|  |  |  |
| --- | --- | --- |
| 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)