

Appendix 1 - Buyer's requirement specification

1 Purpose of the procurement

The Department of Comparative Medicine (AKM) at UiT has recently expanded its laboratory facilities for mice. The animal barriers microbiological health status is opportunist- and pathogen-free (SOPF) and houses both immunocompetent and immunodeficient mouse lines. The new facility includes housing rooms with individual cage systems (IVC) and equipment to maintain high hygienic standards, such as autoclaves.

The purchase tender concerns three (3) anesthesia- and operating tables for surgical procedures on mice. The operating tables should be capable of isolating exhaust anesthesia gas independently from the building's ventilation system, ensuring a safe work environment for operators. The tables should allow for working with multiple animals simultaneously and will be placed in each of three laboratories in AKM.

The tender is divided into two parts.

- **Part 1** (the largest surgical table) must be supplied as an integral unit incorporated into a laminar airflow (LAF) safety hood designed to provide a safe working environment for operators, including specific mitigation of exposure to rodent allergens and proper elimination of anaesthesia gas.
- **Part 2** consist of table 2 and 3. These tables does not require to be supplied with a LAF hood, but each must be accompanied by comprehensive documentation demonstrating at least 99.9% elimination of anaesthetic gases to prevent operator exposure during surgery. Suppliers may submit bids for any single part, for any combination of parts, or for all three lots.

2 The scope and content of the procurement

Tenderers can supply an offer for part 1, part 2 or both parts.

3 Requirements for documentation, information etc.

Delivery requirements (all tables)

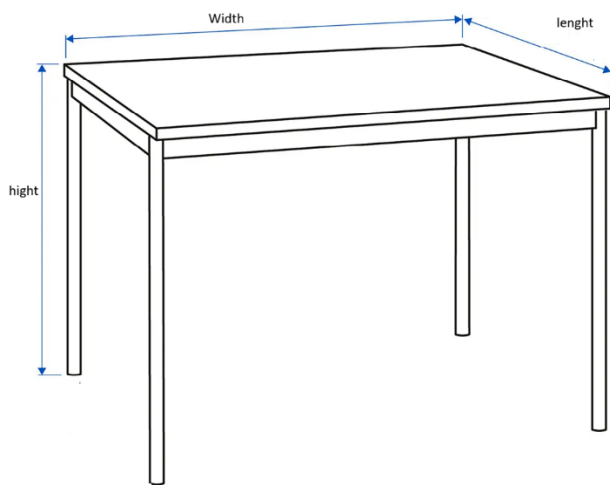
- The tables should be delivered through the main entrance of AKM with access to the elevator (max 1150kg weight).
- The tables should be transported to the location site through doorways of maximum 850mm width x 2000mm height

- Maximum weight capacity in the elevator: 1150kg
- Delivery trucks cannot exceed a height of 3.8 meters.

Technical Specifications

The following table outlines the mandatory (A) and optional (B) requirements for the surgical tables:

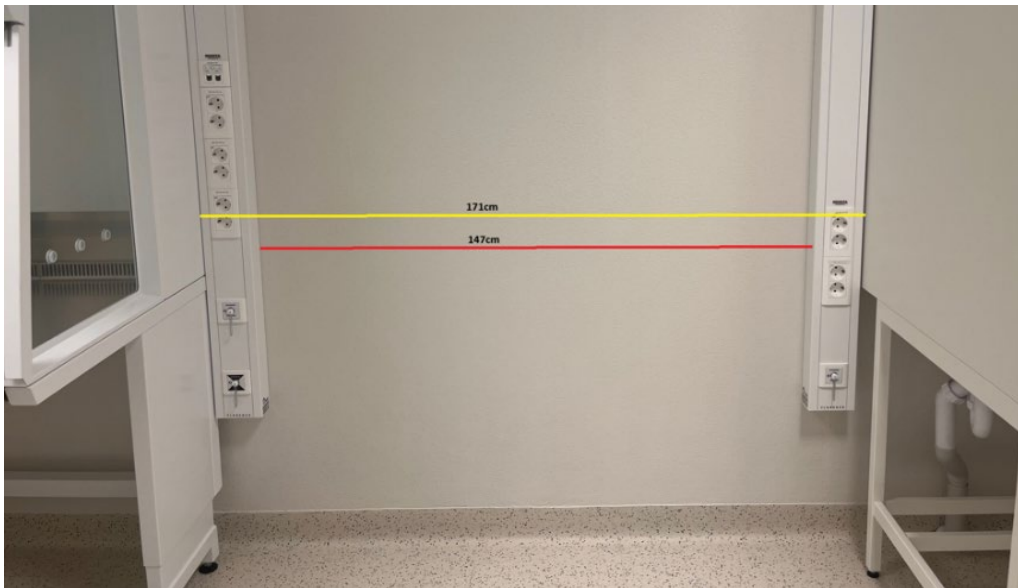
Size specifications: sizes of tables should be as large as possible, but within the maximum dimensions stated below. Width will be facing the wall.



Part 1**Table 1 in laboratory D7.506**

Specifications	Level
The maximal width of the table cannot exceed 171cm*	A
The maximal length of the table cannot exceed 100cm	A
Height can be adjustable, if not should be fixed in height between 80-100cm	A

*Note that it will have to be standing with a distance to the wall of 9cm, due to cable trunking mounted on the wall. Note also the placement of power- and gas supply on the wall.



Part 2

Table 2 laboratory D7.503

Specifications	Level
The maximal width of the table cannot exceed 120cm*	A
The maximal length of the table cannot exceed 80cm	A
Height can be adjustable, if not should be fixed in height of approximately 90cm	A

*Note that it will have to be standing with a distance to the wall of 9cm, due to cable trunking mounted on the wall. Note also the placement of power- and gas supply on the wall.

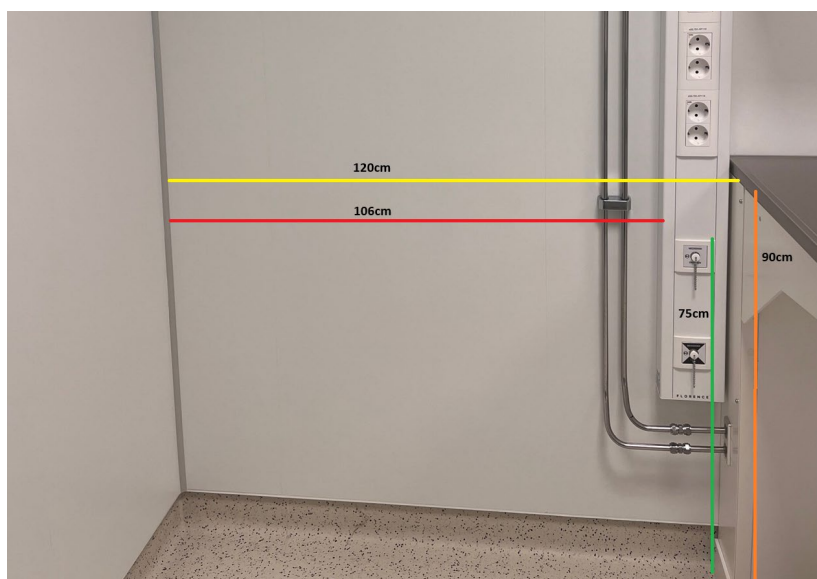


Table 3 laboratory D7.504

Specifications	Level
The maximal width of the table cannot exceed 113cm*	A
The maximal length of the table cannot exceed 80cm	A
Height can be adjustable, if not should be fixed in height of approximately 90cm	A

*Note that it will have to be standing with a distance to the wall of 9cm, due to cable trunking mounted on the wall. Note also the placement of power- and gas supply on the wall.



4 Service and maintenance

A service agreement should be included in the tender. The supplier should describe the service and calibration requirements for the equipment.

The supplier shall submit a fixed-price offer for the complete 5-year service contract in the price matrix.

Service agreement

The initial term of the service agreement shall be up to five (5) years. The purchaser may terminate the service agreement at the end of each contract year by providing written notice.

As part of the tender submission, supplier shall submit a draft service agreement, including a fixed price for each contract year within the initial term as indicated in the price matrix.

Following expiry of the initial term of five years, the service agreement shall be extendable in successive one (1) year periods. The supplier shall provide its proposed price(s) for each optional one-year extension no later than four (4) months before expiry of the then-current service agreement term.

Scope of the service agreement

The supplier shall include a concise detailed service agreement in the tender.

The service agreement shall, as a minimum, include preventive maintenance according to the manufacturer's recommendations, including inspection, functional tests, troubleshooting, software/firmware updates, replacement and, if relevant, cleaning of wear parts, as well as any other necessary repairs.

The service agreement shall include the wear parts/consumables for one year operation.

Remote support and emergency repairs

As part of the service agreement, the supplier shall provide remote and telephone support with a response time within twelve (12) hours.

In the event of a failure, the supplier shall, within 7 days of receiving notice from the purchaser, attend on site and take the necessary measures to restore the unit to operational condition.

Pricing and costs

All labour, travel, accommodation and other expenses incurred by the supplier's personnel in connection with services covered by the service agreement shall be included in the fixed service agreement price.

Cost related to on-site repairs, spare parts not covered by the service agreement shall be invoiced separately from the service agreement.

Travel costs for on-site repairs

Travel and accommodation expenses incurred in connection with separately chargeable on-site repairs shall be reimbursed at cost, subject to the purchaser's prior approval.

Subsistence expenses shall be reimbursed in accordance with the Norwegian Government Travel Allowance Scale applicable at any given time.

Travel time shall not be reimbursed.

Spare parts

The supplier shall guarantee the availability of spare parts for a minimum period of ten years from the date of delivery.

5 Table of requirements

The requirements in the table of requirements form the basis for the Supplier's description of its solution specification, cf. Appendix 2. The Supplier must give an extensive description of all requirements so that the Parties will have a common understanding of what is to be delivered, or which can give the Buyer alternative perspectives to the requirements expressed in the Buyer's requirements specification.

The different requirements have different priority.

Priority A = Absolute requirements that must be fulfilled. Tenders that do not fulfil all the absolute requirements will be rejected.

Priority B = Important requirements that should be fulfilled, but it is not an absolute requirement. Answers will be of great importance for the evaluation of the tender. The requirements are weighted higher than C-requirements.

When filling out the table of requirements the Supplier shall mark an (X) in the column for yes, partly or no under "the Supplier's fulfilment". Reference to relevant documentation and any additional comments shall be made in the column "Comment". It is reminded that it is the duty of the Supplier to document that it fulfils the set requirements. Any missing documentation will result in the requirement being considered as not fulfilled.

No.	Priority	Description
		SPECIFICATIONS ABSOLUTE REQUIREMENTS
1	A	The table should support the use of a minimum of one (1) anesthesia gas induction chamber.
2	A	The induction chamber and mask(s) should be capable of operating both airflow and anaesthesia concentration separately and simultaneously.
3	A	The table's surface and operating panels should be resistant to cleaning agents, including soap, Virkon S, and ethanol.
4	A	The table should function independently of the building's ventilation system.

5	A	It should include a system to effectively remove excess anesthesia gas to prevent operator exposure (e.g., scavenger, gas evacuator system, or absorber).
6	A	If the system uses a carbon filter and pump, it should include a weight-based monitoring system with an alarm to indicate when the filter requires replacement.
7	A	Documentation should be provided to verify the system's effectiveness in proper gas evacuation.
8	A	The system should support the use of isoflurane anesthesia gas.

No.	Priority	Description
		SPECIFICATIONS EVALUATION CRITERIA
1	B	Gas exposure: Describe how the system prevents and/or removes excess anesthesia gas exposure to the operator
2	B	Ease of Cleaning: Provide a detailed description of the design features that facilitate easy cleaning of the table. If the table includes a perforated surface, describe how it allows for cleaning underneath the surface.
3	B	Induction Chamber Design: Designed to minimize stress for mice, with appropriate color and shape to optimize animal welfare. Appropriately sized to accommodate adult mice weighing up to 60g, ensuring optimal animal welfare. - Describe the dimensions and design of the induction chamber, including: - The opening mechanism. - The color of the chamber. - The material used for construction.

		Explain how the design optimizes usability and animal welfare.
4	B	Oxygen and Air Mixing System: - Provide a detailed description of how the table utilizes oxygen mixed with anesthesia gas. - Systems that can mix medical oxygen with isoflurane (e.g., via a compressor or pump) will be awarded the highest points. Clearly explain the mechanism used for mixing. - Indicate whether the system includes an option to use room air as an alternative to medical oxygen and describe how this functionality is implemented.
5		Anesthetic system: - Does the system support the use of both isoflurane and sevoflurane? If yes, please describe how it is possible to change between the two different gasses. - Describe volume of vaporizer and if there are different alternatives. - Describe how filling/refilling of anesthesia gas is done. - Describe if adjustment of flow for masks and induction chamber can be done separately.
6		Oxygen Flowmeter: - It is preferred that the table includes an oxygen flowmeter with adjustable gas flow settings (e.g., a display or flow meter for airflow adjustment) in the range of 0.1–2 L/min. - Describe the design, adjustability and functionality of the flowmeter, if included.
7	B	Number of mice in anesthesia:

		- The table can accommodate a minimum of two (2) mice under surgical gas anesthesia using masks. - The anesthesia table preferably are capable of dosing gas anesthesia for up to three (3) mice simultaneously: one (1) for induction and two (2) for maintenance. - Describe how anesthesia and, where applicable, oxygen flow are adjusted for each individual mouse. State whether these flows can be controlled independently for each animal without simultaneously altering the flow to others, and explain the mechanism that enables independent control.
8	B	Anesthesia Masks: - Describe how the placement of masks can be adjusted on the table to accommodate different procedures and operators. - It is preferred that maintenance masks are fixed to the table during anesthesia to prevent movement to the animal during anesthesia. - Describe how this feature is implemented, if applicable. - Are there an automatic mice recognition for adjustment of anesthesia gas (on/off)?
9	B	Compatibility with Rats: - Describe whether the anesthesia system can be adapted or replaced with necessary equipment (e.g., induction chambers and masks) to ensure compatibility with rats. - Explain how the design, color, shape, and size of the equipment optimize animal welfare for rats.
10	B	Anesthesia Monitoring System: - Describe whether the table includes an option for anesthesia monitoring specifically for mice, including the following parameters/or indicate what available parameters: - Eg. ECG, pulse, respiration, temperature, SpO2, and expiratory CO2. - Describe if monitoring is possible for each mouse under mask anesthesia

		• Indicate whether the monitoring system is integrated into the table or available as an add-on. • It is preferred that the monitoring system includes adjustable alarm settings. • Describe the audible alarms if it possible to be muted or permanently disabled.
11	B	Heating System: The ideal table includes a heating system to maintain and adjust the body temperature of mice before, during and after anesthesia. Describe the heating system: ○ Can the heating be adjusted automatically using a feedback probe. ○ Does it include an override system for manual temperature adjustment. ○ Mechanism of action, type of heating (e.g. water/air etc.), including avoidance of overheating. ○ Describe minimum and maximum temperature limits Or other designs if relevant.
12	B	Multi-Section Heated Work Surface: • Describe the possibility of a multi-section heated work surface, including: ○ At least one surface dedicated to procedures/surgery. ○ At least one surface dedicated to cages.
13	B	Lighting System: • The ideal table includes a lighting system with adjustable lux (brightness) and Kelvin (color temperature). • Indicate settings for lux and kelvin. Maximum and minimum levels. • It is a benefit if the light(s) are movable. Describe placement and design of the lights. • If relevant, describe how the lighting system provides optimal illumination for surgical procedures.

		• Ideal lighting system is placed on the wall side of the table freeing space on the surgical table, describe how this (if applicable) is integrated
14	B	Microscope Compatibility: • One of the three (3) table ideally have room or is designed for the attachment or placement of an operating microscope. Describe what of the tables offer this space solution and how it is implemented in the full setup. • Describe whether the system supports image projection to a wall-mounted screen. • If relevant, provide recommendations for suppliers of surgical microscopes.
15	B	Mobility: Describe whether the table is equipped with wheels, allowing it to be moved to a different lab if needed.
16	B	Gas and CO2 Removal: • Describe how the anaesthesia system and tubing are designed to assist in the removal of excess anaesthetic gases and exhaled CO2. • Describe how alarm/notification when filter is full (and if it's a weight-based system does the scale need regular calibration?) • Provide details on the efficiency and safety of the gas removal system.
18	B	Separate preoperative and operative zones The ideal table are designed to clearly separate preoperative (unclean) zones from operative (clean/sterile) zones. Describe how this is implemented.