before switching off the instrument, start the shutdown procedure. During the shutdown procedure, the fluidics system is cleaned and filled with MACSQuant/MACSima Storage Solution. Automatic shutdown is activated by default after a defined idle time. See chapter **Editing global software options/Timers** in the **MACSQuantify Software user manual**.

1 To manually shut down, click the **Power** button in the upper right corner of the toolbar.

2 To close the MACSQuantify Software on a PC, click **File > Quit**.

3 To switch the instrument to standby mode, select **Instrument off**, or select **Data analysis mode** to proceed with data analysis after the shutdown procedure. After a seven-minute washing procedure (default setting), the instrument switches to standby or data analysis mode.

4 To switch to standby mode, select **Instrument off**.

5 To completely shut down the instrument, switch off the power switch. The power switch is located on the right-hand side of the instrument.

Workspace organization

The MACSQuantify Software user interface can be used by Custom users and MQ Administrators to program parameters for data acquisition and data analysis. The user interface includes the title bar (1), the toolbar (2), the Performance QC & tracking tool (3), the instrument status bar (4), the side pane (5), and the menu bar (6). See **Figure 1**.

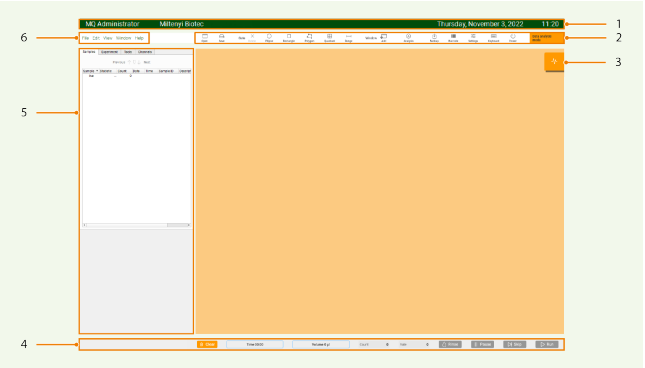


Figure 1: The MACSQuantify Software user interface for Custom users and MQ Administrators

Consumables

MACSQuant Buffers and Solutions	Usage	Order no.
6 × 1.5 L MACSQuant Running Buffer	Acquisition, needle rinse, washing between samples	130-092-747
6 × 1.25 L MACSQuant Running Buffer Concentrate (16×)	Acquisition, needle rinse, washing between samples	130-111-747
6 × 1.5 L MACSQuant Washing Solution	Shutdown	130-092-749
6 × 1.5 L MACSQuant/MACSima Storage Solution	Storage after shutdown	130-092-748
MACSQuant Starting Buffer Kit 4 × 1.5 L Running Buffer 1 × 1.5 L Washing Solution 1 × 1.5 L MACSQuant/MACSima Storage Solution		130-094-190
MACSQuant Washing and Storage Solution Kit 3 × 1.5 L Washing Solution 3 × 1.5 L MACSQuant/MACSima Storage Solution		130-092-801

Table 1: MACSQuant Buffers and Solutions

Instrument monitoring

Hardware monitor

The hardware monitor can be used to view the status of different hardware components including fluidics, lasers, and detectors. To access the hardware monitor, click **View > Hardware**. The **Lasers and detectors** tab shows the status of the optical bench, including the temperature, fan speed, PMT voltage, and annotated path of each laser.

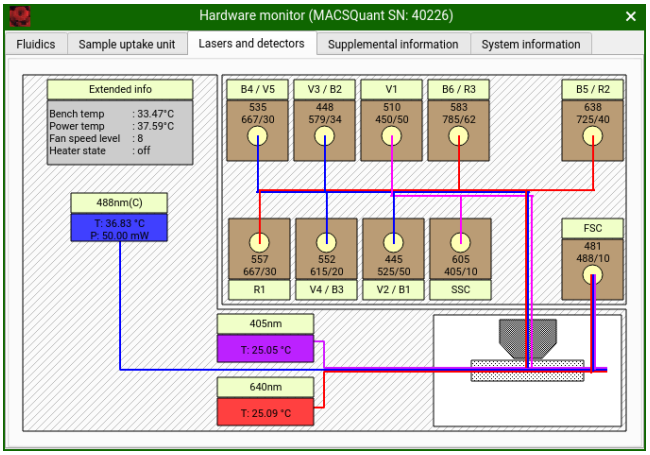


Figure 2: Real-time hardware monitor of the MACSQuant 16 optical bench. T and P indicate the current temperature and power of the main laser

Instrument status indicator

The current status of the instrument is shown on the right-hand side of the toolbar.

Initializing MACSQuant	The instrument is initializing and not available for any acquisition
Data analysis mode	The instrument is in Data analysis mode. The fluidics system is not ready and lasers are switched off. To switch to acquisition mode, prime the instrument
Priming MACSQuant	Priming in progress. The instrument is not available for acquisition
Bottle level critical change a bottle	Shown if a bottle has reached a critical level. The affected bottle's LED will be blinking
Acquisition mode Calibration ok	The instrument is in acquisition mode and ready for acquisition. Calibration status is shown. See the short instructions **PMT calibration**
Processing rack Sample 1 of 3	The instrument is processing a sample. The processed sample is shown
Processing rack change a bottle	The instrument is processing a sample and a bottle level is critical
Fatal error occured hardware disabled	Error alert

Table 2: Statuses of the MACSQuant Instrument

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