

Guidelines

for Instrumentation Usage Costs and Core Facilities



Disclaimer: The English translation of this document is provided for informational purposes. In the event of a discrepancy between the English and the German versions, the German text takes precedence.

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I General Information on Usage Costs

Through its funding procedures, the DFG is able to finance usage costs for major instrumentation and core facilities insofar as these meet an additional need for a specific project (cf. information on the basic module – DFG form 52.01¹). For frequently used technologies, this should preferably occur in the form of **flat-rate usage fees**. If **no flat rates** have been set by the DFG for the use of a specific technology, the costs of usage must be broken down to clearly demonstrate that only those portions that can be recognised as project-specific costs are to be applied for and reimbursed through the DFG.

The flat-rate usage fees specified by the DFG **define upper limits** up to which internal usage costs eligible for funding can be claimed in connection with individual or collaborative projects. Core facilities and instrumentation providers are required to calculate the actual costs incurred and upon request plausibly describe the share of the costs borne by the individual users.

It should be noted that **internal usage costs eligible for funding** only cover **project-specific additional costs** and may therefore differ from the usage and service costs set by core facilities or instrumentation providers. As shown in Figure 1, the varying degrees to which research institutions contribute to the running costs of a core facility result in **deviations in the amount of the respective usage costs**. In consequence, this also leads to deviations of varying degrees between the usage costs charged by a core facility and the upper limit for flat-rate usage fees as defined by the DFG.

Most of the full costs of use, in particular those covering basic operation of a piece of instrumentation such as personnel (e.g. laser protection, administration, cleaning), service and maintenance contracts, depreciation and reinvestment, ongoing expenses for buildings and maintenance, etc., must be borne by the scientific research institution and cannot be financed with DFG funds.

When **calculating the costs eligible for funding**, it should also be taken into account that expenses required for general upkeep of the functionality of major instrumentation cannot be included in the usage costs eligible for funding. If, for example, a major piece of research instrumentation permanently requires cryogenics, e.g. for cooling a superconducting magnet, these cryogenics cannot be included in the costs eligible for funding (not even proportionally during actual use). If cooling only takes place during the (project-specific) measuring procedure

¹ www.dfg.de/formulare/52_01

itself, the costs for the coolant are eligible. The same applies to project-specific wear-and-tear parts such as those required for maintaining a vacuum, etc.

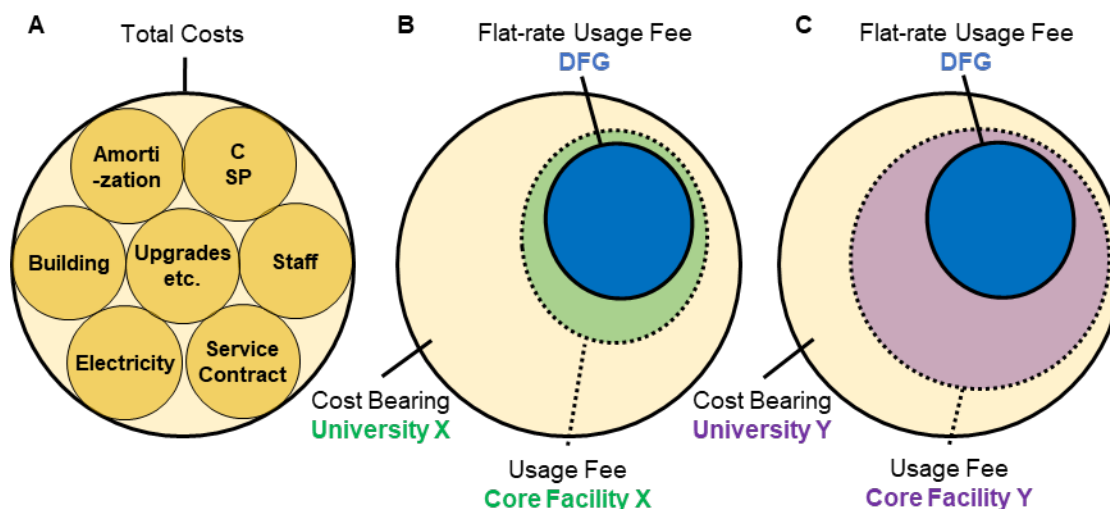


Figure 1 Usage costs eligible for funding. In the example shown, University X (B) assumes a much higher share of the full costs than University Y (C). For this reason, the usage costs Core Facility X charges to its users (B) are significantly lower than those charged by Core Facility Y (C). The usage costs of X are therefore closer to the upper limit defined by the DFG in terms of project-specific usage costs eligible for funding. C, Consumables; SP, Spare Parts.

Unless otherwise stated, the following **usage models** apply:

- Service operation: The staff of the core facility carry out the work.
- Application operation: Users work mainly independently on the instrumentation with the support of core facility staff.

DFG flat-rate usage fees contribute to the proportional financing of personnel costs at the core facility. These funds are intended to compensate for the additional expenditure incurred in providing the instrumentation and project-related support for research projects. Services offered by the facility go beyond straightforward instrumentation training and ensuring measurement readiness: they also include aspects of experiment planning, sample preparation and data evaluation. Staff time for maintaining the operating status (maintenance, administration, etc.) is therefore not eligible for funding; staff time for project-specific measurement is eligible.

Exclusion of duplicate funding: Costs that are already covered by third-party funding or a commitment from the research institution must not be included in the usage costs! If, for example, a staff position at a core facility is applied for in a Z project as part of a collaborative application (e.g. CRC) and additional staff positions have been approved by the research institution as a contribution to basic resources, these staff positions may not be included in the usage costs.

In general, the **presentation** of estimated flat-rate usage fees and costs in a DFG proposal must be **transparent and verifiable** (e.g. costs per measuring unit, number of measuring units, performance class of the instrumentation used, etc.). In the case of **usage costs exceeding €10,000**, applicants should submit a written commitment issued by the person responsible for the instrumentation or the management of the core facility, which also shows that an applicant has obtained advice and that the project is feasible in the form and to the extent described. If proposals are submitted by higher education institutions (e.g. CRC, TRR, FZT and RTG proposals), the submission of written commitments by core facilities can be waived.

In the case of **usage costs incurred as part of a scientific cooperation**, a letter must be submitted confirming both the cooperation and the cooperation partner's own contribution.

Usage costs can only be included in the funding proposal and claimed as an **internal service** under DFG funding procedures if core facilities have adopted terms of use (see also the information in the section "DFG requirements for terms of use at core facilities"). Applicants must submit these terms of use. In the case of core facilities registered in the DFG database RI-sources (<http://risources.dfg.de/>), it is sufficient to include a note to this effect in the proposal.

Even in the case of major instrumentation operated **outside of core facilities** and made available to other persons subject to usage fees, the instrumentation provider must adopt terms of use. When applying for usage costs for instrumentation for which there are no terms of use, applicants must submit a detailed justification and breakdown of the costs incurred (see notes above) in a supplement to the proposal.

II DFG requirements for terms of use at core facilities

In order to be able to apply to the DFG for funds to cover the **use of internal core facilities** as part of DFG projects (usage costs), core facilities must provide terms of use that are visible on the website or intranet of the university/research institution (incl. details of a contact person). Registration in the DFG database RIsources is recommended: <http://risources.dfg.de/>

The following **fundamental aspects** should be regarded as minimum points for inclusion in terms of use:

- Binding nature of the terms of use for all users.
- Details of both technical and scientific contact persons.
- Details of services (equipment, service, support) and potential user group.
- Description of the system for usage time allocation/booking.
- Details of the decision-making criteria on which the allocation of usage time is based in the event of overbooking.
- Differentiation of usage costs according to affiliation (e.g. internal/external); criteria must be applied uniformly within a group. The “price list” should form part of the terms of use (if necessary as an annex).
- Usage costs should be itemised in such a way that it is clear which portions can be applied for or recognised by the DFG as project-specific costs².
- Official adoption/nature of the document should be recognisable from date and signatures.

The following aspects are encouraged;

- Description of the requirements/necessary preparations for use³.
- Definition of responsibilities (e.g. in connection with safety regulations).
- Description of the instrumentation available and its performance class.
- Description of data processing, transfer and archiving.
- Regulation of exploitation rights (*IP: intellectual property*).
- Regulation regarding the recognition of the contributions by the core facility (e.g. *acknowledgements*).

² see also: General information in this guide; DFG Basic Module Guide ([DFG form 52.01](#))

³ e.g. sample preparation standards, statement by ethics committee, proof of principle, etc.

Further notes:

- A core facility in the above sense does not necessarily have to be of a certain size or contain a minimum number of devices.
- It is possible to allocate only part of the usage time of a piece of major instrumentation as a (central) service; only this part must then be regulated by the terms of use.

The contact person for questions regarding terms of use at the DFG is Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2476, e-mail: gunter.merdes@dfg.de.

III Usage flat rates for special instrumentation groups

1 Flow cytometry

For the use of flow cytometry instrumentation operated at core facilities, usage costs may be applied for according to the instrumentation classes listed below.

- Instrumentation class I: Cell analysers with up to 3 lasers
- Instrumentation class II: Cell analysers with more than 3 lasers
- Instrumentation class III: Cell sorter; imaging flow cytometer

	Application operation €/hour	Service operation €/hour
Instrumentation class I	Up to 15.00 max.	Up to 55.00 max. (only possible at < 40 hrs. use)
Instrumentation class II	Up to 25.00 max.	Up to 65.00 max. (only possible at < 40 hrs. use)
Instrumentation class III	Up to 40.00 max.	Up to 80.00 max.

The costs of preparation and follow-up are already included as a lump sum in these upper limits for flat rate user fees. If the instrumentation is used for several hours, the rate should therefore be reduced since this means there is a relative decrease in the preparation and follow-up required.

The DFG contact person for questions regarding usage costs for instrumentation in flow cytometry is Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2476, e-mail: gunter.merdes@dfg.de.

2 Electron microscopy

For the use of electron microscopes operated at core facilities, usage costs may be applied for according to the instrumentation classes and usage models listed below.

With regard to project-specific requirements in terms of preparation, supervision and evaluation, the following instrumentation classes apply:

- Instrumentation class I: Scanning electron microscope.
- Instrumentation class II: Focussed ion beam, transmission electron microscope without aberration correction, microprobe.
- Instrumentation class III: Cryogenic transmission electron microscope, high-end transmission electron microscope with aberration correction.

	Application operation €/hour	Service operation €/hour
Instrumentation class I (REM)	Up to 40.00 max.	Up to 80.00 max.
Instrumentation class II (FIB, TEM, microprobe)	Up to 80.00 max.	Up to 140.00 max.
Instrumentation class III (Cryo-TEM, High End TEM)	Up to 120.00 max.	Up to 200.00 max.

The only hours eligible for funding are those spent at the device conducting investigation work. However, the funds budgeted for this are intended to cover the usual project-specific expenses for preparatory work and sample preparation as well as evaluation.

The DFG contact person for questions regarding electron microscopy costs is Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2476, e-mail: gunter.merdes@dfg.de.

3 Light microscopy

For the use of light microscopes operated at core facilities, usage costs may be applied for according to the requirements of these classes of instrumentation.

With regard to consumables costs incurred and the project-specific personnel required, e.g. for the preparation of samples, supervision of measurements, evaluation of data, etc., the following instrumentation classes and usage flat rates apply:

- Instrumentation class I: Simple systems, e.g. reflected light/transmitted light/wide field microscopes
- Instrumentation class II: Medium complexity, e.g. laser scanning/spinning disc systems
- Instrumentation class III: Elaborate high-performance systems

	Application operation €/hour	Service operation €/hour
Instrumentation class I	Up to 15.00 max.	Up to 40.00 max.
Instrumentation class II	Up to 25.00 max.	Up to 60.00 max.
Instrumentation class III	Up to 50.00 max.	Up to 100.00 max.

The only hours eligible for funding are those spent at the instrument conducting investigation work. However, the funds budgeted for this are intended to cover the usual project-specific expenses for preparatory work and sample preparation as well as evaluation.

The DFG contact person for questions regarding light microscopy is Dr. Michael Royeck, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2976, e-mail: michael.royeck@dfg.de.

4 Magnetic resonance imaging (MRI)

For the use of MRI equipment, up to a maximum of €150.00 per hour of measurement time is eligible for funding. This also applies to measurements on animals. For clinical resp. human MRI at a field strength of 7 Tesla or more, this rate increases to €375.00 per hour. For small animal MRI, the basic rate of €150.00 per hour applies, even at higher field strengths.

The DFG contact person for questions regarding MRI costs is Dr. Christian Renner, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2324, e-mail: christian.renner@dfg.de.

5 Mass spectrometry

For the use of mass spectrometers operated at core facilities and for the use of instrumentation which is operated outside core facilities and for which there are terms of use in accordance with DFG requirements, up to a maximum of €40 per hour is eligible for funding. The only hours eligible for funding are those spent at the instrumentation conducting investigation work. This covers the usual cost of project-specific expenses for preparation and follow-up. For additional scientific support required (e.g. particularly complex sample preparation or further bioinformatic analysis of the measurement results), a flat rate of €30 to 60 per hour can be added in justified cases.

The DFG contact person for questions regarding usage costs for mass spectrometers is Dr. Manfred Mürtz, Scientific Instrumentation and Information Technology, Tel. 0228/885-2432, e-mail: manfred.muertz@dfg.de.

6 NMR spectroscopy

For the use of NMR spectrometers in automated routine operation at core facilities, up to a maximum of €10 per hour is eligible for funding. For medium field strengths up to 400 MHz, €5 per hour is appropriate; the maximum rate of €10 applies to high field strengths of 500 MHz and over. For manual measurements and assistance with the evaluation, the flat rate is increased by €10.00 (per hour of measurement time).

In the case of complex NMR experiments in research, the supervision or implementation of the NMR experimental part is significantly more complex and requires scientific support in preparation, implementation and data processing. Accordingly, hourly rates of up to max. €40.00 (medium field strength, 500 MHz) or max. €80.00 (very high field strength, from 850 MHz) can be applied here. For NMR measurements lasting several days the rate should be reduced since this means there is a relative decrease in the preparation and follow-up required. For a total measurement time of 20 days, no more than half the hourly rate should be applied.

In all cases, the only hours eligible for funding are those required for carrying out NMR measurements.

The DFG contact person for questions regarding NMR costs is Dr. Christian Renner, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2324, e-mail: christian.renner@dfg.de.

7 Examples of non-eligible usage costs

- Costs for computing time at university computing centres are not eligible for DFG funding.
- Usage costs purely for access to clean rooms cannot generally be financed from DFG funds. Costs for the procurement of consumables and use of equipment in the clean room are reimbursable in the normal way.