Brief Instructions
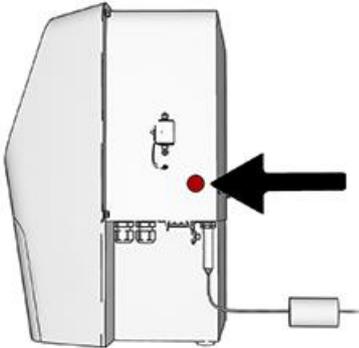## BactoSense Flow Cytometer

SIGRIST
PROCESS-PHOTOMETER

Safety pointers

⚠️ **It is absolutely necessary to read the Instruction Manual before operating. It is particularly important that the section "General safety pointers" is read and understood.**
→ **Instruction Manual**

ℹ️ The BactoSense and peripheral equipment are designed to measure the concentration of microbial cells, in particular bacteria in drinking water.

Switch on the BactoSense

	WORKSTEP
1.	Press the power button. The LED lights up in blue. Wait few seconds until the welcome screen appears.
2.	The home screen display depends on the last mode that was used. **Manual mode** The main screen appears with the latest measurement result. **Auto mode** A graph shows cell counts over time.
3.	Press the **Login** button.
4.	Choose your user role and then enter the corresponding password.

Change language

1.	Press the **Home** button. ℹ️ Press the **Back** button as many times as needed for the **Home** button to appear.
2.	Press the **System settings** button, then **Language**.
3.	Choose the language and press the **OK** button.
4.	The following message appears: "In order to change the language the interface must reload". Therefore, press the **Reload interface** button.

User logout and power off

	WORKSTEP	ADDITIONAL INFO
1.	Press the **Logout** button.	
2.	Choose one of the following options: 1: **User logout** (locks the screen or change user) 2: Power off the device	

Performing manual measurement

The **manual mode** allows to start single measurements (or short sequences of measurements). It can be used either with the manual or the online sampling device.

	WORKSTEP
1.	Press the **Home** button. ℹ️ Press the **Back** button as many times as needed for the **Home** button to appear.
2.	Select **Manual mode** and confirm with **OK**.
3.	Choose one of the listed analysis protocols. ℹ️ Choose **clean sampling device** protocol in case of commissioning or it was out of operation for several hours.
4.	Select the number of replications with the (**+**) and (**-**) buttons.
5.	Write the sample name into the text field. Press on the field to pop up an on-screen keyboard.
6.	Press the **Next** button. ℹ️ The first page of the wizard will inform you of any special steps that are required.
7.	Press the **Start** button. The measurement starts. ℹ️ A single measurement lasts 30 minutes. The state is indicated on the upper toolbar of the user interface: Initializing, Mixing, Analyzing, Processing, Cleaning.
8.	After each measurement, the graph is updated. ℹ️ For more details press the **View Results** button.
9.	If no further measurement is planned for the next several hours, clean the device to avoid internal contamination.

Brief Instructions
BactoSense Flow Cytometer

SIGRIST
PROCESS-PHOTOMETER

Start auto measuring mode

The **auto mode** allows operators to repeat measurements at fixed intervals. It can be used either with the manual or the online sampling device, but is most appropriate for the online sampling device.

	WORKSTEP	
1.	Press the **Home** button. **i** Press the **Back** button as many times as needed for the **Home** button to appear.	
2.	Select **Auto mode** and confirm with **OK**.	
3.	Press the **Start** button.	
4.	Choose one of the listed analysis protocols.	
5.	Write the sample name in the text field. Press on the field to pop up an on-screen keyboard.	
6.	Press the **Next** button.	
7.	Select the measurement interval. 30 min to 6 hours	
8.	Press the **Next** button.	
9.	Press the **Start** button. The measurement starts. **i** During the analysis, the latest estimation of cell counts for the currently analyzed sample is displayed under "last" in the action bar.	
10.	After each measurement, the graph is updated. **i** For more details press the **View Results** button.	

Cartridge filling level

	WORK STEP	ADDITIONAL INFO
1.	Press the **Home** button. **i** Press the **Back** button as many times as needed for the **Home** button to appear.	
2.	Press the **System info** button.	
3.	The filling level of the cartridge is displayed among other system information. A value of 70% means that 70% of the reagents are still available.	⚠ The cartridge change can be done only by an **Admin** or **Service** user.

Cleaning

The following procedure must be followed whenever an internal contamination of the device is suspected. Such a contamination could happen after:

- An abort during a measurement followed by a period out of use
- A power cut of the instrument during its functioning
- A too long period of storage if not properly prepared for this situation
- After a 1 month decommissioning period of the instrument
- After too many measurements in auto mode using the protocol **Manual sampling device**
- After measuring waters with extremely high cells concentrations (> 5'000'000 cells/mL)
- If the cell concentration drops drastically from one measurement to the next
- After using an expired cartridge

	WORKSTEP
1.	If using the **online sampling device**: Load and adjust the manual sampling device accordingly.
2.	In Manual mode, select and start the **Clean optics** protocol, 5 times in a row.
3.	Insert the screw cap tube named "Waste solution" into the sampling device. If the tube contains more than 5 ml of liquid, throw it away and use a new one. As an alternative to the "Waste solution", a new sterile screw cap tube filled with at least 2 ml of sterile deionized water can be used.
4.	In Manual mode, select and start the **Clean Sampling Device** protocol, 5 times in a row.
5.	Load the sample to be analyzed. In Manual mode, select and start the **Prime** protocol 3 times in a row.
6.	The contamination should now be eliminated, and the BactoSense should be ready to measure again.
7.	If the contamination is still visible: - If the contamination has been significantly reduced, please restart the same procedure from point 2 to 4. - If the contamination is still the same, please follow the procedure in the instructions manual.