

FlowKon User Guidelines

The FlowKon user rules are formulated in accordance to the “Basic Requirements for Research Infrastructures in Europe”¹ (European Science Foundation; published 04/2011) as well as the Guidelines for Research Facilities of the DFG (published 06/2016)². The FlowKon user rules are mandatory for all users of the FlowKon. The laboratory head of the FlowKon, in consultation with the steering committee, can make changes to the user rules.

FlowKon Access

Information about FlowKon is available on the Internet: <https://www.biologie.uni-konstanz.de/flow-cytometry-centre/>. Upon consultation and registration FlowKon is available to all workgroups of the University of Konstanz. Depending on the capacity FlowKon also offers access to its equipment for external users not associated with the University of Konstanz. Staff members for support are normally present during normal working hours. Registered FlowKon users are provided 24-hour access to the flow cytometric analyzers after having completed the training sessions on the respective instrument. The general contact e-mail address of FlowKon is: flowkon@uni-konstanz.de.

FlowKon Equipment

An overview about FlowKon instrumentation and detailed descriptions of the flow cytometers can be found on the FlowKon homepage: <https://www.biologie.uni-konstanz.de/flow-cytometry-centre/>.

User Support

FlowKon supports its users by offering personalized training for independent operation of flow cytometric analyzers and the multiplex system as well as full-service cell sorting. FlowKon also offers scientific support and consultancy on experimental design, sample preparation, instrument choice, data acquisition, analysis and interpretation, as well as technical support and troubleshooting. For short term research projects requiring only limited time at an instrument (e.g. experiment for a publication) full-service acquisition without prior instrument training is available. In this case, the flow cytometric analyzers are operated by FlowKon staff.

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf

If necessary, prospective FlowKon users may already ask for support before or while planning their research projects. Telephone numbers and e-mail addresses of responsible FlowKon staff members can be found on the FlowKon homepage. For scientific or technical questions you can get into contact with Dr. Annette Sommershof using the general contact e-mail address of the FlowKon: flowkon@uni-konstanz.de

User Registration

Interested prospective FlowKon users should contact FlowKon staff to set up an appointment for a consultation on their project, to identify the correct flow cytometric technique, the respective instrument, and to discuss issues of sample preparation and staining. Upon registration of a personal account for the online booking system (<https://ppms.eu/bic.biologie.uni-konstanz/login/?pf=3>) and the confirmation of the account request by a FlowKon staff member, the users are required to print the “FlowKon User Guidelines” and confirm their acceptance.

Autonomous booking and usage of the flow cytometric analyzers requires the users to receive two training sessions (2 h each) with a FlowKon staff member on the respective instrument. While the first training session is an instrument specific instruction, the second one can already comprise the first scientific experiment under supervision of FlowKon personnel.

Personal Accounts

The PPMS booking database can be accessed by FlowKon users via Shibboleth authentication using the users University of Konstanz credentials. For external users unique accounts are generated. Any user has to inform FlowKon staff at the end of their contract, if their affiliation with their workgroup changes or their proposed project ends, so that their PPMS account and their FlowKon access can be revoked.

Equipment Booking

Booking of all FlowKon equipment (instruments, FlowJo Dongles, consumables) via the PPMS booking system can be carried out with any web browser using the following webpage: <https://ppms.eu/bic.biologie.uni-konstanz/?FlowKon>.

Autonomous booking of the flow cytometric analyzers is possible using the personal user account and only after having completed the training sessions on the respective instrument. Booking for colleagues is not allowed. However, a not yet registered user may work at a system under the supervision of a registered FlowKon user, who has to be present all the time. Independent booking of the FlowKon FACSAria cell sorter is only possible after initial project consultation, to ensure the correct sorting devices and to discuss issues of sample preparation and staining. Booking a FlowKon instrument prior to a user’s experiment is mandatory, as the usage fees are calculated from the booking times.

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf

If an instrument is not available due to technical issues or maintenance, it is blocked for booking. Affected users will be promptly informed by e-mail or telephone and will be supported by FlowKon personnel to perform their experiments on an alternative instrument if possible.

The user-specific booking times of the FlowKon instruments are logged by the online booking system and are used to calculate the usage fees for the quarterly fee invoices and to generate usage statistics. The use of these data for other purposes, as well as the dissemination to third parties is expressly excluded.

Booking priorities

All users have the same booking priorities. In general, booking of instruments is not limited and is possible at maximum two weeks in advance; however exceptions may be made upon consultation with FlowKon staff. If a FlowKon instrument is fully booked, quotas of usage time may be adapted by the FlowKon manager. In general, access for external users can only be granted if ample free usage time is available.

Usage Fees

The usage fees paid are used to cover running costs (sheath fluid, waste disposal, washing buffer) and instrument maintenance (quality control, replacement parts). All users are required to pay the following usage fees:

| Flow Cytometric Analyzers | University of Konstanz | External Users |
|---------------------------|--|----------------|
| FACS Verse | 12.00 € / h | - upon request |
| FACS Lyric | 12.00 € / h | - upon request |
| BD LSRFortessa | 12.00 € / h | - upon request |
| Bio-Plex200 | 12.00 € / plate + 35 € fixed cost per day + 60 € fixed cost per month | - upon request |
| Flow Cytometric Sorters | | |
| BD FACS Aria IIIu | 12 € / hour + 45 € fixed cost per day | - upon request |
| BD FACS Aria III | 12 € / hour + 45 € fixed cost per day | - upon request |

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf

The usage fees are subject to evaluation at regular intervals, and will be adjusted on the basis of the actual costs. Invoices for the usage fees are prepared on a quarterly basis, and have to be paid within 10 weeks. Billing is addressed to the responsible Principal Investigator, who signed the “FlowKon Guidelines” of the respective user.

Note: Funds to cover usage fees can be requested as part of grant proposals to the DFG (Research Grants, Scientific Networks, Collaborative Research Centres (SFB)).

Cancellation Policy

A booked session on a flow cytometric analyzer can be cancelled free of charge until 3 hours before the actual starting time. A booked session on the cell sorter (FACSAria) can be cancelled free of charge until 24 hours before the actual starting time. Thereafter, booking can be cancelled only if a replacement is found. It is the responsibility of the user to change the entry in the booking system accordingly. Otherwise, the normal usage fees will apply. If a user does not use the instrument through the entire booked session, usage fees will be calculated according to booked time, unless the user finds a replacement and changes the entry in the booking system.

User Responsibilities

Users are expected to comply to the “FlowKon Guidelines” according to the document they sign for registration. Users are allowed to operate FlowKon instruments only after training by the FlowKon personnel and are responsible to utilize the facility equipment in a manner that comports with the demonstrated operation procedures including the startup, shutdown, and cleaning procedures. Users should always ask FlowKon staff when they are in doubt about any of the procedures.

FlowKon equipment and working space have to be kept clean and tidy during work and for the next user. Used lab equipment and waste has to be removed accordingly. Every user has to note date/time, user's name, GVO and safety level in a Logbook which is available in the respective laboratories. To avoid hazards for other users and damage to equipment, FlowKon personnel is to be informed immediately if solutions have been spilled or a contamination with chemical or biological agents has occurred.

The instruments have to be handed over to the next user in the on-or off-state, according to the booking situation. The flow cytometry analyzers are to be turned off if no other user is enrolled in the booking schedule within the same day. You may ask FlowKon personnel about the booking schedule or otherwise check the booking calendar.

Biosafety

Principal Investigators (PI) are responsible for the users of their research group, concerning a general introduction into basic experimental procedures, as well as general safety instructions and issues regarding biological safety. Specific regulations regarding FlowKon lab space are

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf

outlined in the “FlowKon Biosafety Guidelines” (available for download at <https://www.biologie.uni-konstanz.de/flow-cytometry-centre/booking/>).

Any research involving genetically modified organisms (GMOs) or biological toxins and microorganisms with a risk classification in biohazard group 2 (BSL-2) requires registration with the regional council of Freiburg (Regierungspräsidium Freiburg). The responsibility for registration lies with the respective PI. Furthermore, experiments involving S2 biological safety level samples have to be approved in advance by the FlowKon personal and are only allowed after all relevant biohazard information for proper risk assessment has been transmitted to core personnel via the “Biosafety Information Sheet” (available for download at <https://www.biologie.uni-konstanz.de/flow-cytometry-centre/booking/>).

For further information please contact the FlowKon staff via flowkon@uni-konstanz.de.

Data Storage

It is primarily the responsibility of each user to back up his/her experimental data. Data must not be stored within the instrument’s specific acquisition software, as the acquisition software slows down significantly if too much data is stored here. Data, Experiments and Templates may be stored in a personal folder on an external hard drive provided on each respective computer operating the analyzer. FlowKon does not take responsibility for data saved in wrong places and for long term data backup. For data transfer data can be copied to the FlowKon data server which can be accessed within the university network. The file server is accessible for all registered members of the user’s research group. If a user leaves the University of Konstanz, the user is requested to export all data from the acquisition software as well as the personal folder on the FlowKon external hard drive.

Acknowledgement of FlowKon in Publications

The use of FlowKon instruments, data acquisition or data analysis has to be acknowledged in the appropriate way in every publication, which contains data recorded at the FlowKon, e.g. ‘We acknowledge the flow cytometry centre (FlowKon) at the University of Konstanz for the use of flow cytometers and the expert support in instrument usage and data analysis.’ Publications encompass scientific papers, Bachelor-, Master- or doctoral theses as well as contributions to conferences. If required, FlowKon staff may be asked to read and review the sections describing the flow cytometric methods in drafts of scientific papers, to ensure a correct description of methods and equipment. After publication FlowKon users are requested to provide a PDF-file of the paper for the facility’s records.

These references are of utmost importance for the FlowKon, as all publications are a major hallmark for the impact and importance of a facility. They prove the effective use of the equipment and are therefore prerequisite for the success of the FlowKon in evaluation

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf

processes and grant applications. Furthermore, these references enable the facility to convey its relevance to users, to university executives and research networks.

If the support required by the user to accomplish a project goes well beyond the service described under 4 (“User Support”), in particular if FlowKon is involved in project planning, if it provides samples from own research work, or any other substantial intellectual or experimental contribution, the project should be conducted on a collaborative basis, resulting in co-authorships of the involved academic FlowKon staff. Usage fees will incur nevertheless to cover the running costs. The details of such an agreement need to be discussed between the respective project leader and the FlowKon technical head in an initial consultation.

¹ https://www.dfg.de/download/pdf/foerderung/programme/wgi/basic_requirements_research_infrastructures.pdf

² https://www.dfg.de/formulare/55_04/55_04_de.pdf