|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| KI-Logo_pos_sv | |  | | **Document name:** |
| **Reference number /version (optional):** |
| **Radiation Risk Assessment (RadRA)** | | | | **Date (year-month-day):** |
| * This form should be applied for **identification** and **characterization** of **risks** involved in work with all kinds of **radiation** at Karolinska Institutet, i.e. both **ionizing** (X-ray, radioactive isotopes) and **non-ionizing radiation** (UV/laser light, microwaves). * Please note, research work involving **ionizing radiation** is only allowed after approval by KI/hospital **radiation protection expert**, please read <https://staff.ki.se/radiation-safety>.   When finished, print out and place this risk assessment in the lab so that each researcher can consult it before conducting experiments. | | | | |
| CHaracterization of the radiation | | | | |
| **Department:** | | | **Rearch group:** | |
| **Group leader/PI:** | | | | |
| **Lab responsible person** (if applicable): | | | | |
| **Non-ionizing radiation source?** | Microwave system. Manufacturer?       Model?       Serial number?       Room number?  IR light system. Manufacturer?       Model?       Serial number?       Room number?  Laser light system. Manufacturer?       Model?       Serial number?       Room number?  UV light system. Manufacturer?       Model?       Serial number?       Room number?  Other non-ionizing radiation system(s). Please specify:       Room number? | | | |
| **Ionizing radiation source?** | X-ray diffraction system. Manufacturer?       Model?       Serial number?       Room number?  X-ray fluorescence system. Manufacturer?       Model?       Serial number?       Room number?  X-ray imaging system. Manufacturer?       Model?       Serial number?       Room number?  X-ray irradiator. Location?  AKM.  ANA Futura.  BioClinicum.  Biomedicum.  KM-A.  KM-B.  KM-F.  Other. Please specify:  Accelerator. Location?  BioClinicum.  R building.  Open radioactive source(s). Local license number?  Yes. Local license number?  No. Send application according to <https://staff.ki.se/radiation-safety>.  Other ionizing radiation system(s). Please specify: | | | |

|  |  |  |
| --- | --- | --- |
| laboratory work, all types of radiation | | Reference number /version (optional): |
| **General description of the work?** |  | |
| **Method description(s) including type of work. Please elaborate.** |  | |
| **Does the method involve hazardous chemicals and/or biological and/or human material?** | No.  Yes. Which?      , which risk statements?       Does the handling of dangerous chemicals need a separate risk assessment? If yes; name of the risk assessment: | |
| **How many employees are performing the experiments** (or otherwise involved, for example sharing facilities)? |  | |
| **Frequency of experiment?** | Weekly. How many experiments?  Monthly. How many experiments?  Yearly. How many experiments? | |
| **Has all staff working in this lab valid course certificates for the specific radiation source(s)?** | Yes.  No. Why? | |
| **Handling and safety instructions available?** | Yes. Which?  No. Why? | |
| **Protective measures for the work with the radiation source(s):**  **Protective clothing and/or gloves** Please specify:  During the whole method. During parts of the method, which part(s)?  **Protective shielding** Please specify (e.g., face shield, standing shield, glasses, goggles):  During the whole method. During parts of the method, which part(s)?  **Work in a safety cabinet**  During the whole method. During parts of the method, which part(s)?    **Use of integrated safety devices** (e.g., interlock, etc.)  During the whole method. During parts of the method, which part(s)?  **Other** (for example time, distance, etc.) Please elaborate: | | |
| **Does any part of the handling possess a high risk of exposing staff to radiation?** | Yes. Which part?       Expected time**[[1]](#footnote-1)**?  No. Why? | |
| **Is the radiation monitored/measured?** | Yes. How?  No. Why? | |
| **Risk for unauthorized access to the radiation source** (other KI staff, visitors, etc.)? | No.  Yes. Why?       How many? | |
| **Are there employees needing special consideration?** E.g. pregnant employees, dish washing and cleaning staff, and facility management. |  | |
| **Emergency procedures (in case of accident, spill, theft etc.)** |  | |
| **Name and phone number of contact person (in case of accident):** |  | |

|  |  |  |
| --- | --- | --- |
| LABORATORY WORK, ionizing radiation ONLY | | Reference number /version (optional): |
| **Has all involved staff reviewed the local radiation safety guidelines**, https://staff.ki.se/radiation-safety? | Yes.  No. Why: | |
| **Has all involved staff a valid radiation safety course certificate**, i.e., not older than five years? | Yes.  No. Why: | |
| **Does the research involve a radioactive isotop bound to an antibody?** | No.  Yes. Bound to?       Specify pharmacokinetics: | |
| **Risk for external contamination** (skin, clothes, shoes, etc)? | No.  Yes. Action?       Specify measurement method? | |
| **Risk for internal contamination** (inhalation, ingestion, cuts, etc)? | No.  Yes. Action?       Specify measurement method? | |
| **Risk for contamination of surfaces (work area, floor, sink, etc)?** | No.  Yes. Action?       Specify measurement method? | |
| **Possible liquid radioactive waste**, please specify type of liquid waste (urine if animals involved) and how it is handled, if it contains mixed sources that need special considerations. | No.  Yes. Specify? | |
| **Possible solid radioactive waste**, please specify type of solid waste generated (feces if animals involved) and how it is handled, if it contains mixed sources that need special considerations. | No.  Yes. Specify? | |

|  |  |  |
| --- | --- | --- |
| laboratory work, participants & signature | | Reference number /version (optional): |
| **Other adequate information** (please, specify)? |  | |
| **List all participants** of this risk assessment. |  | |
| **Group leader**,in print: |  | |
| **Group leader**, signature: |  | |

1. Describe if the work is performed rarely or regularly, for short or long periods, if possible, specify the time periods. [↑](#footnote-ref-1)